

Max Perlès
advanced industrial linings



technical manual
chemistry & industry
TECHNOPERL *systems*

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Chemical & other industries
and « max perlès » coatings for industrial storage and treatment works

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Chemical and Other Industries and *maxperlès coatings* for industrial storage and treatment works

Why industrial storage and treatment works should be protected :

Optimized Asset Management :

To prevent or to stop the degradation of infrastructure, hence significantly increasing its life expectancy and operating period, therefore generating a *positive return on the investment in the coating*.

Functionally :

On a concrete substrate : To obtain a *waterproof* or *watertight* surface that can furthermore *resist certain degrees of cracking in a concrete substrate* as well as *counter-pressure* through the concrete . The coating is either single-coat , « watertight » , resisting future cracking in the substrate of up to 2/10ths of a mm , or is a waterproof composite of epoxy resin reinforced with glass tissue or mat , that will resist future cracking in the substrate of up to 20/10ths of a mm , depending on the weight of the glass reinforcement used .

On a steel substrate : to apply an anti-corrosion and protective film to the steel surface.

Technically :

- To protect industrial storage and treatment works from premature degradation due to the contact, permanent or temporary, with chemically aggressive liquids and gases.
- To protect the chemical integrity of liquid and gas contents.
- To greatly *facilitate and accelerate cleaning and maintenance operations* due to the smooth finish of the coating .
- To conform with toxicological and sanitary regulations applicable in most countries

Advantages of max perlès coatings

Health and Safety :

They are *solvent-free* with very low VOC content. This *protects the environment* and allows them to be applied under *health and safety conditions* vital for both the personnel involved and the quality of the implementation.

Experience and references :

They are the result of unmatched expertise and experience : our solvent-free epoxy *coatings* for the protection of storage capacities have been implemented by qualified applicators on worksites worldwide *since 1965*.

Quality Assurance :

Our Research & Development and Technical Assistance Departments work in collaboration to develop our products' reliability, as well as to fine-tune new products, for a quality that we strive to always improve – *a must for ISO 9001-2015 certification* – to better meet the users' expectations and those of an *environment* more and more strictly governed by *regulations*.

Technical Assistance :

Our Technical Assistance department offers upon request training or advice to application companies by assisting them before and/or during their work. It also operates post-application visits upon request by the Applicator or the end customer to detect possible defects.

Guaranteed reliability :

Max Perlès coating systems are guaranteed for the duration indicated on the specification supplied for each project . This guarantee is based on a specific *Insurance Policy* issued by a world-class Insurance Company . Our Application partners , once trained by us , should supply a similar guarantee on their workmanship . The end customer can then request from the manufacturer/applicator partnership a *Joint Guarantee* indicating that any failure of the coating during the warranty period resulting from bad product quality or its incorrect application will be corrected free of charge for the client.

UPWARDS OF 10 MILLION SQM OF CAPACITIES HAVE BEEN PROTECTED WITH
OUR PRODUCTS OVER THE LAST 60 YEARS.

Technical specification

Technical specification

Waterproof, Watertight and
Protective coating.

1. Overview

This document describes our:

TECHNOPERL® ⁽¹⁾ epoxy-based coatings,
and
GELCOAT SV102 novolac-epoxy coating.

- They can be applied in one or several coats inside **concrete works** both **primary (storage) and secondary (retentions, sumps)**.

The resulting adherent or semi-adherent systems are generally reinforced so as to make the system **waterproof** (specifications 1A, 1B, 1D, 4A, 4B, 4D – 1C) that is incorporating a reinforcement of a certain quality and thickness that gives to the coating a **resistance to future cracking** in the substrate of up to 20/10th of a mm.

In some cases, particularly when they are not in permanent contact with reagents or effluents, they can be used only for **watertightness** (specification 10).

- They are also applied as anticorrosion protection of steel works, with added reinforcement or not (specifications 101B, 201B, 301B, 400B, 701B, 501, 110B, 112B).
They are chosen with respect to the OHGPI circulars G31 and G37.

⁽¹⁾ To which are added the following appropriate topcoats:

Gelcoat SV102,
LP100/512 or 812,
AR100/MD4 or CLX,

These different possibilities are described in the appropriate specification sheets.

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Waterproof, Watertight and
Protective coating.

Areas and limits of use:

- ♦ Interior coatings of reservoirs, tanks, basins, retentions, gutters, canalisations, etc...,
- ♦ Whether there are overground, buried or semi-buried
- ♦ Containing reagents or effluents, acids or bases.
- ♦ Are concerned:
New work, or rehabilitation/maintenance.
- ♦ Are excluded pre-fabricated elements as per ITBTP definition 3.3.4.

Reference documents:

- ♦ ITBTP (Technical Institute of Building and Public Works) Annals No. 486, Professional Recommendations – May 1990.
- ♦ Technical Circulars G31 and G37 of the OHGPI (Office for Certification of Industrial Paint Guarantees) applicable to steel capacities.
- ♦ Data sheets of the specified products, which detail their characteristics and their application conditions, completed with Technical Advices.
- ♦ Specific tests that have been carried out with water-based, acid, base, alcohol-containing or greasy simulants, both in permanent immersions and temporary retention situations.

Technical specification

Waterproof, Watertight and
Protective coating.

2. Description of coating functionalities

4 criteria are retained with respect to the function requested of the coating.

1. Adherent waterproofing and protection, applicable to class C concrete works

Consists of a multi-layer coating that absorbs without damage mechanical stresses generated in particular by quantified substrate crackings and some counterpressures, while ensuring a perfect inertia to the reagent or effluent with which it is in contact:

*The system consists of a jointless reinforced structure
based on **Technoperl® R** solvent-free epoxy resin,
reinforced with fiberglass,
and **Technoperl® T** or **Gelcoat SV102** topcoat, according to the chemical aggressiveness of the content.*

2. Semi-independent waterproofing and protection, applicable to class C existing concrete works, whether coated or not

Consist of a multi-layer coating fixed to the substrate by a mechanical process bridging all existing or future cracks, and inert to the reagent or effluent with which it is in contact:

The system is identical to the previous system, with mechanical anchoring in addition.

3. Watertight coating and protection, applicable to class B concrete works

Consist of a single-layer coating that remains inert to gas emissions and accidental liquid spillings of the reagent or effluent, while ensuring surface watertightness and protection.

*The system consists of a continuous **Technoperl® T** or **Gelcoat SV102** or **LP100/512** or **812** coating,
non-reinforced and adherent, except on cracks which are then bridged with a reinforcement.*

4. Anticorrosion protection, applicable to steel works

Consist of a single-layer coating that remains inert to the reagent or effluent content, while protecting the steel to which it is applied:

*The system consists of a continuous **Technoperl® T** or other coating,
preceded by a glassfiber reinforced coating
if the steel is heavily corroded or if the chemical aggressiveness is high.*

Technical specification

Waterproof, Watertight and
Protective coating.

3. Tests

Reports on the tests that have been realized and that are mentioned in the product data sheets are available on request.

4. Origin of the products

- *Design and manufacture*

They are designed and manufactured in our plant at Hénonville, Oise, France, under a quality system conforming to the ISO 9001 standard version 2015 and certified by the Bureau Veritas Certification France under nr. FR089775-1

- *Labelling/packaging/storage*

Packaging includes in particular the following indications:

- > risk and safety phrases and logos
- > manufacture date
- > shelf life
- > storage conditions
- > mixing proportions
- > pot life

Technical specification

Waterproof, Watertight and
Protective coating.

5. Nature and quality of acceptable substrates

Whether new or old , substrates should be the object of a written assessment carried out jointly by the civil works contractor and the application contractor before proceeding with the coating works , describing the condition of the surface , quantifying and qualifying any existing disorders and determining who is responsible to carry out the necessary corrections .

- ***New concrete must be left to dry for at least 28 days before coating and old concrete must be in good condition*** , designed, calculated and constructed in conformity with the prescriptions of the regulatory texts mentioned in the reference documents.

This applies in particular to the state of the surface : are deemed acceptable surface conditions obtained and/or restored using solutions proposed in our system sheets – see Chapter 4 below - and in our ***Technical Advice Nr. 1 “Specification for preparation of concrete”*** - see Appendix 3.

The state of the surface must be of a good quality as indicated in the NFP 18-201 Standard – Technical Specification – ref. DTU 23.1 and in chapters 7-3-1 of Norm NF EN 1992-1 & 1992-3 (EUROCODE N°2).

Any products used for the repair of the concrete must be validated prior to application by the application contractor to make sure they are compatible with our coatings and that no risk exists of them creating a difference in potential between old and new concrete parts that could cause degradation in the concrete and corrosion of the steel reinforcement .

- ***New or old steel*** structures must be within the limits defined in ISO 8501-1 standard (1988) – page 15, and referred to in the OHGPI circular G31 and G37.

Technical specification

Waterproof, Watertight and
Protective coating.

6. Specifications by function and type of structure:

Concrete substrates:

Waterproofing and protection

Sheets	1A	: Reinforced coating	450g Technoperl® R with Technoperl® T topcoat	–	2.0 mm
	1B	: Reinforced coating	800g Technoperl® R with Technoperl® T topcoat	–	2.6 mm
	1D	: Reinforced coating	1200g Technoperl® R with Technoperl® T topcoat	–	3.0 mm
	4A	: Reinforced coating	450g Technoperl® R with GelcoatSV102 topcoat	–	2.0 mm
	4B	: Reinforced coating	800g Technoperl® R with GelcoatSV102 topcoat	–	2.6 mm
	4D	: Reinforced coating	1200g Technoperl® R with GelcoatSV102 topcoat	–	3.0 mm

Concrete substrates, pre-coated or not:

Semi-independent (mechanically anchored) waterproofing and protection

Sheet	1C	: Reinforced coating	800g Technoperl® R with Technoperl® T topcoat	–	2.6 mm
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New concrete substrates:

Watertightness and protection

Sheet	10	: Single coat	Technoperl® T	–	0.6 mm
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Steel substrates:

Anti-corrosion protection

Sheets	101B	: Single coat	Technoperl® T	–	0.8 mm
	201B	: Single coat	LP100/512	–	0.8 mm
	301B	: Single coat	LP100/812	–	0.8 mm
	400B	: Single coat	Gelcoat SV101	–	0.6 mm
	701B	: Single coat	AR100/MD4	–	0.8 mm
	110B	: Reinforced coating	1 mat Technoperl® R with Technoperl® T topcoat	–	2.0 mm
	112B	: Reinforced coating	3 mats Technoperl® R with Technoperl® T topcoat	–	4.0 mm

Notes:

- The above single coats may also be used as topcoats over a Technoperl® R laminate coating.

sheet ex.nr.1A Technoperl® / P45

Waterproof fiberglass-reinforced epoxy protective coating⁽¹⁾

made of: solvent-free epoxy reinforced with 450 g/sqm of fiberglass
for: permanent or temporary (retention) storage works
in contact with: industrial effluents to be identified
substrate: new concrete or existing concrete in good condition

Preparation as per [Technical Advice nr 1](#)

«Specification for preparation of concrete», and as a minimum:

- ♦ **Obtaining** a healthy and homogeneous⁽¹⁾ substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
- ♦ **Removal** of dust with an industrial vacuum cleaner
- ♦ **Impregnation** of concrete with waterborne epoxy **Primer EDO** using a roller, **250 g/sqm**
- ♦ **Bridging** of existing cracks with a 10 cm wide plasticized adhesive tape
(except if there exists a risk of un-drained-counter-pressure)
- ♦ **Rendering** of surface defects with epoxy **Render AR100**

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

System Technoperl® / P45 – thickness 2 mm *:

- ♦ **Uninterrupted laminate** of fiberglass/epoxy as per [Technical Advice nr 14](#), comprising:
Technoperl® R coat for **impregnation**, using a roller, **550 microns, 750 g/sqm**
Glassfabric P45 to be unrolled, and debubbled using a special roller, **450 g/sqm**
Technoperl® R, coat for **saturation**, using a roller, **400 microns, 550 g/sqm**
Silica SBO to be sprinkled while progressing by mechanical projection, **400 g/sqm**
- ♦ **Checking** as per [Technical Advice nr 3](#) “Performance testing” and [nr 4](#) “Dielectric testing”
- ♦ **Repair** of defects as per [Technical Advice nr 5](#) “Retouching”
- ♦ **Topcoat** one coat of **Technoperl® T**, using airless spray or roller, **600 microns, 800 g/sqm**

* When only partially coating a vertical surface (such as walls), we recommend that the top of the coating be stopped in an engraving (see TA nr. 7 and sketch nr. 8)

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee : 10 years

Including the **resistance to existing and bridged substrate cracks of up to 20/10th mm and resistance to new cracks of up to 10/10th mm and resistance to counter-pressure through the substrate of up to 1 bar (10 meters of water).**

Reservation: surface colour may change

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*



(1) In accordance with the definition of Annals of the Technical Institute of the Building industry and Public works - ITBTP - May 1990, for the works of class C.

sheet ex.nr.1B Technoperl® / P80

Waterproof fiberglass-reinforced epoxy protective coating⁽¹⁾

made of: solvent-free epoxy reinforced with 800 g/sqm of fiberglass
for: permanent or temporary (retention) storage works
in contact with: industrial effluents to be identified
substrate: new concrete or existing concrete in average or good condition

Preparation as per [Technical Advice nr 1](#)

«Specification for preparation of concrete», and as a minimum:

- ♦ **Obtaining** a healthy and homogeneous⁽¹⁾ substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
- ♦ **Removal** of dust with an industrial vacuum cleaner
- ♦ **Impregnation** of concrete with waterborne epoxy **Primer EDO** using a roller, **250 g/sqm**
- ♦ **Bridging** of existing cracks with a 10 cm wide plasticized adhesive tape
(except if there exists a risk of un-drained-counter-pressure)
- ♦ **Rendering** of surface defects with epoxy **Render AR100**

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

System Technoperl® / P80 – thickness 2,6 mm*:

- ♦ **Uninterrupted laminate** of fiberglass/epoxy as per [Technical Advice nr 14](#), comprising:
Technoperl® R coat for **impregnation**, using a roller, **700 microns, 950 g/sqm**
Glassfabric P80 to be unrolled, and debubbled using a special roller, **800 g/sqm**
Technoperl® R, coat for **saturation**, using a roller, **500 microns, 700 g/sqm**
Silica SBO to be sprinkled while progressing by mechanical projection, **400 g/sqm**
- ♦ **Checking** as per [Technical Advice nr 3](#) “Performance testing” and [nr 4](#) “Dielectric testing”
- ♦ **Repair** of defects as per [Technical Advice nr 5](#) “Retouching”
- ♦ **Topcoat** one coat of **Technoperl® T**, using airless spray or roller, **600 microns, 800 g/sqm**

* When only partially coating a vertical surface (such as walls), we recommend that the top of the coating be stopped in an engraving (see TA nr. 7 and sketch nr. 8)

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee : 10 years

Including the resistance to existing and bridged substrate cracks of up to 20/10th mm and resistance to new cracks of up to 15/10th mm and resistance to counter-pressure through the substrate of up to 1 bar (10 meters of water).

Reservation: surface colour may change

This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
 To become effective, it must have been formalised in a duly signed guarantee commitment certificate.



(1) In accordance with the definition of Annals of the Technical Institute of the Building industry and Public works - ITBTP - May 1990, for the works of class C.

sheet ex.nr.1D Technoperl® / P120

Waterproof fiberglass reinforced epoxy protective coating ⁽¹⁾

made of: solvent-free epoxy reinforced with 1200 g/sqm of fiberglass

for: permanent or temporary (retention) storage works

in contact with: industrial effluents to be identified

substrate: new or existing concrete

Preparation as per [Technical Advice nr 1](#)

«Specification for preparation of concrete», and as a minimum:

- ♦ **Obtaining** a healthy and homogeneous substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
- ♦ **Removal** of dust with an industrial vacuum cleaner
- ♦ **Impregnation** of concrete with waterborne epoxy **Primer EDO** using a roller, 250 g/sqm
- ♦ **Rendering** of surface defects with epoxy **Render AR100**

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

System Technoperl® / P120 – thickness 3 mm*:

- ♦ **Uninterrupted laminate** of fiberglass/epoxy as per [Technical Advice nr 14](#), comprising:
Technoperl® R coat for **impregnation**, using a roller, 800 microns, 1100 g/sqm
Glassfabric P120 to be unrolled, and debubbled using a special roller, 1200 g/sqm
Technoperl® R, coat for **saturation**, using a roller, 600 microns, 800 g/sqm
Silica SBO to be sprinkled while progressing by mechanical projection, 400 g/sqm
- ♦ **Checking** as per [Technical Advice nr 3](#) “Performance testing” and [nr 4](#) “Dielectric testing”
- ♦ **Repair** of defects as per [Technical Advice nr 5](#) “Retouching”
- ♦ **Topcoat** one coat of Technoperl® T, using airless spray or roller, 600 microns, 800 g/sqm

* When only partially coating a vertical surface (such as walls), we recommend that the top of the coating be stopped in an engraving (see TA nr. 7 and sketch nr. 8)

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee: 10 years

Including the resistance to substrate cracks, existing or to come, up to 20/10th mm and resistance to counter-pressure through the substrate of up to 1 bar (10 meters of water).

Reservation: surface colour may change

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*



⁽¹⁾ In accordance with the definition of Annals of the Technical Institute of the Building industry and Public works - ITBTP - May 1990, for the **works of class C**.

sheet ex.nr.4A Technoperl / P45, topcoat Gelcoat SV102

Waterproof fiberglass-reinforced epoxy protective coating⁽¹⁾

made of: solvent-free epoxy reinforced with 450 g/sqm of fiberglass + specific topcoat

for: permanent or temporary (retention) storage works
in contact with: industrial effluents to be identified

substrate: new concrete or existing concrete in good condition

Preparation as per *Technical Advice nr 1*

«Specification for preparation of concrete», and as a minimum:

- ♦ **Obtaining** a healthy and homogeneous ⁽²⁾ substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
- ♦ **Removal** of dust with an industrial vacuum cleaner
- ♦ **Impregnation** of concrete with waterborne epoxy **Primer EDO** using a roller, 250 g/sqm
- ♦ **Bridging ⁽³⁾** of existing cracks with a 10 cm wide plasticized adhesive tape
- ♦ **Rendering** of surface defects with epoxy **Render AR100**

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

System Technoperl / P45 with Gelcoat SV102 topcoat – thickness 2.2 mm :*

- ♦ **Uninterrupted laminate** of fiberglass/epoxy as per *Technical Advice nr 14*, comprising:
Technoperl R coat for **impregnation**, using a roller, 550 microns, 750 g/sqm
Glassfabric P45 to be unrolled, and debubbled using a special roller, 450 g/sqm
Technoperl R, coat for **saturation**, using a roller, 400 microns, 550 g/sqm
Silica SBO to be sprinkled while progressing by mechanical projection, 400 g/sqm
- ♦ **Checking** as per *Technical Advice nr 3* “Performance testing” and *nr 4* “Dielectric testing”
- ♦ **Repair** of defects as per *Technical Advice nr 5* “Retouching”
- ♦ **Topcoat** novolac-epoxy **Gelcoat SV102** divided in 2 passes, using a medium bristle roller/flat brush, 600 microns, 800 g/sqm

* When only partially coating a vertical surface (such as walls), we recommend that the top of the coating be stopped in an engraving (see TA nr. 7 and sketch nr. 8)

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee : 10 years

Including the **resistance to existing and bridged substrate cracks of up to 20/10th mm** and **resistance to new cracks of up to 10/10th mm** and **resistance to counter-pressure through the substrate of up to 1 bar** (10 meters of water).

Reservation: surface colour may change

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*

♦ ♦ ♦ ♦ ♦

(1) In accordance with the definition of Annals of the Technical Institute of the Building industry and Public works - ITBTP - May 1990, for the **works of class C**.

sheet ex.nr.4B Technoperl® / P80, topcoat Gelcoat SV102

Waterproof fiberglass-reinforced epoxy protective coating⁽¹⁾

- made of:* solvent-free epoxy reinforced with 800 g/sqm of fiberglass + specific topcoat
- for:* permanent or temporary (retention) storage works
- in contact with:* industrial effluents to be identified
- substrate:* new concrete or existing concrete in average or good condition

Preparation as per [Technical Advice nr 1](#)

«Specification for preparation of concrete», and as a minimum:

- ♦ **Obtaining** a healthy and homogeneous⁽¹⁾ substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
- ♦ **Removal** of dust with an industrial vacuum cleaner
- ♦ **Impregnation** of concrete with waterborne epoxy **Primer EDO** using a roller, 250 g/sqm
- ♦ **Bridging** of existing cracks with a 10 cm wide plasticized adhesive tape
(except if there exists a risk of un-drained-counter-pressure)
- ♦ **Rendering** of surface defects with epoxy **Render AR100**

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

System Technoperl® / P80 with Gelcoat SV102 topcoat – thickness 2.6 mm* :

- ♦ **Uninterrupted laminate** of fiberglass/epoxy as per [Technical Advice nr 14](#), comprising:
Technoperl® R coat for **impregnation**, using a roller, 700 microns, 950 g/sqm
Glassfabric P80 to be unrolled, and debubbled using a special roller, 800 g/sqm
Technoperl® R, coat for **saturation**, using a roller, 500 microns, 700 g/sqm
Silica SB0 to be sprinkled while progressing by mechanical projection, 400 g/sqm
- ♦ **Checking** as per [Technical Advice nr 3](#) “Performance testing” and [nr 4](#) “Dielectric testing”
- ♦ **Repair** of defects as per [Technical Advice nr 5](#) “Retouching”
- ♦ **Topcoat** novolac-epoxy **Gelcoat SV102** divided in 2 passes, using a medium bristle roller/flat brush, 600 microns, 800 g/sqm

* When only partially coating a vertical surface (such as walls), we recommend that the top of the coating be stopped in an engraving (see TA nr. 7 and sketch nr. 8)

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee: 10 years

Including the **resistance to existing and bridged substrate cracks**, up to 20/10th mm and **resistance to new cracks** of up to 15/10th mm and **resistance to counter-pressure** through the substrate of up to 1 bar (10 meters of water).

Reservation: surface colour may change

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*



(1) In accordance with the definition of Annals of the Technical Institute of the Building industry and Public works - ITBTP - May 1990, for the **works of class C**.

sheet ex.nr.4D Technoperl® / P120, topcoat Gelcoat SV102

Waterproof fiberglass-reinforced epoxy protective coating

- made of:* solvent-free epoxy reinforced with 1200 g/sqm of fiberglass + specific topcoat
- for:* permanent or temporary (retention) storage works
- in contact with:* industrial effluents to be identified
- substrate:* new or existing concrete

Preparation as per *Technical Advice nr 1*

«Specification for preparation of concrete», and as a minimum:

- ♦ **Obtaining** a healthy and homogeneous⁽¹⁾ substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
- ♦ **Removal** of dust with an industrial vacuum cleaner
- ♦ **Impregnation** of concrete with waterborne epoxy **Primer EDO** using a roller, 250 g/sqm
- ♦ **Rendering** of surface defects with epoxy **Render AR100**

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

System Technoperl® / P120 with Gelcoat SV102 topcoat – thickness 3 mm:

- ♦ **Uninterrupted laminate** of fiberglass/epoxy as per *Technical Advice nr 14*, comprising:
Technoperl® R coat for **impregnation**, using a roller, 800 microns, 1100 g/sqm
Glassfabric P120 to be unrolled, and debubbled using a special roller, 1200 g/sqm
Technoperl® R, coat for **saturation**, using a roller, 600 microns, 800 g/sqm
Silica SB0 to be sprinkled while progressing by mechanical projection, 400 g/sqm
- ♦ **Checking** as per *Technical Advice nr 3* “Performance testing” and *nr 4* “Dielectric testing”
- ♦ **Repair** of defects as per *Technical Advice nr 5* “Retouching”
- ♦ **Topcoat** novolac-epoxy **Gelcoat SV102** In 1 layer using airless spray 45/1 minimum, or divided in 2 passes, using a medium bristle roller, 600 microns, 800 g/sqm

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee: 10 years

Including **the resistance to substrate cracks, existing or to come of up to 20/10th mm and resistance to counter-pressure through the substrate of up to 1 bar** (10 meters of water).

Reservation: surface colour may change

This proposal is based on our n° FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations To become effective, it must have been formalised in a duly signed guarantee commitment certificate.

♦ ♦ ♦ ♦ ♦

- ⁽¹⁾ Must be eliminated entirely any coating, or render, or mortar, of which the surface aspect, and/or an adherence < 1,5 MPa, would not allow qualification as a stable and homogeneous substrate.
In the same way, the **surface compactness of a rough concrete must not be < 1,5 MPa.**

sheet ex.nr.1C Technoperl® / P80, plugged

Mechanically-fixed Waterproof fiberglass-reinforced epoxy protective lining

made of: solvent-free epoxy reinforced with 800 g/sqm of fiberglass
for: permanent or temporary (retention) storage works
in contact with: industrial effluents to be identified
substrate: previously coated concrete

Preparation as per [Technical Advice nr 1](#)

«Specification for preparation of concrete», and as a minimum:

- ◆ **Removal** of every bad or non adhesive particles of the previous coating by any suitable means,
- ◆ **Levelling** of the blistered or projecting zones by grinding, until obtaining an even, plane surface
- ◆ **Cleaning** by any suitable means until total depollution, removal of dust with an industrial vacuum cleaner
- ◆ **Rendering** of surface defects with epoxy **Render AR100**

The existing coating can be preserved in whole or part on condition that its adherence to the substrate is minimum 1 MPa according to NF EN 24624. The naked concrete zones must be prepared identically to those receiving an adherent coating.

Advice: the application under the laminate of our conductive primer **SCREENPERL® (200μ)** allows homogeneous dielectric testing despite the potentially insulating presence of the previous coating.

System Technoperl® / P80 plugged – thickness 2,6 mm:

- ◆ **Uninterrupted laminate** of fiberglass/epoxy as per [Technical Advice nr 14](#), comprising:
Technoperl® R coat for **impregnation**, using a roller, **700 microns, 950 g/sqm**
Glassfabric P80 to be unrolled, and debubbled using a special roller, **800 g/sqm**
Technoperl® R, coat for **saturation**, using a roller, **500 microns, 700 g/sqm**
Silica SB0 to be sprinkled while progressing by mechanical projection, **400 g/sqm**
- ◆ **Fixed** mechanically every 50 cm with **Exco plugs/PP 8/50 Ø 32 mm**, as per [Technical Advice nr 21](#) “Mechanical fixing in one piece of laminates”
- ◆ **Reinforcement** with mat washers **RM 60 Ø 12 cm, 5 u/sqm**, saturated of **Technoperl R, 10 g/u**, and sprinkled with silice SB0 while progressing
- ◆ **Checking** as per [Technical Advice nr 3](#) “Performance testing” and [nr 4](#) “Dielectric testing”
- ◆ **Repair** of defects as per [Technical Advice nr 5](#) “Retouching”
- ◆ **Topcoat** one coat of **Technoperl® T**, using airless spray or roller, **600 microns, 800 g/sqm**

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee: 10 years

Including **the resistance to all substrate cracks, existing or to come.**

Exclusion: any defects resulting from **the counter-pressure exercised at the back of the coating by un-drained water**

Reservation: surface colour may change

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*

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sheet ex.nr.10 Technoperl® – 0.6 mm

Watertight coating

<i>made of:</i>	single-layer solvent-free epoxy
<i>for:</i>	interior watertightness of permanent or temporary (retention) storage works
<i>in contact with:</i>	industrial effluents to be identified
<i>substrate:</i>	new concrete

Preparation as per *Technical Advice nr 1*

«Specification for preparation of concrete», and as a minimum:

◆ Obtaining	a healthy and homogeneous substrate, free from laitance, loose particles and dust, over 100 microns surface roughness, using appropriate mechanical means
◆ Removal	of dust with an industrial vacuum cleaner
◆ Impregnation	of concrete with waterborne epoxy Primer EDO using a roller, 250 g/sqm
◆ Bridging	of existing cracks with a 10 cm wide plasticized adhesive tape overlaid with a 20 cm wide strip of glassfabric tissue R45 , 450 g/sqm , impregnated and saturated with Technoperl® R at 250 g/lm , and sprinkled with Silica SB0 while progressing
◆ Complete rendering of the concrete surface	using our epoxy Render AR100 , 600-800 g/sqm , depending on state of surface

Proper adherence of a coating depends on the quality of the substrate and on its surface preparation. **Surface cohesion must be 1,5 MPa minimum** in the case of new concrete and **1 MPa minimum** in the case of rehabilitation of existing concrete.

Technoperl® coating – thickness 0.6 mm:

◆ Application	of Technoperl® T : In 1 layer using airless spray 45/1 minimum Theoretical consumption: 800 g/sqm for 600 microns ,
◆ Checking	as per <i>Technical Advice nr 3</i> “Performance testing” and <i>nr 4</i> “Dielectric testing”
◆ Repair	of defects as per <i>Technical Advice nr 5</i> “Retouching”

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee: up to 5 years, depending on the nature and temperature of the effluent

Reservations:

. any defects coming from a microscopic crack or a nonbridged/reinforced crack,
or from an underpressure non drained water in the back of the coating.
surface colour may change

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sheet ex.nr.101B

Technoperl® 800μ, on Sa2.5 & Primer

Anti-corrosion protective coating

made of: single-layer solvent-free epoxy

for: permanent storage works

in contact with: industrial effluents to be identified – $t \leq 50^{\circ}\text{C}$

substrate: new steel or steel in good surface state ⁽¹⁾

Preparation as per *Technical Advice nr 2*

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽²⁾ by any appropriate means to obtain equivalent to Sa 2.5 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application while progressing and before any flash-rusting of one stand-by coat of Epoxy primer **Screenperl®**, 75 μm dry film, 60 g/sqm
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, 400g/sqm.

Technoperl® coating – thickness 0.8 mm:

- ◆ Application of **Technoperl® T**:
In 1 layer using airless spray 45/1 minimum,
Theoretical consumption: 1100 g/sqm for 800 microns,
- ◆ Checking as per *Technical Advice nr.3* “Performance testing” and *nr.4* “Dielectric testing”
- ◆ Repair of defects as per *Technical Advice nr.5* “Retouching”

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A loss factor has to be added for practical consumption, **about 15%**, according to means and methods used.

Possible guarantee : 5 years, depending on the nature and temperature of the effluent.

In accordance with Circular G37 of the OHGPI

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- (1) This specification is for works to the maximum with the state C of the standard ISO 8501-1 :
- On the assumption of an important corrosion where the state D would be reached without however being exceeded, a specific rendering of the corrosion cankers is necessary with **Render AR100**, solventfree epoxy gel charged with silica.
 - If corrosion exceeds the state D, the implementation of a structure **Technoperl® R reinforced with glassfiber** is necessary before the application of the topcoat **Technoperl® T**.
- (2) In case of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.

sheet ex.nr.201B LP100/512 800μ, on Sa2.5 & Primer

Anti-corrosion protective coating

made of: single-layer solvent-free epoxy

for: permanent storage works

in contact with: industrial effluents to be identified – $t \leq 50^{\circ}\text{C}$

substrate: new steel or steel in good surface state ⁽¹⁾

Preparation as per *Technical Advice nr 2*

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽²⁾ by any appropriate means to obtain equivalent to Sa 2.5 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application while progressing and before any flash-rusting of one stand-by coat of Epoxy primer **Screenperl®**, 75 μm dry film, **60 g/sqm**
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, **400g/sqm**

LP100/512 coating – thickness 0.8 mm:

- ◆ Application of LP100/512:
In 1 layer using airless spray 45/1 minimum,
Theoretical consumption: **1150 g/sqm** for **800 microns**,
- ◆ Checking as per *Technical Advice nr.3* “Performance testing” and *nr.4* “Dielectric testing”
- ◆ Repair of defects as per *Technical Advice nr.5* “Retouching”

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A loss factor has to be added for practical consumption, **about 15%**, according to means and methods used.

Possible guarantee : 5 years, depending on the nature and temperature of the effluent.

In accordance with Circular G37 of the OHGPI

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- (1) This specification is for works to the maximum with the state C of the standard ISO 8501-1 :
- On the assumption of an important corrosion where the state D would be reached without however being exceeded, a specific rendering of the corrosion cankers is necessary with **Render AR100**, solventfree epoxy gel charged with silica.
 - If corrosion exceeds the state D, the implementation of a structure **Technoperl®R reinforced with glassfiber** is necessary before the application of the topcoat **LP100/512**.
- (2) In case of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.

sheet ex.nr.301B LP100/812 800μ, on Sa2.5 & Primer

Anti-corrosion protective coating

made of: single-layer solvent-free epoxy

for: permanent storage works

in contact with: industrial effluents to be identified – $t \leq 50^{\circ}\text{C}$

substrate: new steel or steel in good surface state ⁽¹⁾

Preparation as per [Technical Advice nr 2](#)

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽²⁾ by any appropriate means to obtain equivalent to Sa 2.5 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application while progressing and before any flash-rusting of one stand-by coat of Epoxy primer **Screenperl®**, 75 μm dry film, **60 g/sqm**
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, **400g/sqm**

LP100/812 coating – thickness 0.8 mm:

- ◆ Application of LP100/812:
In 1 layer using airless spray 45/1 minimum,
Theoretical consumption: **1100 g/sqm** for **800 microns**,
- ◆ Checking as per [Technical Advice nr.3](#) “Performance testing” and [nr.4](#) “Dielectric testing”
- ◆ Repair of defects as per [Technical Advice nr.5](#) “Retouching”

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Possible guarantee : 5 years, depending on the nature and temperature of the effluent.

In accordance with Circular G37 of the OHGPI

*This proposal is based on n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
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- ⁽¹⁾ This specification is for works to the maximum with the state C of the standard ISO 8501-1 :
- On the assumption of an important corrosion where the state D would be reached without however being exceeded, a specific rendering of the corrosion cankers is necessary with **Render AR100**, solventfree epoxy gel charged with silica.
 - If corrosion exceeds the state D, the implementation of a structure **Technoperl®R reinforced with glassfiber** is necessary before the application of the topcoat **LP100/812**.
- ⁽²⁾ In case of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.

sheet ex.nr.400B Gelcoat SV102 600μ, on Sa2.5 & Primer

Anti-corrosion protective coating

made of: single-layer solvent-free epoxy

for: permanent storage works

in contact with: industrial effluents to be identified

substrate: new steel or steel in good surface state ⁽¹⁾

Preparation as per *Technical Advice nr 2*

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽²⁾ by any appropriate means to obtain equivalent to Sa 2.5 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application while progressing and before any flash-rusting of one stand-by coat of Epoxy primer **Screenperl®**, 75 μm dry film, **60 g/sqm**
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, **400g/sqm**

Gelcoat SV102 coating – thickness 0.6 mm:

- ◆ Application of **Gelcoat SV102:**
In 1 layer using airless spray 45/1 minimum, or roller with spalter smoothing, in 2 passes from 2h to 6h of interval, Theoretical consumption: **800 g/sqm** for **600 microns**,
- ◆ Checking as per *Technical Advice nr.3* “Performance testing” and *nr.4* “Dielectric testing”
- ◆ Repair of defects as per *Technical Advice nr.5* “Retouching”

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A loss factor has to be added for practical consumption, **about 15%**, according to means and methods used.

Guarantee: 5 years, depending on the nature and temperature of the effluent

In accordance with Circular G37 of the OHGPI

This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations To become effective, it must have been formalised in a duly signed guarantee commitment certificate.

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- (1) This specification is for works to the maximum with the state C of the standard ISO 8501-1:
- On the assumption of an important corrosion where the state D would be reached without however being exceeded, a specific rendering of the corrosion cankers is necessary with **Render AR100**, solventfree epoxy gel charged with silica.
 - If corrosion exceeds the state D, the implementation of a structure **Technoperl® R reinforced with glassfiber** is necessary before the application of the topcoat **Gelcoat SV102**.
- (2) In case of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.

sheet ex.nr.701B

AR100/MD4 800μ, on Sa3 & Primer

Anti-corrosion protective coating

made of: single-layer solventfree epoxy

for: permanent storage works

in contact with: industrial effluents to be identified

substrate: new steel or steel in good surface state ⁽¹⁾

Preparation as per [Technical Advice nr 2](#)

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽²⁾ by any appropriate means to obtain equivalent to Sa3 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application while progressing and before any flash-rusting of one stand-by coat of Epoxy primer **Screenperl®**, 75 μm dry film, **60 g/sqm**
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, **400g/sqm**

AR100/MD4 coating – thickness 0.8 mm:

- ◆ Application of AR100/MD4:
In 1 layer using airless spray 45/1 minimum,
Theoretical consumption: **1250 g/sqm** for **800 microns**,
- ◆ Checking as per [Technical Advice nr.3](#) “Performance testing” and [nr.4](#) “Dielectric testing”
- ◆ Repair of defects as per [Technical Advice nr.5](#) “Retouching”

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A **loss factor** has to be added for practical consumption, **about 15%**, according to means and methods used.

Possible guarantee : 5 years, depending on the nature and temperature of the effluent.

In accordance with Circular G37 of the OHGPI

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*

◆◆◆◆◆

- ⁽¹⁾ This specification is for works to the maximum with the state C of the standard ISO 8501-1:
- On the assumption of an important corrosion where the state D would be reached without however being exceeded, a specific rendering of the corrosion cankers is necessary with **Render AR100**, solventfree epoxy gel charged with silica.
 - If corrosion exceeds the state D, the implementation of a structure **Technoperl® R reinforced with glassfiber** is necessary before the application of the topcoat **AR100/MD4**.
- ⁽²⁾ In case of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.

sheet ex.nr.110B Technoperl® / 1 glassmat

Anti-corrosion reinforced protective coating

made of: solvent-free epoxy reinforced with 450 g/sqm of fiberglass

for: permanent storage works
in contact with: industrial effluents to be identified – $t \leq 50^{\circ}\text{C}$

substrate: new steel or existing steel with limited corrosion

Preparation as per [Technical Advice nr 2](#)

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽¹⁾ by any appropriate means to obtain equivalent to Sa 2.5 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application ⁽²⁾ while progressing and before any flash-rusting of one stand-by coat of Epoxy primer **Screenperl®**, 75 µm dry film, 60 g/sqm
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, 400g/sqm

System Technoperl® / 1 glassmat 450 – thickness 2 mm:

- ◆ Uninterrupted laminate of fiberglass/epoxy **Technoperl® R**, as per [Technical Advice nr.14](#):
Technoperl® R coat for impregnation, using a roller, 600 microns, 800 g/sqm
M450 type glassmat, to be unrolled and debubbled using a special roller, 450 g/sqm
Technoperl® R coat for saturation, using a roller, 500 microns, 700 g/sqm
Silica SB0 to be sprinkled while progressing by mechanical projection, 400 g/sqm
- ◆ Checking with [Technical Advice nr.3](#) “Performance testing” and [nr.4](#) “Dielectric testing
- ◆ Repair of defects as per [Technical Advice nr.5](#) “Retouching”
- ◆ Top coat One coat of **Technoperl® T**, solventfree epoxy, using airless spray, 600 microns, 800 g/sqm

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A loss factor has to be added for practical consumption, **about 15%**, according to means and methods used.

Possible guarantee : 5 years, depending on the nature and temperature of the effluent.

In accordance with Circular G37 of the OHGPI

*This proposal is based on our n°FA0095300, products civil liability insurance policy “after delivery”, within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*

◆◆◆◆◆

- (1) In case of a risk of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.
- (2) Is not mandatory in the case of treatment of small steel tanks where there is no risk of reoxidation of the steel after blasting:
in this case, its roughness will be increased to 100 microns or rough G.

sheet ex.nr.112B Technoperl® / 3 glassmats

Anti-corrosion reinforced protective coating

made of: solvent-free epoxy reinforced with 1350 g/sqm of fiberglass

for: permanent storage works
in contact with: industrial effluents to be identified – $t \leq 50^{\circ}\text{C}$

substrate: new steel or corroded existing steel

Preparation as per [Technical Advice nr 2](#)

«Specification for preparation of steel», and as a minimum:

- ◆ Grinding of barbs and welding projections until elimination, and of the weld beads and sharp angles for softening
- ◆ Blasting ⁽¹⁾ by any appropriate means to obtain equivalent to Sa 2.5 standard, with a Medium G or a Rt 50-75 microns profile
- ◆ Removal of dust with an industrial vacuum cleaner
- ◆ Application ⁽²⁾ while progressing and before any flash-rusting of one stand-by coat of solvent epoxy, **Screenperl®**, 75 µm dry film, **60 g/sqm**
Silica SB 0 to be sprinkled after 1h minimum and before 2h30 maximum, **400g/sqm**

System Technoperl® / 3 glassmats 450 – thickness 4 mm:

- ◆ Uninterrupted laminate of fiberglass/epoxy **Technoperl® R**, as per [Technical Advice nr.14](#):
One impregnating coat of **Technoperl® R**, using a roller, **600 microns, 800 g/sqm**
M450 type glass mat, to be unrolled and debubbled using a special roller, **450 g/sqm**
Same operation for the **2nd**, then the **3rd** glassmat
One saturation coat of **Technoperl® R**, using a roller, **500 microns, 700 g/sqm**
Silica SB 0 to be sprinkled while progressing by mechanical projection, **400 g/sqm**
- ◆ Checking with [Technical Advice nr.3](#) "Performance testing" and [nr.4](#) "Dielectric testing"
- ◆ Repair of defects as per [Technical Advice nr.5](#) "Retouching"
- ◆ Top coat One coat of **Technoperl® T**, solventfree epoxy, using airless spray, **600 microns, 800 g/sqm**

Application conditions: In accordance with the rules of the art and the indications of our data sheets and technical advices.

A loss factor has to be added for practical consumption, **about 15%**, according to means and methods used.

Possible guarantee : 5 years, depending on the nature and temperature of the effluent.

In accordance with Circular G37 of the OHGPI

*This proposal is based on our n°FA0095300, products civil liability insurance policy "after delivery", within its terms and limitations
To become effective, it must have been formalised in a duly signed guarantee commitment certificate.*

◆◆◆◆◆

- (1) In case of a risk of sweating of steel plates which contained oily products, observe 48 h delay after blasting.
The appearance of brown stains must lead to a new blasting onto the affected areas until they disappear.
- (2) Is not mandatory in the case of treatment of small steel tanks where there is no risk of reoxidation of the steel after blasting:
in this case, its roughness will be increased to 100 microns or rough G.



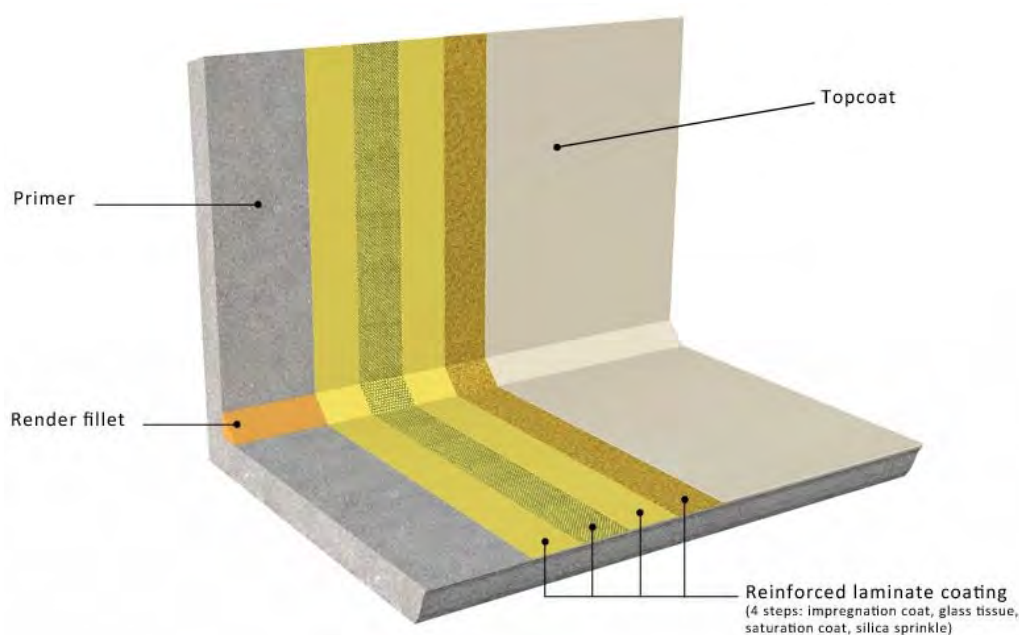
**Max
Perlès**
advanced industrial coatings

Coating of concrete structures

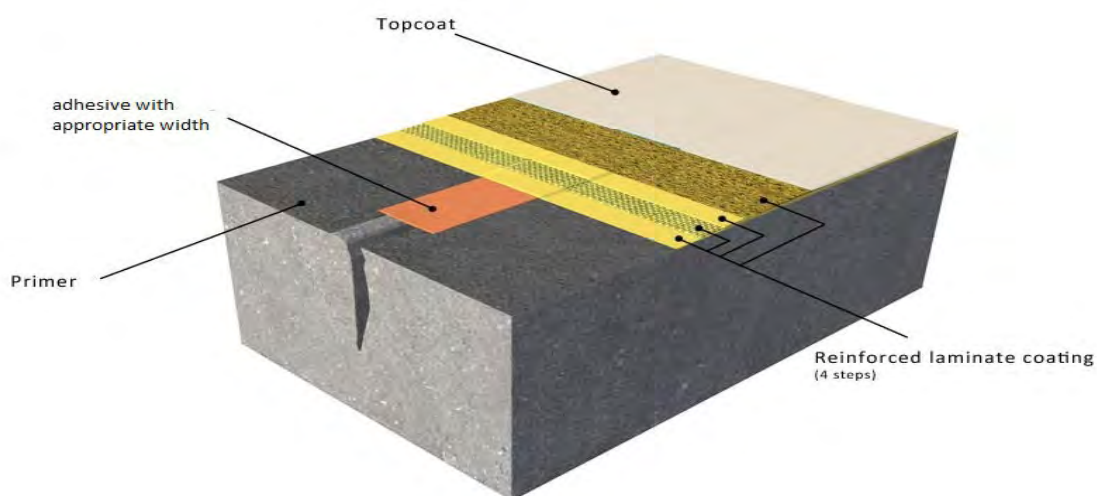
December 2024

Dealing with singular points: Sketch Book

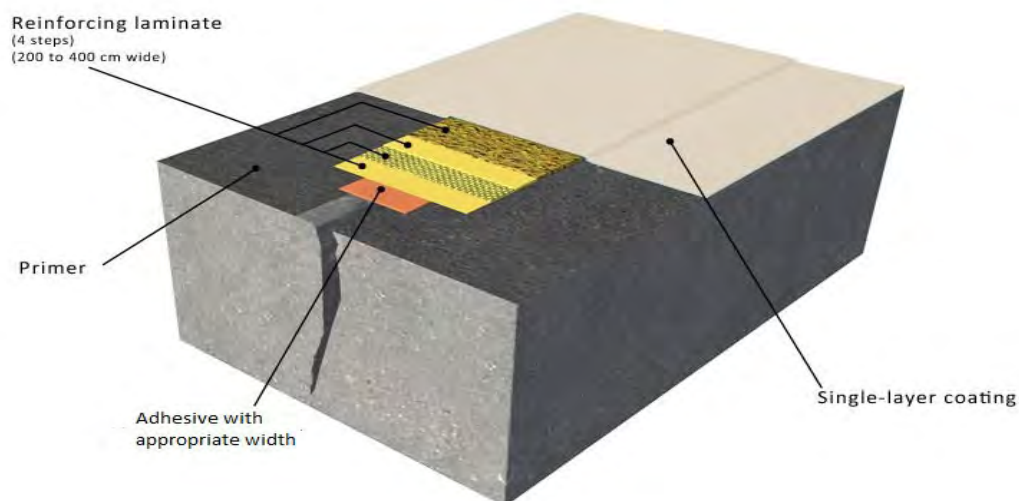
Layered presentation of a laminate coating



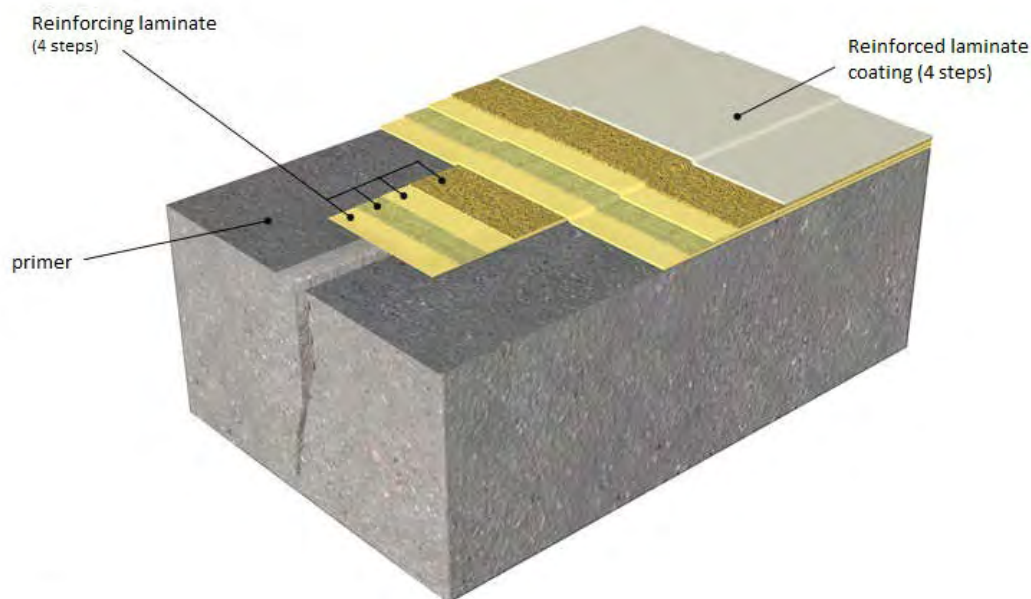
Sketch no.1: Treating a non active and non penetrating crack when applying a laminate coating



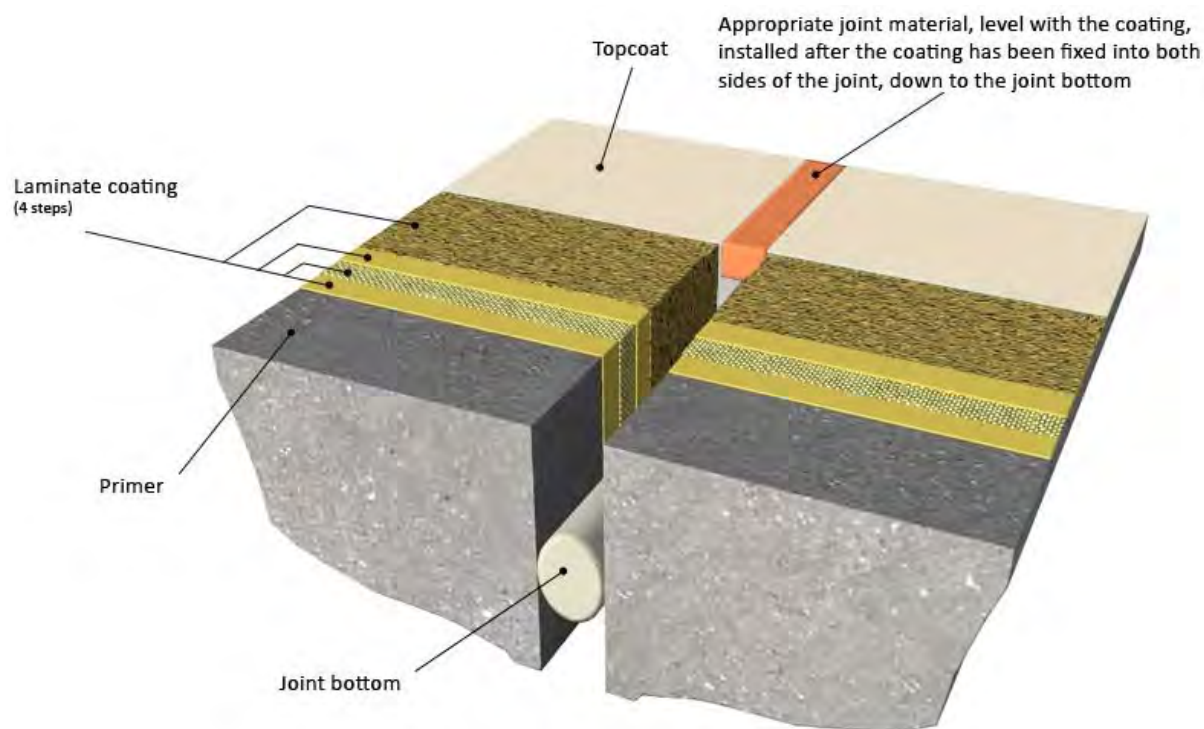
Sketch no.2: Treating a crack when applying a single-layer coating



Sketch no.3: Treating a crack when applying a laminate coating

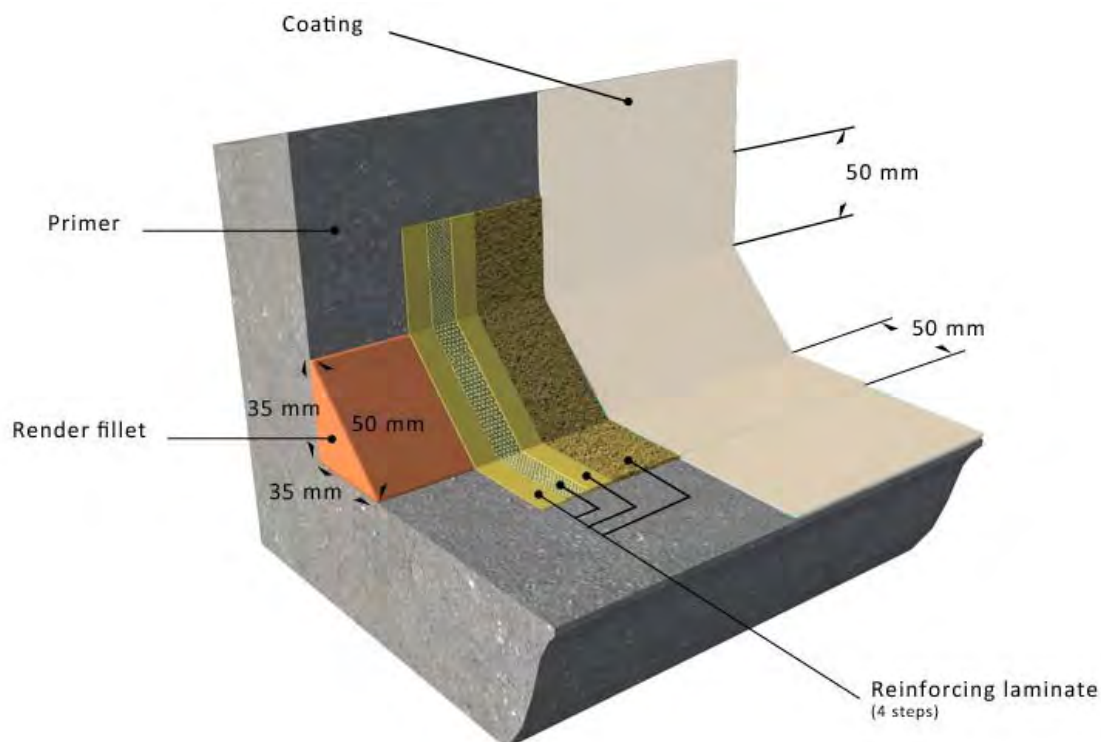


Sketch no.4: Treating an expansion joint or an active and penetrating crack when applying a laminate coating

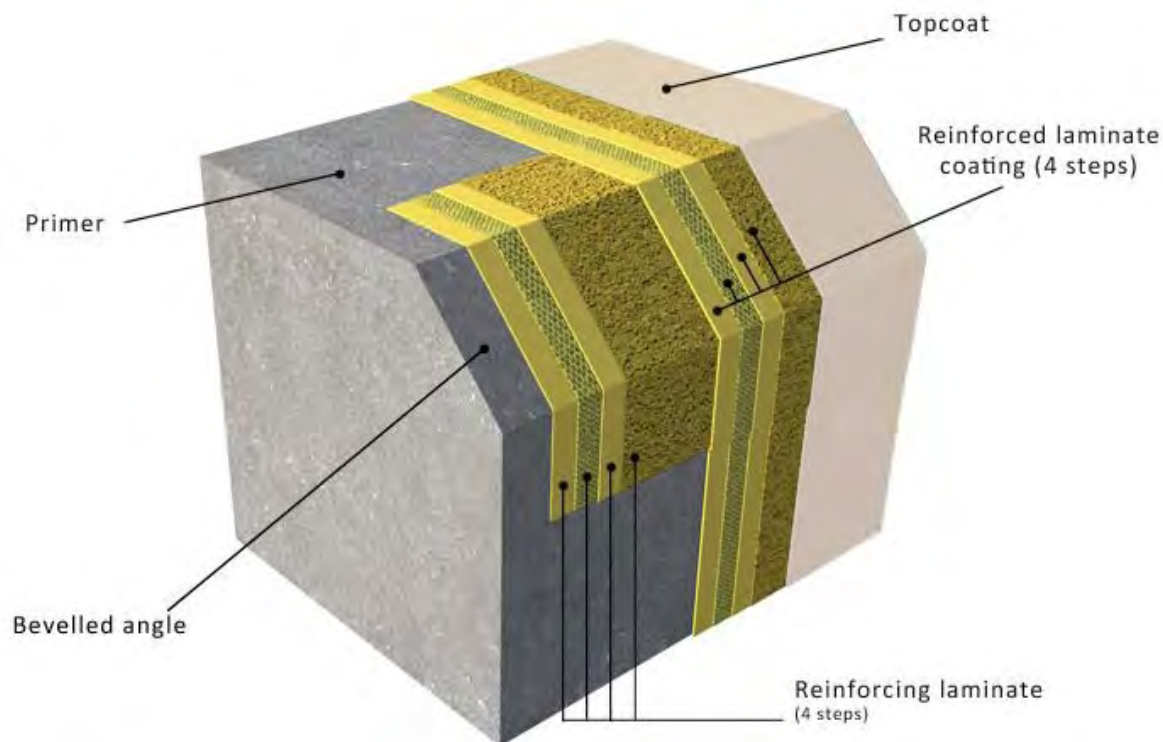


Treatment is the same when applying a single-layer coating

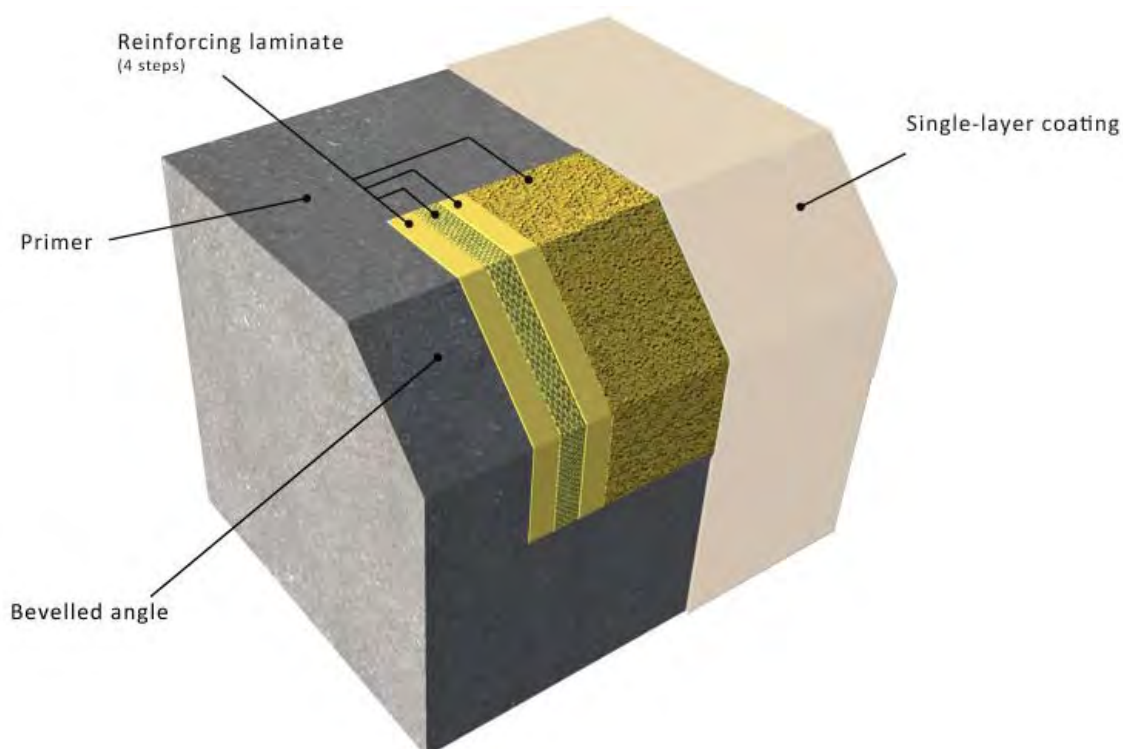
Sketch no.5: Treating a closed angle corner



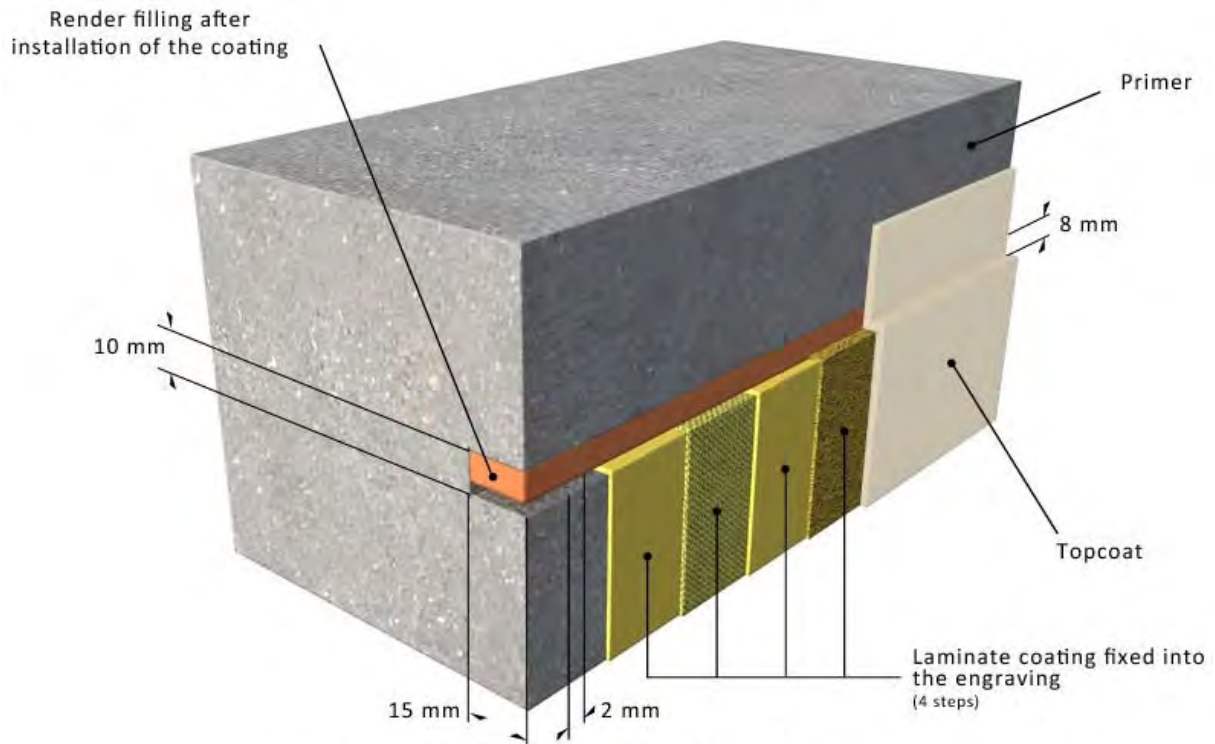
Sketch no.6: Treating an open angle when applying a laminate coating



Sketch no.7: Treating an open angle when applying a single-layer coating

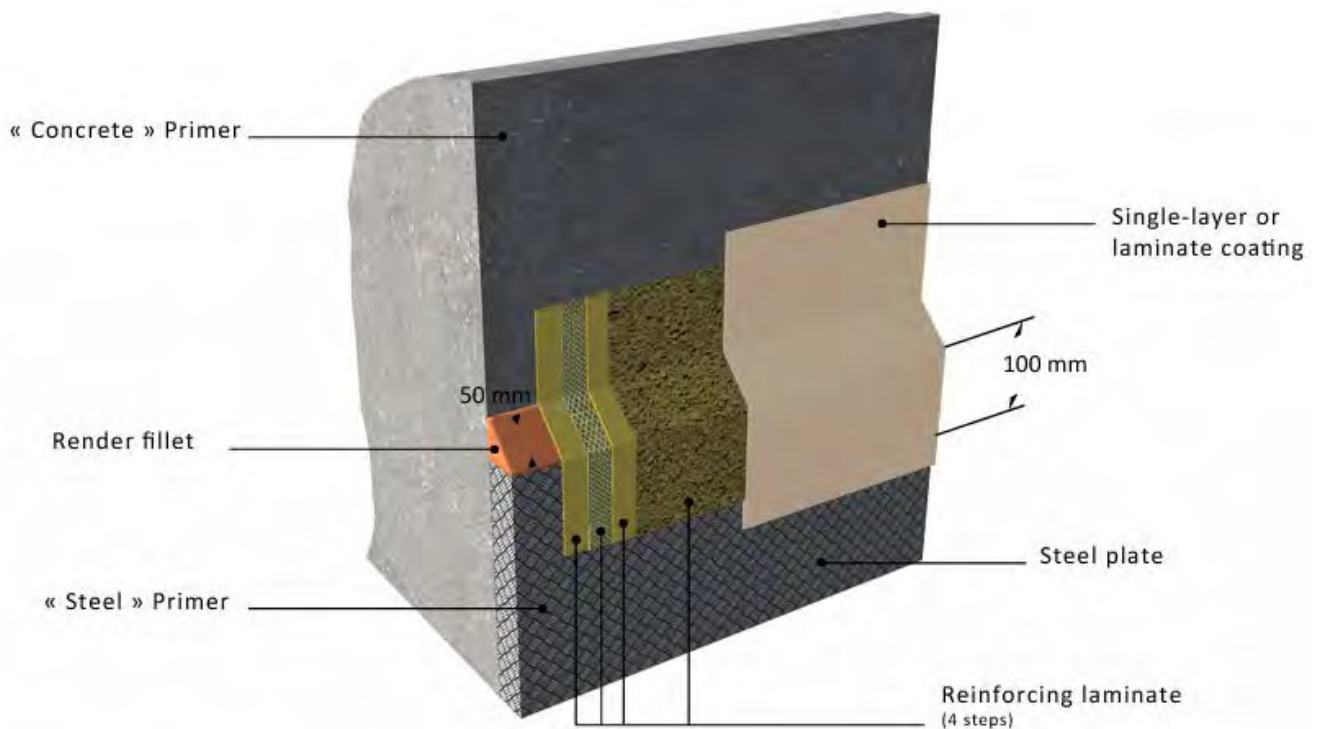


Sketch no.8: Treating an engraving when applying a laminate coating



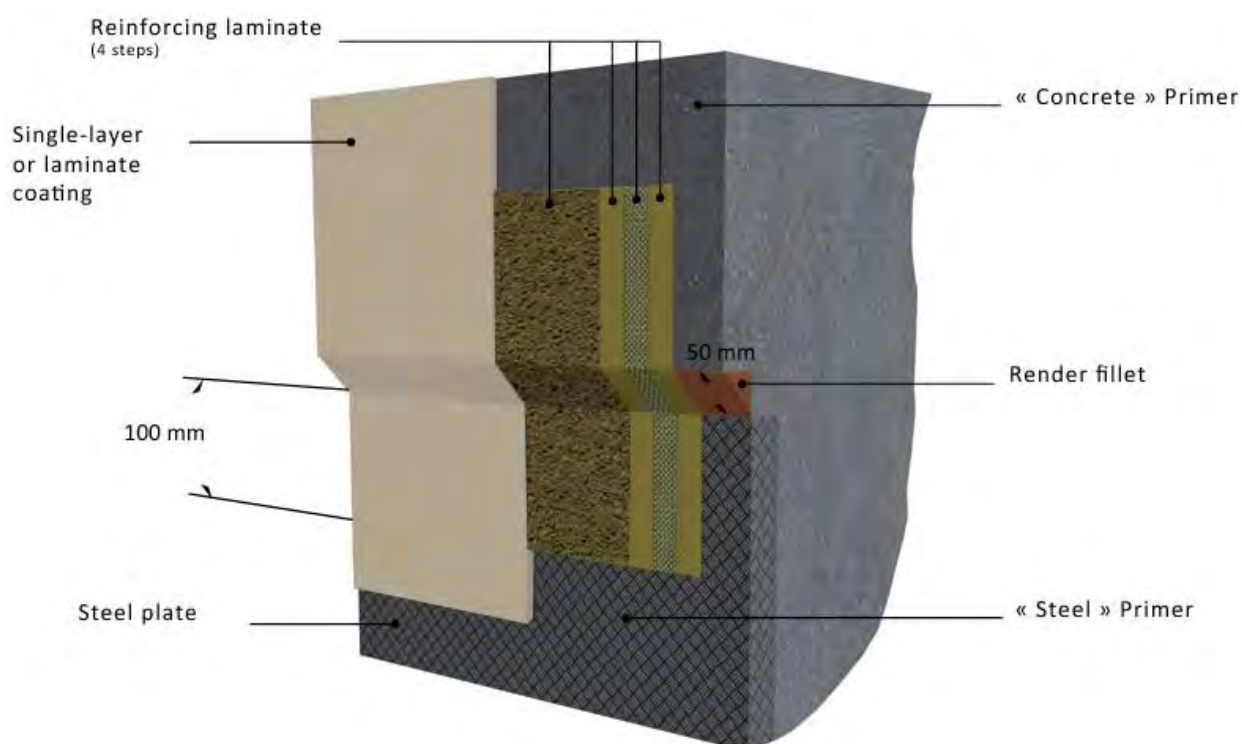
Treatment is the same when applying a single-layer coating

Sketch no.9: Treating an outgoing steel plate

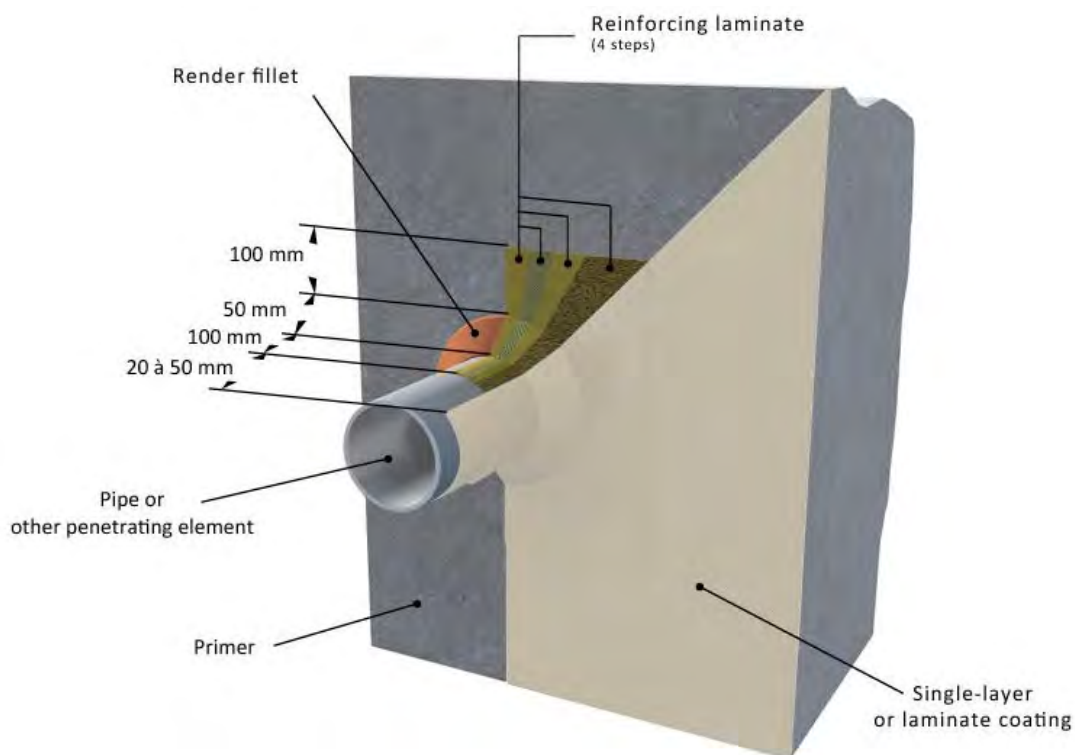


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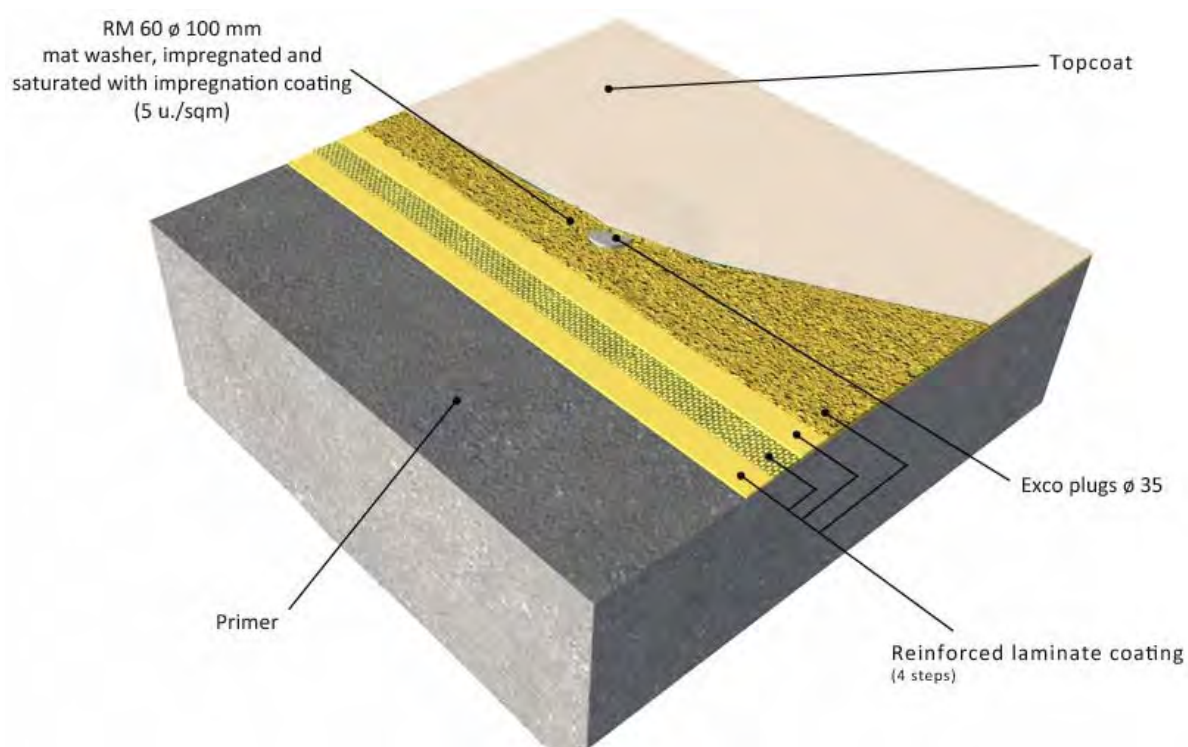
Sketch no.10: Treating an ingoing steel plate



Sketch no.11: Treating an incoming pipe or other penetrating element



Sketch no.12: Treating a mechanically-fixed (or anchored) coating



Technical specification

Waterproof, Watertight and
Protective coating.

7. Performance testing and retouching

Testing is performed by the application company to check the reliability of its work.

Tests take place:

- > during the application
- > after the application.

They are carried out in conformity with the processes described in our *Technical Advice Nr. 3 "Performance Testing"* and *Technical Advice No. 4 "Dielectric Testing"* - see appendix 2.

They may lead to repairs or retouches using the *Technical Advice Nr. 5 "Retouching"* – see appendix 2.

8. Technical assistance

It is provided by our **Technical Assistance Department** upon request from the application contractor.

It comprises:

- > theoretical and practical training
- > recapitulating the main implementation phases
- > performing jointly with the application company a **"reference zone"** on a representative area.

9. Commissioning

It can take place after a certain waiting time which varies according to the curing time of the coating at different temperatures:

- > 10°C: 10 days
- > 20°C: 7 days
- > 30°C: 4 days
- > 40°C: 3 days

10. Servicing / maintenance / repairs

They must be ensured in compliance with the principles described in Chapter 10 of the ITBTP Annals. Refer also to the appropriate specific details in the *Technical Advice No. 5 "Retouching"* – see appendix 2.

Technical specification

Waterproof, Watertight and
Protective coating.

11. Qualification of application companies

They must:

- > either give proof of successful and equivalent experiences under similar conditions,
- > or have received from us significant training specific to the products to be applied.

12. Warranty – modalities and operation

- Principle of operation:

It operates on the principle described in Chapter 11 of the ITBTP Annals.

- Definition:

This is a **performance guarantee** meaning that the coating or lining implemented is capable of fulfilling the functions of:

- > waterproofing or watertightness and protection of the interior surfaces of a concrete structure
- > protection of the interior surfaces of a steel structure
- > non pollution of the contents, where appropriate, under specified conditions and for a specified time.

- Criteria:

They are studied according to the structure's specific operating parameters.

These criteria are notably:

- > the degree of allowable cracking for the waterproofing or watertightness function
- > possible nature, concentration, pH and temperature of the effluents.

- Operating mode:

In all cases, the guarantee is **jointly** agreed to by *max perlès et cie* and the application contractor.

It is materialized in a **Joint guarantee** co-signed by the two parties and handed over to the beneficiary client / building owner.

It stipulates that, in case of a problem, the costs for removing the defective coating and supplying and applying a new coating are covered.

It is covered by an **insurance policy** taken out by each of the joint parties for its own liability according to the model hereafter.



Insurance Certificate – General Liability

The undersigned, SCOR Europe SE, having its head office at 5 Avenue Kléber - 75 116 Paris - France, hereby certifies that the company:

MAX PERLES et Cie
4 rue du Professeur René Dubos
60119 HENONVILLE

is insured under the policy n° **FA0095300** underwritten with our company in respect of the pecuniary consequences of its civil liability risks that may incur as a result of bodily injury, material and immaterial damage caused to third parties and attributable to the activities insured by this policy.

Activity: Sale of products for the execution of covering work for storage and transport capacities in the field of industry and chemistry.

The guarantees of the contract are exercised up to the amounts indicated below.

Combined Insurance limit:

PUBLIC LIABILITY / PRODUCT LIABILITY

ALL DAMAGES COMBINED (bodily injured, property damages & financial losses)**10 M€** per policy period

Including:

- Pure Financial Losses ("D.I.N.C.") with the amount of **5 M€** per year
- "Faute inexcusable de l'employeur" with the amount of **5 M€** per year
- Dismantling/Reinstalling costs with the amount of **5 M€** per year
- Professional liability with the amount of **2.5 M€** per year
- Pollution Sudden and Accidental (classified locations excluded) with the amount of **3 M€** per year
- Damages resulting from exports to the USA/Canada, all damages aggregate (Bodily injuries, Property damages and Financial losses): with the amount of **5 M€** per year
- Including: Pure financial losses ("D.I.N.C.") on "Loss of use" basis with the amount of **1 M€** per year

DEFENSE AND RECOURSE: EUR 30'000 per claim and per year

Limits shown above may have been reduced by paid claims.

The present certificate is valid for the period from 01/01/2025 to 31/12/2025 inclusive, subject to the payment of the premium, and subject to the possibility of suspension or termination of the policy during the policy period for the cases provided for by the French Insurance Code or the policy.

It is addressed to whom it may concern and cannot bind our company beyond the limits of the clauses and conditions of the policy that it refers to and notably with respect to the activities insured by this policy.

This certificate constitutes only an assumption of coverage. The coverage solely applies within the terms and conditions of the General Third-Party liability policy n° **FA0095300**.

Issued in Paris, 12/12/2024


Alain GILLES / Technical accountant

Technical specification

Waterproof, Watertight and
Protective coating.

appendix 1

Product technical Data sheets

EDO PRIMER
SCREENPERL

AR100 RENDER

TECHNOPERL®

LP100/512
LP100/812
GELCOAT SV102
AR100/MD4

FIBERGLASS FABRICS P45, P80, P120



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

Primer

EDO

waterborne epoxy

scope:

concrete preparation

CHARACTERISTICS

Description / purpose

Where: On concrete or under our epoxy systems.

What: Improving adhesion and wetting ability for our epoxy systems.

Reducing or even stopping of water infiltrations before coating.

Primer EDO is a component of two systems that carry a **CE Marking** and are adapted for the following protection situations: principle 1, method 1.3; principle 2, method 2.2 and principle 8, method 8.2 of Norm NF EN 1504-2.

Colour / finish

Clear / satin.

Packaging

In 2 separate cans, pre-adjusted for 8 kg.

Proportions, *by weight*: base **385** / hardener **615**.

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures of between 1°C/34°F and 35°C/95°F ⁽¹⁾.

V.O.C. content

0 g/l according to ISO 11890-1 (statistic average).

Composition

Resin: epoxide Pigments: none
Hardener: polyamide Vehicle: water

Specific gravity (mix) at 20°C/68°F

1.20 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight : 47 % ± 2 as per ISO 3251
By volume : 36 % per calculation

Viscosity (mix) at 20°C/68°F

Fluid.

⁽¹⁾ which might increase or decrease by 10°C/50°F, once only, during a 5 days max transport time to destination.

IMPLEMENTATION

For all use:

refer to relevant material safety data sheets indicating risk sentences and safety recommendations

Surface preparation

Concrete free from oil, laitance and dust.

Possible application on damp but non sweating surface.

Instructions for use

- **Air temperature for application:**

Substrate: 3°C/37°F above dewpoint,
with 5°C/41°F at least ♦ 45°C/113°F at most.

Product: 5°C/41°F mini ♦ 35°C/95°F maxi.

- **Reducing viscosity when temp. < 15°C/60°F:** add 10% water to the hardener *prior to mixing with the base*.

- **Mix:** Pour *the base into hardener* while carefully stirring mechanically until a perfectly homogeneous mixture is obtained.

- **Maturing:** none.

- **Potlife mixture** at 20°C/68°F: 2 hours ⁽²⁾

- **Application:** roller or brush, exclusively.

⁽²⁾ The limit shows when a separation of phases becomes visible on the surface, producing a "turned" mix effect.

Consumption / thickness

- 250 g/sqm in a single coat. EDO being an impregnation material, no specific thickness is required.
- 2, even 3 coats should be applied when lasting dampness on the substrate or in case of infiltration risks.

Curing at 10°C/50°F – 30°C/86°F

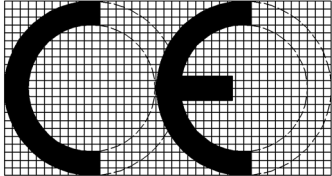
- Dust free: 6 and 3 hours
 - Recoatable: mini: 6 and 3 hours ♦ maxi : none
- Make sure of absence of humidity before recoating.**

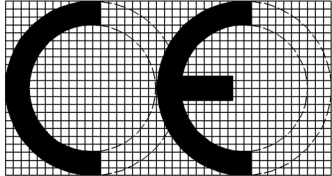
Precautions and safety

Waterborne product. Flash point (cc) : >100°C/212°F

Cleaning of application equipment

- Immediately after use : water
 - Afterwards and up to 3 hours standby :
- Flammable ED Thinner – Flash point (cc) : 25°C/77°F.


Primaire EDO – Aquaperl T Max Perlès – 4 rue du professeur Dubos – BP 80439 – 60119 Hénouvville
16
1164-CPR-PPR008 EN 1504-2 : 2005 DOP : 16.08.001
Produits de protection de surface Revêtement
Perméabilité au CO₂ : NF EN 1062-6 : S_D > 50 m
Perméabilité à la vapeur d'eau : NF EN ISO 7783-2 : Classe II
Absorption capillaire et perméabilité à l'eau : NF EN 1062-3 : W < 0,1 kg / (m² x h^{0,5})
Adhérence NF EN 1542 Pour système rigide avec trafic ≥ 2,0 MPa


Primaire EDO – Bioperl T Max Perlès – 4 rue du professeur Dubos – BP 80439 – 60119 Hénouvville
17
1164-CPR-PPR008 EN 1504-2 : 2005 DOP : 17.12.001
Produits de protection de surface Revêtement
Perméabilité au CO₂ : NF EN 1062-6 : S_D > 50 m
Perméabilité à la vapeur d'eau : NF EN ISO 7783-2 : Classe II
Absorption capillaire et perméabilité à l'eau : NF EN 1062-3 : W < 0,1 kg / (m² x h^{0,5})
Adhérence NF EN 1542 Pour système rigide avec trafic ≥ 2,0 MPa



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

SCREENPERL®

conductive epoxy primer, solvent-free

*scope:
surface treatment*

CHARACTERISTICS

Description / purpose

Where: On concrete or metal , under our epoxy coatings.

What: Conductive primer guaranteeing homogeneous “holiday” (porosity) testing of the watertightness of the coating above. It also blocks the surface porosity of concrete substrates and resists a high degree of counterpressure through the concrete in the case of underground structures.

Colour / finish

Black / glossy.

Packaging

In 2 separate cans, pre-adjusted for 8 kg.

Proportion, *by weight*: base **60** / hardener **40**.

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures of between 5°C/32°F and 35°C/95°F.

V.O.C. content

42 g/l (maximum), according to ISO 11890-1 (P1-M2).

Properties and benefits

SCREENPERL also provides a high degree of adherence to a concrete substrate (CSTB test R2EM-SIST-19-26078323) thereby resisting to capillary and osmotic blistering (CSTB test R2EM-SIST-18-26075428).

Composition

Resin: epoxide
Hardener: polyamine
Pigments: carbonated

Specific gravity (mix) at 20°C/68°F

1.05 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight : 96-100% after 6 hrs maturation - ISO 3251
By volume : 100 % per calculation

Viscosity (mix) at 20°C/68°F

36 Poises ± 4 poises.

Electrical resistivity (by volume) :

10⁶ Ω/sq as per ASTM D257.

APPLICATION

For all uses:

refer to relevant material safety data sheets indicating risk sentences and safety recommendations

Surface preparation

Concrete free of oil, laitance and dust.

Steel: after smoothing of sharp edges, abrasive-blasted surfaces to Sa 2.5 standard, Medium G or Rt 50-75µm.

Products preparation

24 hours minimum before application, place the cans in a temperate area at 10°C/50°F min and 30°C/86°F max.

Application temperatures

Ambient temperature: 5°C to 35°C

Relative humidity: below 85%

Substrate temperature: 5°C to 35°C and 3°C minimum above dewpoint (on concrete)

Product:

While mixing: 10°C /50°F mini ♦ 30°C/86°C maxi

Manual use : at mixing temperature

Mixing

- **Never make up partial mixtures**, in order to avoid the risks of incorrect proportions.
- Stir the base with a power mixer to an even consistency. Then add hardener and continue stirring until a perfectly homogeneous mixture is obtained.

Conditions for use

- No maturing before use.
- Start the application immediately after mixing.
- **SCREENPERL® should never be diluted.**

Application

- roller or brush.

Pot-life of mixture

10°C/50°F	20°C/68°F	30°C/86°F
2 h 00	0 h 35	0 h 10

Consumption

- **Concrete** : 250 g to 300g /sqm . Can be higher if porosity of the concrete surface is high.
- **Steel** : 80±15 g/sqm for 75µm dry film thickness

Curing

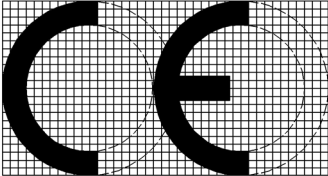
t°	Dust Free	Tack free	Overcoatable (mini-maxi)
10°C	-	-	10 h 00 -30 days
20°C	3 h 00	24 h 00	4 h 00 -15 days
30°C	-	-	2 h 00 -3 days

Precautions and safety

Solvent-free. Flash point (cf) : >100°C/212°F

Cleaning of application equipment

Flammable ED Thinner – Flash point (cf) : 25°C/77°F.


SCREENPERL – BIOPERL T Max Perlès – 4 rue du professeur Dubos – BP 80439 – 60119 Hénonville
20
1164-CPR-PPR008 EN 1504-2 : 2005 DOP : 20.11.001
Produits de protection de surface Revêtement
Perméabilité au CO₂ : NF EN 1062-6 : S_D > 50 m
Perméabilité à la vapeur d'eau : NF EN ISO 7783-2 : Classe II
Absorption capillaire et perméabilité à l'eau : NF EN 1062-3 : W < 0,1 kg/ (m² x h^{0,5})
Adhérence NF EN 1542 Pour système rigide avec trafic ≥ 2,0 MPa



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

Render AR100

solventfree epoxy

*scope:
concrete and steel
surface preparation*

OVERVIEW

Purpose

Where: Under our epoxy coating systems or under other chemically-compatible coatings.

What: Surfacing, rendering, filling cavities and joints, creating chamfers.

Which: Steel or concrete structures.

Description

Product : Solventfree epoxy.

Use : Light or heavy local or complete rendering and filling, creation of chamfers in angles. Thicknesses up to 30mm. Vertical or horizontal.

Properties and benefits

Mechanical properties :

Exceptional adhesion and sticking properties, with very high mechanical cohesion.

Usage properties :

RENDER AR100 is easy to use and multi-purpose. It requires neither sanding nor grinding.

Compliance with safety and regulatory requirements:

RENDER AR100 is **solventfree**, flash point (cc): > 90°C/194°F

for optimal safety and minimized application constraints. It is **aromatic amines and phthalates free** for compliance with current regulations.

CHARACTERISTICS

Packaging

- In 2 separate cans, pre-adjusted for 4 or 12 kg.
- Proportion *by weight*: base **85** / hardener **15**

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures of between 5°C/32°F and 35°C/95°F⁽¹⁾,
⁽¹⁾ which might increase or decrease by 10°C/50°F, once only during a 5 days max transport time to destination.

Colours

Yellow ochre, approaching RAL 8001.

Finish

Semi-mat.

V.O.C. content

17.7 g/l, according to ISO 11890-1 (statistic average).

Composition

Resin	:	epoxide
Hardener	:	non aromatic polyamine
Pigments	:	synthetic oxides
Filler	:	silicates/silica
Solvent	:	none

Specific gravity (mix) at 20°C/68°F

1.90 ± 0,05 g/ml as per ISO 2811

Solids content (mix)

By weight	:	96–100% after 6 hrs maturation - ISO 3251
By volume	:	100% per calculation

Viscosity (mix) at 20°C/68°F

Pasty.

APPLICATION

Conforming and controlled conditions during application and hardening periods are necessary to obtain required quality

For all uses :
Refer to relevant material safety data sheets as to risk sentences and safety recommendations

◆ Before:

Surface preparation

Concrete impregnated with **PRIMER EDO**, **AQUAPRIM** or **SCREENPERL®** :

Refer to relevant data sheets and *Technical Advice nr 1* :
« Specification for preparation of concrete ».

Steel : after smoothing of sharp edges, abrasive blasted surfaces to Sa 2,5 minimum. Average profile :

- In case of application of **ED1 VARNISH**, **AQUAPRIM** or **SCREENPERL®** primers (see data sheets) :
Medium G or Rt 50-75µ.
- In case of direct application : Rough G or Rt 100µ.

Always apply on clean and dry substrates

Products preparation

24 hours minimum before application, place the cans in a temperate area at 10°C/50°F min and 30°C/86°F max.

Application temperatures

Ambient temperature: 5°C to 35°C

Relative humidity: below 85%

Substrate temperature: 5°C to 35°C and 3°C minimum above dewpoint,

Product:

While mixing: 10°C /50°F mini ◆ 30°C/86°C maxi

Use : at mixing temperature

Mixing

- *Never make up partial mixtures*, in order to avoid the risks of incorrect proportions.
- Stir the base with a power mixer to an even consistency. Then add hardener and continue stirring until a perfectly homogeneous mixture is obtained.

Conditions for use

- No maturing before use.
- Start the application immediately after mixing.
- **RENDER AR100 should never be diluted.**

Application conditions

- Manual : Palette knife, spatula or trowel.
- Mechanically : Pump for paste-like product, or pneumatic double cartridge caulking gun with a static mixer

◆ During:

Potlife of mixture

10°C/50°F	20°C/68°F	30°C/86°F
4 h 00	2 h 00	1 h 00

Consumption / thickness per mm

1,9 kg/sqm.

This theoretical value should be increased by **10±5%** for practical consumption,, according to the nature of the substrate and the application.

Note:

Consumption will increase when surface temperature is < 20°C, making the product viscous.

Overcoating

No minimum or maximum delay after application and no particular prior conditions, except in the following case: if thickness is > 5 mm, or in the care of smoothing, there may be a rise of epoxy resin to the surface.

In this case it is necessary :

- either to sprinkle **SILICA SB0** or **F15** on the surface, while progressing,
- or to sand paper the surface, after at least 12/24 hours' drying according to temperature, in order to obtain a Rough G surface roughness.

◆ After:

Curing

t°	Dust free	Tack free
10°C	8 to 9 h 00	24 h 00
20°C	5 to 6 h 00	15 to 18 h 00
30°C	2 to 2 h 30	5 to 6 h 00

Cleaning of application equipment

Flammable ED Thinner. Flash point (cc): 25°C/77°F.



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

TECHNOPERL®

« cold applied » solventfree epoxy

scope:
industries

OVERVIEW

Purpose

Where: Interior of tanks, reservoirs, gutters, sumps, retention pits.

What: Contact with industrial effluents.

Which: Steel or concrete structures.

Description

Product: solventfree epoxy.

As **laminate lining**, it is designed for tightness in cement works, or for reinforcement of steel works in which corrosion resulted in significant damage to the substrate.

As **single thick coat**, it is suitable for anticorrosion of steel.

Use:

Technoperl® R: Impregnation/saturation of reinforcements

Technoperl® T: Top or single coat, from 400 to 1000µ

They can be applied with all the devices commonly used on job sites, see below **Application**.

Properties and benefits

Chemical performance:

Very good inertia to raw waters, detergents and greases, to many of diluted bases and acids, and to some gaseous environments: please consult us.

Mechanical resistance and proofing of laminate:

Especially high with laminate lining, as a result of its resistance to shearing, fissuring and underpressure.

Surface properties:

Aspect : uniform and seamless glossy surface.

Result : very easy to clean, no weak areas.

Compliance with safety and regulatory requirements:

Technoperl® is **solventfree**, flash point (cc): > 90°C/194°F for optimal safety and minimized application constraints.

It is **aromatic amines or phthalates free** for compliance with current regulations.

CHARACTERISTICS

Packaging

- In 2 separate cans, pre-adjusted: **R**: for 12 kg
T: for 12 kg.
- Proportion, *by weight*: base **3** / hardener **1**

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures between 0°C/32°F and 35°C/95°F⁽¹⁾,
⁽¹⁾ which might increase or decrease by 10°C/50°F, once only during a 5 days max transport time to destination.

Colours

R/T: Almond green.

Finish

Glossy with limited chalking and yellowing in operation *especially if implementation requirements are respected*.

Reinforcements

Please consult us.

V.O.C. content

R : 7.9 g/l, according to ISO 11890-1 (statistical average)

T : 12.3 g/l, according to ISO 11890-1 (statistical average)

Composition

Resin : epoxy
Hardener : non-aromatic polyamine
Pigments : synthetic oxides
Solvent : none

Specific gravity (mix) at 20°C/68°F

R/T : 1.33 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight : 96–100% after 6 hrs maturation - ISO 3251
By volume : 100% per calculation

Viscosity (mix) at 20°C/68°F

R : 5 000 mPa.s ± 1 000 ♦ 50 poises ± 10

T : 7 000 mPa.s ± 1 000 ♦ 70 poises ± 10

A slight evolution may happen during the storage period, with no effect on the application conditions.

IMPLEMENTATION

Conform and controlled conditions
During application and hardening periods
Are necessary to obtain required quality

For all use:
Refer to relevant material safety data sheets as to
risk sentences and safety recommendations

◆ Before:

Surface preparation

Concrete impregnated with **Primer EDO** or **Screenperl®**:
Refer to relevant data sheet and *Technical Advice nr1*
« Specification for preparation of concrete ».

Steel after smoothing sharp edges, on abrasive blasted
surfaces to Sa 2.5 degree. Average profile:

- In case of prior application of **Screenperl®** or **Varnish ED1** (see data sheet):

Medium G or Rt 50-75µ.

- In case of direct application: Rough G or Rt 100µ.

Our epoxy **laminates**, according to specification.

Always apply on clean and dry substrates

Products preparation

24 hours minimum before application, place the drums in a
temperate area at 10°C/50°F min and 30°C/86°F max.

Application temperatures

Substrate:

3°C/37°F mini above dew point,

with 5°C/41°F at least ◆ 45°C/113°F at most.

Product:

While mixing: 10°C/50°F mini ◆ 30°C/86°C maxi

Spraying: at 25/35°C // 77/86°F at hose exit

Manual use: at mixing temperature

Mixing

- **Never make up partial mixtures**, in order to avoid the risks of incorrect proportions.
- Stir the base with a power mixer to an even consistency. Then, add hardener and continue stirring until a perfectly homogeneous mixture is obtained.

Conditions for use

- No maturing before use.
- Start the application immediately after mixing.
- **Technoperl should never be diluted.**

Application

Laminate – grade R:

- Roller, or airless pump (see below **gradeT**) for the binder,
- Debubbler roller for the glass fiber,
- Mechanical sprinkling of Silica SB 0 before drying.

Detailed procedure is described in our *Technical Advice nr 14*
available on request.

singlecoat and/or topcoat – grade T:

- Airless spraying unit, with a 45/1 min pump ratio.
- Or Medium bristle roller, for small or difficult to access areas, on condition to **pay particular attention to the thickness and regularity of applied coat: this shall be followed by smoothing the surface with a flat brush.**

◆ During:

Pot life of mixture

Grades	10°C/50°F	20°C/68°F	30°C/86°F
R	3 h 00	1 h 00	0 h 25
T	2 h 00	0 h 35	0 h 10

In case of long lasting spraying application, the hose should be cleaned once per hour with ED Thinner.

Number of coats

2 per layer, except in case of multi-layer continuous application, plus 1 for topcoating or for a singlecoat.

Thicknesses

Laminate – grade R:

They are given upon specification, and vary with nature of the reinforcement: they are generally comprised between 2.0 and 4.0 mm, **including** a 500 to 800µ **topcoat**.

Top or Singlecoat – grade T:

Min 500 microns – max 1000 microns, according to spec.

Consumptions

Laminate – grade R:

- 1,4 kg/m² of binder for a P45 fabric-450 g/m²: 1,5 mm
- 1,8 kg/m² of binder for a P80 fabric-800 g/m²: 2,0 mm
- 2,2 kg/m² of binder for a P120 fabric-1200 g/m²: 2,5 mm

Top or singlecoat – grade T:

133 g/sqm per 100 microns thickness. This theoretical value should be **20±5% increased** to get it practical, according to nature of substrate and implementation method.

Note:

Consumption will increase by 100 to 300 g/m² when surface temperature is < 20°C, making the product viscous with its contact.

Cleaning of application equipment

Flammable ED Thinner. Flash point (cc): 25°C/77°F.

◆ After:

Curing

t°	Dust free	Tack free
10°C	R: 8 h 00 – T: 3 h 30	S: 24 h 00 – T: 12 h 00
20°C	R: 5 h 00 – T: 3 h 00	S: 15 h 00 – T: 10 h 00
30°C	R: 2 h 00 – T: 1 h 30	S: 6 h 00 – T: 3 h 30

Delay before use: 10, 7 or 4 days, depending on temperature.

Repairs

Report to our *Technical Advice nr 5*.

Replaces and cancels any former issue.

The above mentioned information is given with objectiveness but cannot involve our company beyond our manufacturer's responsibility.

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**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

Coating

LP100/512

solventfree epoxy coating

scopes:

*petroleum, foodstuffs
and energy*

OVERVIEW

Purpose

Where : Interior of primary and secondary storage containments, pipelines.

What : Contact with a large number of products : alcohol (but not wine), petroleum products, nuclear effluents, food stuffs, etc.

Which : Steel or concrete structures.

Description

Product: solventfree epoxy.

Use: Designed to supply a long-lasting solution for the internal waterproofing and protection of concrete and steel civil works either as the top coat of a multi-layer, glass-fiber-reinforced coating capable of resisting a certain degree of future cracking in a concrete substrate, or as a single-layer coating on concrete or steel.

Typical thickness: 300 to 1000 microns, horizontally as well as vertically.

Properties and benefits

Chemical Properties:

Foodgrade quality: report E16-15824 by IANESCO Lab.

Foodgrade quality: report E16-15824-2 by IANESCO Lab.

Decontamination test: report nr 06/11 by CEA Saclay.

Mechanical properties:

Taber abrasion test report nr CET0065246-6D1-m by CETIM Nantes.

Surface properties:

Aspect : uniform and seamless glossy surface.

Result : very easy to clean, no weak areas.

Compliance with safety and regulatory requirements:

LP100/512 is solventfree, flash point (cc): > 90°C/194°F for optimal safety and minimized application constraints.

It is **aromatic amines and phthalates free** for compliance with current regulations.

CHARACTERISTICS

Packaging

In 2 separate cans, pre-adjusted for 20 kg.

Proportions, *by weight*: base **1** / hardener **1**

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures of between 5°C/32°F and 35°C/95°F⁽¹⁾,
⁽¹⁾ which might increase or decrease by 10°C/50°F, once only during a 5 days max transport time to destination.

Colours

Sand-colored, approaching yellow RAL 1017

White on request

Finish

Glossy with limited chalking and yellowing in operation.

V.O.C. content

15.8 g/l, according to ISO 11890-1 (statistical average)

Composition

Resin	:	epoxy
Hardener	:	non-aromatic polyamine
Pigments	:	synthetic oxides
Solvent	:	none

Specific gravity (mix) at 20°C/68°F

1.43 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight : 96–100% after 6 hrs maturation - ISO 3251

By volume : 100% per calculation

Viscosity (mix) at 20°C/68°F

8 500 mPa.s ± 1 500 ♦ 85 poises ± 15

APPLICATION

Conforming and controlled conditions during application and hardening periods are necessary to obtain required quality

For all uses :
Refer to relevant material safety data sheets as to risk sentences and safety recommendations

◆ Before:

Surface preparation

Steel : after smoothing of sharp edges, abrasive-blasted surfaces to Sa 3 degree, or equivalent.

Average profile:

- In case of prior application of **VARNISH ED1**, **PRIMER W1**, or **AQUAPRIM** (see data sheet): Medium G or Rt 50-75µ.
- In case of direct application: Rough G or Rt 100µ.

Concrete impregnated with **PRIMER EDO**, **SCREENPERL®** or **AQUAPRIM**.

Refer to relevant data sheet and *Technical Advice nr1* "Specification for preparation of concrete"

Always apply on clean and dry substrates

Products preparation

24 hours minimum before application, place the cans in a temperate area at 10°C/50°F min and 30°C/86°F max.

Application temperatures

Ambient temperature: 5°C to 35°C

Relative humidity: below 85%

Substrate temperature: 5°C to 35°C and 3°C above dewpoint

Product:

While mixing: 10°C/50°F min ◆ 30°C/86°F max

Manual use: at mixing temperature

Spraying: at 30/35°C // 86/95°F min at hose exit.

Mixing

- *Never make up partial mixtures* in order to avoid the risk of incorrect proportions.
- Stir the base with a power mixer to an even consistency. Then add hardener and continue stirring until a perfectly homogeneous mixture is obtained.

Conditions for use

- No maturing before use.
- Start the application immediately after mixing.
- **LP100/512 should never be diluted.**

Application

- 1 or 2-component airless spraying unit, with a 45:1 min pump ratio, fitted with heating hose.
- Or medium bristle roller, for small or difficult to access areas, as long as particular attention is paid to the thickness and regularity of the applied coat. This shall be followed by smoothing the surface with a flat brush.

◆ During:

Pot-life of mixture

10°C/50°F	20°C/68°F	30°C/86°F
1 h 00	0 h 30	0 h 15

In case of long lasting spraying application, the hose should be cleaned every hour with ED Thinner.

Number of passes

One.

Thicknesses

300 to 1000 microns, according to specification.

Note:

Thicknesses are proposed in agreement with the method of the International standard ISO 19840:

Do not exceed 20% above the maximum value, except for pre-touchups and local overcoatings.

Theoretical consumption

143 g/sqm per 100 microns thickness.

This theoretical value should be by increased by **15±5 %** for practical consumption, according to the nature of the substrate and the method of application.

Note:

Consumption will increase by 100 to 300 g/sqm when surface temperature is < 20°C, making the product viscous.

Cleaning of application equipment

ED Thinner. Flash point (cc): 25°C/77°F.

◆ After:

Curing

t°	Dustfree	Tack free
10°C	6 h 00	20 h 00
20°C	3 h 00	11 h 00
30°C	1 h 30	4 h 00

Delay before use: 4, 7 or 10 days, depending on ambient temperature.

Repairs

Refer to our *Technical Advice nr 5*.

Replaces and cancels any former issue.

The above mentioned information is given with objectiveness but cannot involve our company beyond our manufacturer's responsibility.



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

Coating

LP100/812

solventfree novolac epoxy

scope:

chemical stresses

OVERVIEW

Intended use

Where : Internal protection of capacities and pipes.

What : Contact with chemically highly aggressive liquids, gas or solids – particularly in alkaline, alcoholic or food environments (except wine).

Which : Steel or concrete structures.

Description

Product : solventfree novolac epoxy.

Use : in a single layer – to avoid problems with delays between coats causing disbondings – using a high ratio airless spraying pump:

- either as a direct single coat
- or as a topcoat over a glassfibre-epoxy compound such as one of the « *perl* » range.

Typical thickness: in 1 coat, according to specification: 600 to 1000 microns, horizontally as well as vertically.

Properties and benefits

Chemical performance:

High inertia to a large number of basic reagents, alcohols, organic and mineral acids: please consult us.

Food-grade quality report RE 11/08076 by IANESCO Lab.

Application properties:

To take advantage of the safety and the comfort of an automatic dosing and mixing process by the spraying machine, gradually as needed.

Surface properties:

Aspect : uniform and seamless glossy surface.

Result : very easy to clean, no weak areas.

Compliance with safety and regulatory requirements:

LP100/812 is solventfree, flash point (cc): > 90°C/194°F for optimal safety and minimized application constraints.

It is **aromatic amines, phthalates and styrene free** for compliance with current regulations.

CHARACTERISTICS

Packaging

In 2 separate cans, pre-adjusted for 20 kg.

Proportion, *by volume*: base **1** / hardener **1**

Storage conditions

- 18 months maximum, in the original cans, never opened,
- Under shelter,
- At temperatures of between 0°C/32°F and 35°C/95°F⁽¹⁾,
⁽¹⁾ which might increase or decrease by 10°C/50°F, once only during a 5 days max transport time to destination.

Colours

Beige.

Finish

Glossy with limited chalking and yellowing in operation, ***especially if implementation requirements are respected.***

V.O.C. content

17.7 g/l, according to ISO 11890-1 (statistical average)

Composition

Resin	:	novolac epoxy
Hardener	:	non-aromatic polyamine
Pigments	:	stable synthetic oxides
Solvent	:	none

Specific gravity (mix) at 20°C/68°F

1.34 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight	:	96–100% after 6 hrs maturation - ISO 3251
By volume	:	100% per calculation

Viscosity (mix) at 20°C/68°F

10 000 mPa.s ± 1500 ♦ 100 poises ± 15

A slight evolution may happen during the storage period, without any effect on the application conditions.

IMPLEMENTATION

Conform and controlled conditions during application and hardening periods are necessary to obtain required quality

For all use:
Refer to relevant material safety data sheets as to risk sentences and safety recommendations

◆ Before:

Surface preparation

Steel after smoothing sharp edges, on abrasive blasted surfaces to Sa 3 degree. Average profile:

- In case of prior application of **Varnish ED1** (see data sheets): Medium G or Rt 50-75µ.
- In case of direct application: Rough G or Rt 100µ.

Our epoxy **laminates**, according to specification.

On specific recommendation: **concrete** impregnated with **EDO** or **Screenperl**: please consult us.

Always apply on clean and dry substrates

Products preparation

24 hours minimum before application, place the drums in a temperate area at 10°C/50°F min and 30°C/86°F max.

Application temperatures

Substrate:

3°C/37°F mini above dew point,

with 5°C/41°F at least ◆ 45°C/113°F at most.

Product:

While mixing: 10°C/50°F min ◆ 30°C/86°F max

Spraying: at 35/45°C // 95/113°F at hose exit

Manual use: at mixing temperature

Mixing

- *Never make up partial mixtures*, in order to avoid the risks of incorrect proportions.
- Stir the base with a power mixer to an even consistency. Then, add hardener and continue stirring until a perfectly homogeneous mixture is obtained.

Conditions for use

- No maturing before use.
- Start the application immediately after mixing.
- **LP100/812 should never be diluted.**

Application

- Airless spraying unit, with a 45/1 min pump ratio, fitted with heating hose.
- Medium bristle roller, for small or difficult to access areas, on condition to *pay particular attention to the thickness and regularity of applied coat: this shall be followed by smoothing the surface with a flat brush.*

◆ During:

Pot life of mixture

10°C/50°F	20°C/68°F	30°C/86°F
2 h 00	0 h 30	0 h 15

In case of long lasting spraying application, the hose should be cleaned once per hour with ED Thinner.

Number of coats

one.

Recommended thickness

Min 600 microns - max 1000 microns, according to spec.

Note:

Thicknesses are proposed in agreement with the method of the International standard ISO 19840:

Do not exceed 30% above the maximum value, except for pre-touchups and local overcoatings.

Theoretical consumptions

134 g/sqm per 100 microns thickness.

This theoretical value should be **20 ±5 % increased** to get it practical, according to nature of substrate and implementation method.

Note:

Consumption will increase by 100 to 300 g/m² when surface temperature is < 20°C, making the product viscous with its contact.

Cleaning of application equipment

Flammable ED Thinner. Flash point (cc): 25°C/77°F.

◆ After:

Curing

t°	Dustfree	Tack free
10°C	5 h 00	14 h 00
20°C	2 h 00	9 h 00
30°C	1 h 00	4 h 00

Delay before use: 10 to 4 days, depending on temperature.

Repairs

Report to our *Technical Advice nr 5*.



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

Gelcoat

SV102

solventfree novolac epoxy

*scopes:
chemical industry
and energy*

OVERVIEW

Purpose

Where: Internal protection of tanks, retention pits, gutters.

What: Occasional or permanent contact with effluents, which may be radioactive or not, acid or basic, in energy production sites or chemical industries.

Which: Steel or concrete structures.

Description

Product: solventfree epoxy-novolac.

Use:

- either as a direct single coat,
- either as a topcoat of an epoxy-fibre reinforced structure such as one of the « **perl** » range.

Typical thickness: according to specification: from 500 to 800 microns.

Application in one vertical coat: up to 500µ with an airless pump, or 300µ with a roller.

Properties and benefits

Chemical and nuclear performance:

Exceptional inertia to a very large number of mineral and organic acids at ambient temperature: please consult us.

Decontamination test: report nr 06/07 by CEA Saclay.

Application properties:

To take advantage of a simple and cost effective standard spraying machine.

Surface properties:

Aspect : uniform and seamless glossy surface.

Result : very easy to clean, no weak areas.

Compliance with safety and regulatory requirements:

SV101 is solventfree, flash point (cc): > 90°C/194°F for optimal safety and minimized application constraints.

It is **aromatic amines, phthalates and styrene free** for compliance with current regulations.

CHARACTERISTICS

Packaging

- In 2 separate cans, pre-adjusted for 12 kg.
- Proportions, *by weight*: base **1** / hardener **1**

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures of between 0°C/32°F and 35°C/95°F⁽¹⁾,
⁽¹⁾ which might increase or decrease by 10°C/50°F, once only during a 5 days max transport time to destination.

Colours

Beige, approaching RAL 1015.

Finish

Glossy with limited chalking and yellowing in operation, *especially if implementation requirements are respected.*

Reinforcements

Please consult us.

V.O.C. content

52 g/l (maximum), according to ISO 11890-1 (P1-M2)

Composition

Resin	:	novolac-epoxy
Hardener	:	non-aromatic polyamine
Pigments	:	synthetic oxides
Solvent	:	none

Specific gravity (mix) at 20°C/68°F

1.30 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight : 96–100% after 6 hrs maturation - ISO 3251

By volume : 100% per calculation

Viscosity (mix) at 20°C/68°F

6 000 mPa.s ± 1 000 ♦ 60 poises ± 10

A slight evolution may happen during the storage period, without any effect on the application conditions.

IMPLEMENTATION

Conform and controlled conditions
During application and hardening periods
Are necessary to obtain required quality

For all use:
Refer to relevant material safety data sheets as to
risk sentences and safety recommendations

◆ Before:

Surface preparation

Steel after sharp edges have been smoothed, on abrasive blasted surfaces to Sa3 degree.

Average profile:

- In case of prior application of **Varnish ED1** or **Screenperl** (see data sheet):

Medium G or Rt 50-75µ.

- In case of direct application:

Rough G or Rt 100µ.

Our epoxy **laminates**, according to specification.

On specific recommendation: **concrete** impregnated with **EDO Primer** or **Screenperl®**: please consult us.

Always apply on clean and dry substrates

Products preparation

24 hours minimum before application, place the cans in a temperate area at 10°C/50°F min and 30°C/86°F max.

Application temperatures

Substrate:

3°C/37°F minimum above dew point,

With: 5°C/41°F at least ◆ 45°C/113°F at most.

Product:

While mixing: 10°C/50°F min ◆ 30°C/86°F max

Spraying at: 25°C/77°F min at hose exit

Manual use: at mixing temperature

Mixing

- *Never make up partial mixtures*, in order to avoid the risks of incorrect proportions.
- Stir the base with a power mixer to an even consistency. Then, add hardener and continue stirring until a perfectly homogeneous mixture is obtained.

Conditions for use

- No maturing before use.
- Start the application immediately after mixing.
- **Gelcoat SV102 should never be diluted.**

Application

- Airless spraying unit, with a 45/l min pump ratio, fitted with heating hose.
- Or medium bristle roller, *in 2 passes*, with an interval of 2 to 6 hours between both at 20°C, *each one to be followed by smoothing the surface with a flat brush.*

◆ During:

Pot-life of mixture

10°C/50°F	20°C/68°F	30°C/86°F
2 h 00	0 h 30	0 h 10

In case of long lasting spraying application, the hose should be cleaned once per hour with ED Thinner.

Number of coats

Horizontal application: 1

Vertical application: 2, *within the acceptable recoating interval*: see below.

Recommended thickness

500 to 800 microns, according to specification.

Thicknesses are proposed in agreement with the method of the International standard ISO 19840:

Do not exceed 30% above the maximum value, except for pre-touchups and local overcoatings.

Theoretical consumption

130 g/sqm per 100 microns thickness.

This theoretical value should be **20±5 % increased** to get it practical, according to nature of substrate and implementation method.

Note:

Consumption will increase of 100 to 300 g/sqm when surface temperature is < 20°C, making the product viscous with its contact.

Cleaning of application equipment

Thinner ED. Flammable product. Flash point (cf): 25°C.

◆ After:

Curing

t°	Dustfree	Recoatable
10°C	5 h 00	min 5 h 00 – max 8 h 00
20°C	2 h 00	min 2 h 00 – max 6 h 00
30°C	1 h 00	min 1 h 00 – max 3 h 00

Delay before use: 10, 7 or 4 days, depending on temperature.

Repairs

Report to our *Technical Advice nr 5*.



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

Coating
AR100/MD4

« hot applied » solventfree epoxy

scope:
*chemicals and
heavy chemical stresses*

OVERVIEW

Intended use

Where : Interior of tanks and pipes.

What : Contact with alcohols such as diluted phenol, chlorinated solvents, reducing acids (hydrochloric), in aggressive chemical environment.

To be also used in nuclear and food industries.

Which : Steel or concrete structures.

Description

Product : solventfree epoxy product.

Use : in a single layer – to avoid problems with delays between coats causing disbondings – with a 2-component hot spraying machine:

- either in direct single coat
- or as a suitable finish of a glassfibre-epoxy compound of the « perl » range.

Typical thickness: 800 microns, horizontally as well as vertically

Properties and benefits

Chemical Performance:

Foodgrade quality: report RE-05/07241 by IANESCO Lab.

Decontamination test: report 830.605 by CEA Saclay

Higher Heating Value and Lower Heating Value: L080091DE3 by LNE Trappes.

Application properties:

To take advantage of the safety and the comfort of an automatic dosing and mixing process by the spraying machine, gradually as needed.

Surface properties:

Aspect : uniform and seamless glossy surface.

Result : very easy to clean, no weak areas.

Compliance with safety and regulatory requirements:

AR100/MD4 is **solventfree**, flash point (cc): > 90°C/194°F for optimal safety and minimized application constraints.

It is **aromatic amines or phthalates free** for compliance with current regulations.

CHARACTERISTICS

Packaging

In 2 separate cans, pre-adjusted for a 40 kg quantity.

Proportions, *by weight and by volume* base **1** / hardener **1**

Storage conditions

- 18 months max, in the original cans, never opened,
- Under shelter,
- At temperatures of between 0°C/32°F and 35°C/95°F⁽¹⁾,
⁽¹⁾ which might increase or decrease by 10°C/50°F, once only during a 5 days max transport time to destination.

Colours

Mother of pearl, approaching Red beige RAL3012.

Finish

Glossy with limited chalking and yellowing in exploitation, *especially if implementation requirements are respected.*

V.O.C. content

4.6 g/l, according to ISO 11890-1 (statistical average)

Composition

Resin	:	epoxide
Hardener	:	non-aromatic polyamine
Pigments	:	synthetic oxides
Solvent	:	none

Specific gravity (mix) at 20°C/68°F

1.52 ± 0.05 g/ml as per ISO 2811

Solids content (mix)

By weight : 96–100% after 6 hrs maturation - ISO 3251

By volume : 100% per calculation

Viscosity (mix) at 20°C/68°F

120 000 mPa.s ± 10 000 ♦ 1 200 poises ± 100.

IMPLEMENTATION

Conform and controlled conditions during application and hardening periods are necessary to obtain required quality

For all use:
Refer to relevant material safety data sheets as to risk sentences and safety recommendations

◆ Before:

Surface preparation

Steel after smoothing sharp edges, on abrasive blasted surfaces to Sa 3 degree, or equivalent.

Average profile:

- Case of prior application of **Varnish ED1** :

Medium G or Rt 50-75µ.

- Case of direct application:

Rough G or Rt 100µ.

Our epoxys **lamine**, according to specification.

On recommendation: suitable **concrete**, impregnated with **Primer EDO** : consult us.

Always apply on clean and dry substrates

Products preparation

At least 12 hours before they are used, pre-heat the drums to a temperature of 40/50°C // 104/122°F.

Application temperatures

Substrate:

3°C/37°F mini above dew point,

with 15°C/59°F at least ◆ 45°C/113°F at most.

Product:

See below

Conditions for use

- Since the base and hardener components are very viscous at ambient temperature, but also very reactive at high temperature, it is absolutely necessary to respect all the implementation instructions

In particular:

- **Never make up partial mixtures**, in order to avoid the risks of incorrect proportions.
- **Never try to mix "manually"** the base with the hardener, except for pre-touchups or touchups with quantities not exceeding 1 kg.
- Potlife of a 1 kg mixture at 20°C/68°F: 10 min - see further in the **Repairs** section.
- **Components should never be diluted**

Application

- 2-component dosing and mixing equipment designed for hot spraying.
- Product spraying temperature:
90°C/194°F at hose exit.

◆ During:

Number of coats

One.

Recommended thickness

800 microns.

May be raised at 1000 microns on specification.

Note:

Thicknesses are proposed in agreement with the method of the International standard ISO 19840:

Do not exceed 30% above the maximum value, except for pre-touchups and local overcoatings

Theoretical consumptions

152 g/sqm per 100 microns thickness.

This theoretical value should be **20 ±5 % increased** to get it practical, according to nature of substrate and implementation method

Note:

Consumption will increase by 100 to 300 g/m² when surface temperature is < 20°C, making the product viscous with its contact.

Cleaning of application equipment

Flammable ED Thinner. Flash point (cc): 25°C/77°F.

◆ After:

Curing

t°	Dustfree	Dry to touch
15°C	2 h 00 min	5 h 00 min
30°C	0 h 30 min	2 h 00 min

Delay before use: 10 to 4 days, depending on temperature and/or corrosive action of the liquid to be in contact. Please consult us.

Repairs

Report to our *Technical Advice nr 5*.



**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

fiberglass tissue

P45

Biaxial glass fabric – 450 g/sqm

*scope:
reinforcement of our epoxy
coatings*

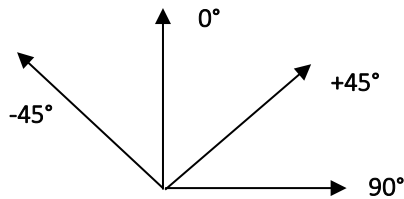
OVERVIEW

Description

Glass tissue, made of two cloths of woven glass fibers oriented at + and – 45°, attached to a glass mat, and with a **black** longitudinal thread to indicate the width of recommended overlapping.

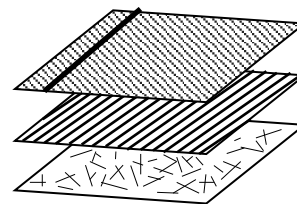
Purpose

Reinforcement of epoxy coatings, particularly to obtain resistance to future cracking in a concrete substrate.



Properties and benefits

- High mechanical performance.
- Excellent drapability.
- No longitudinal deformation.
- Easy to roll-out, impregnate and saturate.



← Fabric -45°

← Fabric +45°

← Matt

CHARACTERISTICS

Specifications

Axis angle	Weight (g/sqm)	Tolerance	Fiber	Filament diameter	Finish
Fabric +45°	187	± 5%	E-glass	12 - 14 µ	Silane
Fabric -45°	187	± 5%	E-glass	12 - 14 µ	Silane
Matt	100	± 5%	E-glass	-	-
Sewing	<10	± 5%	PE	78 dTex	-

Dimensions of the rolls

Length: about 40 lm
Width: 127 cm
Weight: about 25 kg
Surface: about 51 sqm
Also exists in the form of a 20cm-wide band, 79lm long: **R45**

Thickness

500µ.

Packaging

On a cardboard mandrel, with the matt on the outside, in a polyethylene bag.

Storage conditions

Must not be exposed to moisture.

Store in a dry atmosphere (humidity below 90%), under shelter, in the original packing, at a temperature of between 5°C/32°F and 35°C/95°F.

Use conditions

Use in a non-condensing environment and on a non-condensing substrate, as per our [Technical Advice nr14](#).

Replaces and cancels any former issue - The above mentioned information is given with objectiveness but cannot involve our company beyond our manufacturer's responsibility.

ISO 9001 certified

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**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

fiberglass tissue

P80

Biaxial glass fabric – 800 g/sqm

scope:
*reinforcement of our epoxy
coatings*

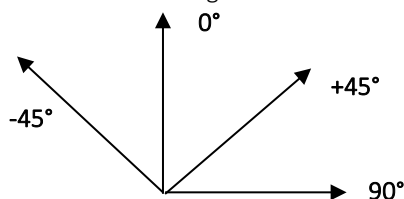
OVERVIEW

Description

Glass tissue, made of two cloths of woven glass fibers oriented at + and – 45°, attached to a glass matt, and with a *green* longitudinal thread to indicate the width of recommended overlapping.

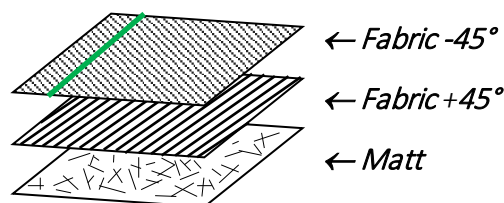
Purpose

Reinforcement of epoxy coatings, particularly to obtain resistance to future cracking in a concrete substrate.



Properties and benefits

- High mechanical performance.
- Excellent drapability.
- No longitudinal deformation.
- Easy to roll-out, impregnate and saturate.



CHARACTERISTICS

Specifications

Axis angle	Weight (g/sqm)	Tolerance	Fiber	Filament diameter	Finish
Fabric +45°	350	± 5%	E-glass	12 - 16 µ	Silane
Fabric -45°	350	± 5%	E-glass	12 - 16 µ	Silane
Matt	100	± 5%	E-glass	-	-
Sewing	<10	± 5%	PE	78 dTex	-

Dimensions of the rolls

Length: about 24 ml
Width: 127 cm
Weight: about 25 kg
Surface: about 31 sqm

Thickness

800µ

Packaging

On a cardboard mandrel, with the matt on the outside, in a polyethylene bag.

Storage conditions

Must not be exposed to moisture.

Store in a dry atmosphere (humidity below 90%), under shelter, in the original packing, at a temperature of between 5°C/32°F and 35°C/95°F.

Use conditions

Use in a non-condensing environment and on a non-condensing substrate, as per our [Technical Advice nr14](#).

Replaces and cancels any former issue - The above mentioned information is given with objectiveness but cannot involve our company beyond our manufacturer's responsibility.

ISO 9001 certified

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**Max
Perlès**
advanced industrial coatings

data sheet

December 2024

fiberglass tissue

P120

Biaxial glass fabric – 1200 g/sqm

scope:
*reinforcement of our epoxy
coatings*

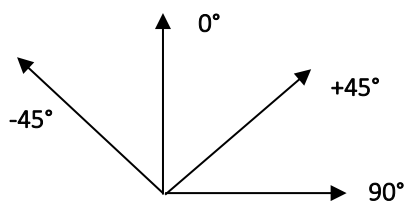
OVERVIEW

Description

Glass tissue, made of two cloths of woven glass fibers oriented at + and – 45°, attached to a glass matt, and with a **red** longitudinal thread to indicate the width of recommended overlapping.

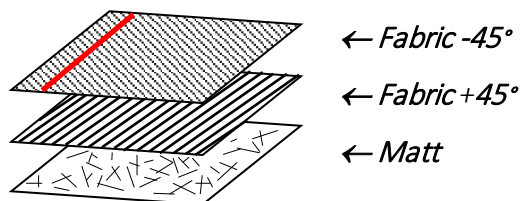
Purpose

Reinforcement of epoxy coatings, particularly to obtain resistance to future cracking in a concrete substrate.



Properties and benefits

- High mechanical performance.
- Excellent drapability.
- No longitudinal deformation.
- Easy to roll-out, impregnate and saturate.



CHARACTERISTICS

Specifications

Axis angle	Weight (g/sqm)	Tolerance	Fiber	Filament diameter	Finish
Fabric +45°	550	± 5%	E-glass	12 - 17 µ	Silane
Fabric –45°	550	± 5%	E-glass	12 - 17 µ	Silane
Matt	100	± 5%	E-glass	-	-
Sewing	<10	± 5%	PE	78 dTex	-

Dimensions of the rolls

Length: about 16 m
Width: 127 cm
Weight: about 25 kg
Surface: about 21 sqm

Thickness

1000/1200 µ.

Packaging

On a cardboard mandrel, with the matt on the outside, in a polyethylene bag

Storage conditions

Must not be exposed to moisture.

Store in a dry atmosphere (humidity below 90%), under shelter, in the original packing, at a temperature of between 5°C/32°F and 35°C/95°F.

Use conditions

Use in a non-condensing environment and on a non-condensing substrate, as per our [Technical Advice nr14](#).

Replaces and cancels any former issue - The above mentioned information is given with objectiveness but cannot involve our company beyond our manufacturer's responsibility.

ISO 9001 certified

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Technical specification

Waterproof, Watertight and
Protective coating.

appendix 2

Technical advices

Technical Advice No. 1

“Specification for preparation of concrete”

Technical Advice No. 2

“Specification for steel preparation”

Technical Advice No. 3

“Performance testing”

Technical Advice No. 4

“Dielectric testing”

Technical Advice No. 5

“Retouching”

Technical Advice No. 7

“Engraving of a laminate”

Technical Advice No. 14

“Application of fiberglass/epoxy laminates”

Technical Advice No. 21

“Mechanical fixing in one piece of laminates”

Specification for preparation of concrete

Scope :

This document describes:

- the necessary requirements, in terms of substrate surface condition, to undertake coating work, new or remedial.
- the products to use and measures to take if such requirements are not fulfilled.
- the sequence of steps to implement.

It does not cover the structural state or strength of the concrete substrate, which is presumed to comply with all applicable norms, rules and regulations (see list at the beginning of our Technical Manuals).

Requirements :

Drying of new or refurbished substrates :

- New concrete:
28 days minimum, depending on temperature and ventilation.
- Mortars and water based renders:
Refer to the indications provided in the manufacturer's relevant product data sheet.

Substrate aspect :

- Uniform and smooth, free of sharp edges and/or cavities exceeding 0.5 mm from the average level. The profile must have a roughness of between CSP 3 to 5 of concrete surface profiles according to the ICRI (International Concrete Repair Institute).
- The air holes in fresh concrete must be filled up when the casing is released, without yielding a glossy surface.

Laitance :

Is absolutely prohibited, as are pure cement finishes.

Substrate cleanliness:

- Casing release agents and additives must be eliminated.
- Substrate must be free of loose particles and of any pollutants such as paint, oil, grease and wax – which would be harmful to the adherence of the coating. It must be vacuum cleaned very carefully to eliminate dust .

Water infiltration and counter-pressure:

Install drainage solutions or apply specific treatment – see following page .

Substrate reconditioning to fulfil these requirements :

Implementation conditions:

Make sure the ambient conditions for each operation are in accordance with the relevant product data sheets.

Presence of laps, edges, scrapes, etc:

Grind off and vacuum the dust.

Light laitance, traces of pure cement, oil and other pollutants:

Lightly clean off, using fine grade abrasives with limited pressure or light waterjet. Vacuum the dust and/or dry off.

Thick laitance, pure cement finish, fresh cast concrete:

Carefully sandblast using fine grade abrasives with limited pressure, or adapted waterjet. Vacuum the dust and/or dry off.

Repair :

Mortars and other products used for the repair of the concrete must be chemically compatible with Max Perlès coatings , must be fast-setting and checked against the risk of them creating a difference in potential between old and new concrete parts .

Apparent steel reinforcement must be passivated before being covered over : carefully brush off loose oxydes and passivate using our modified epoxy PRIMER W.

Dry substrate:

Impregnate with one coat of EDO PRIMER or of SCREENPERL®, waterborne epoxy.

Double the coat in case of high porosity.

Damp substrate:

Impregnate with one coat of EDO PRIMER or of SCREENPERL®, in order to neutralize moisture. To be repeated two or three times in case of moisture re-sweating.

Air holes in cast concrete / coarse trowelling:

The surface must be rendered with our AR100 RENDER, a solvent-free epoxy charged with silica, in one or two coats.

Damaged surface with deep cavities:

Fill with AR100 RENDER, in successive passes up to 2 cm thick each, after adding in silica F15, if necessary, to constitute a mortar (up to 1 for 1 in weight).

Stabilized cracks (*) and passive concrete overlaps:

- Bridge them over with a 5 to 10 cm wide plasticized adhesive tape
- Then reinforce them:
 - by applying a fiberglass fabric strip 20 cm wide, saturated with the appropriate Max Perlès epoxy resin and sprinkled while progressing with SB0 SILICA SAND, when under a single-layer watertight coating
 - by implementing the fully-adherent multi-layer coating system directly in the case of waterproofing.

Un-stabilized cracks (*) and active concrete overlaps:

As above, adapting the width of the bridging as well as the nature and weight of the local or general reinforcement according to the width of the crack.

(*) according to French standard NFP 95-103.

Sequence :

- ♦ Grinding
- ♦ Blasting
- ♦ Dust removal
- ♦ EDO PRIMER or SCREENPERL®
- ♦ AR100 RENDER
- ♦ Bridging/reinforcement
- ♦ Coating

Particular case :

Counter-pressure:

Can be accepted, in the case of a reinforced waterproof coating, for a value of up to 0.5 MPa (5 bar). Value obtained according intern method CEBTP.

Specification for preparation of steel

Scope

This document describes:

- the necessary requirements, in terms of substrate surface conditions, to undertake coating work, new or remedial.
- the products to use and measures to take if such requirements are not fulfilled.

It does not cover the structural state or strength of the steel substrate, which is presumed to comply with all applicable norms, rules and regulations.

Requirements

Preparation of sheet steel :

Must be to degree P2 as per standard NF EN ISO 8501-3.

- Barbs, scratches or weld projections must be eliminated by chipping and grinding.
- Sharp edges and weld beads must be rounded by grinding.

Environmental conditions:

- **All coating work must be undertaken at ambient temperature within the range indicated in the product data sheet of the chosen coating.**

Appropriate air heating or, symmetrically, air cooling and ventilation equipment must be used if necessary.

Work in cold weather on an open air surface is not recommended.

- **Always operate at a difference of at least +3°C / + 38°F between the measured temperature of the steel substrate and the dew point – see standard NF EN ISO 8502-4.**

Use appropriate air heating, or deshydration equipment if necessary.

ISO 12944 recommendations should be applied.

Blasting:

- **Before:** if using solid abrasive material, check that it is of appropriate quality and not damp, check that the blasting equipment is operational and that air pressure at the nozzle is sufficient to cover pressure losses.
- **Implementation:** by sand blasting or hydro blasting or combined blasting until the profile and the roughness specified in our system sheet is obtained.
- **After:** vacuum-dust very carefully and eliminate all abrasive deposits, including those on the scaffolding.

The residual dust content on the steel surface is measured according to ISO 8502-3 and must not exceed category 2.

The soluble salt content on the steel surface is measured according to ISO 8502-6 and 9 and must be lower than 50 mg/sqm.

Primer:

Immediately after blasting and before any re-oxidation, apply a 30 microns dry film thickness stand-by coat of Varnish ED1 or Primer EDA, colorless epoxies, unless our specification stipulates direct application of the coating on the blasted steel.

Specific points

Sheet holes:

Before applying the coating, fill all holes and craters with Render AR100, solventfree epoxy.

Floating roof tank strut supports:

After blasting and prior to any coating, screw struts one by one and stick in place 5 mm thick prefabricated reinforced epoxy plates using Render AR100.

Precut to a size slightly smaller than the one of the metallic reinforcement plates which may exist.

Replaces and cancels any former issue

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Performance testing

Scope

This document describes the tests that must be done to carry out the reliability of the coating implementation.

They take place: . **during** the application,
. **after** the application.

Testing during application

- **Environmental conditions:**

While progressing with humidity and temperature recording devices, placed and moved depending on work progress to ensure at all times that the dew point is not reached and the temperature ranges are met.

- **Wet film thickness:**

At each coat, using a **calibrated** notched gauge, while progressing and at least once every sqm.

- **Consumption:**

It is complementary to the thickness test and detects any possible discrepancy in real time.

- **Aspect :**

Permanent verification that bubbles or "pinholes" do not appear and that the film presents a uniform and homogeneous surface.

Testing after application:

- **Dry film thickness on metallic surfaces:**

After physical "drying", using a magnetic sensor device, calibrated under the conditions defined by the standard ISO 19840.

- **Polymerization:**

After 48 hours minimum (at 20°C // 68°F), by a test, with white cotton rubbed once on the film onto which a few drops of acetone were deposited: cotton should not show any trace of the coating colour.

- **Porosities:**

Verification of the coating's dielectric sealing following the method described in our [Technical Advice nr.4](#) "Dielectric testing" by sweeping all the coated surfaces with an electrical brush adapted to the substrate.

In case of linings reinforced with fiberglass fabric, this test is carried out on the laminate before topcoat is applied.

If the laminate is implemented on an old supposedly insulating coating, it is necessary to apply a coat of conducting interface beforehand: ref. Interface CF.

It is also possible to test the topcoat independently if a coat of the same Interface CF has been applied between the two layers.

Please consult us.

Repairs:

If necessary, all tests must be followed by the appropriate corrective actions:

– immediately, if tests are carried out during the application

or

– as described in our [Technical Advice nr.5](#) then re-tested in case of tests carried out after application.

Replaces and cancels any former issue

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Dielectric testing

Scope

This document describes the operation to be carried out to detect perforations, porosities, micro-cracks, conductive inclusions or other defects in a waterproof coating, whether applied on concrete or on steel. It is termed dielectric testing or holiday detection.

Principle

With the substrate connected to ground, test the integrity of the coating by sweeping its surface with a continuously powered “brush” or “broom” probe:

A **bluish electric arc and a distinct drop in voltage** occurs in case of porosity, perforation or conductive inclusion in the coating, accompanied by a **sharp audible signal**.

Note: When this control is done on a multi-layer coating, a yellowish glow may be observed, accompanied by a continuous buzz of the device. This phenomenon is not in itself indicative of the presence of a porosity.

Conditions

Time limit :

Dielectric testing should be performed at least 48 hours (when ambient temperature is around 20°C / 68°F) or 72 hours (at around 15°C / 60°F) after coating application.

If the coating is multi-layer, glass-tissue reinforced this test is carried out on the coating before the topcoat (finishing coat) is applied.

If the coating is being applied on a previously-existing , supposedly insulating coating, it is necessary to apply a coat of our conductive SCREENPERL® coating onto the old coating before proceeding with the new coating.

Equipment

ELCOMETER or similar.

Steps

1. Connect the equipment to ground using the ground wire

2. Power up and test the charge

3. Calibrate the equipment:

On concrete or steel substrates :

Apply the brush or broom to the surface of bare concrete or of bare metal and progressively increase the voltage until an audible and luminous error signal is obtained. ***The value indicated at this point is considered as the tare, and must be added to the control voltage defined by the coating thickness – see NF EN ISO 29601 standard and paragraph 4 below.***

4. Set the equipment to the appropriate voltage:

Film thickness:	Test voltage:
0,5 mm	2,9 kVolts + tare
1,0 mm	5,5 kVolts + tare
1,5 mm	8,5 kVolts + tare
2,0 mm	11,7 kVolts + tare
3,0 mm	17,0 kVolts + tare
4,0 mm	22,5 kVolts + tare

5. Perform the dielectric testing :

After checking that ***the coating surface is dry and clean***, the operation is carried out at a constant speed of about 5 linear meters/min :

- with a broom for large flat surfaces
- with a brush for corners and in areas with irregular profile.

If the voltage indicated by the equipment drops to a value close to the tare value (or drops by at least two thirds of the set voltage) and the bluish arc appears together with the sharp audible signal, this indicates the presence of perforations, porosities or conductive inclusions in the coating.

Defects detected this way are marked out for later repairs as per our [Technical Advice nr.5](#). Once corrected, they too will be tested using the same process.

Replaces and cancels any former issue

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Retouching

Scope

This document describes the steps to carry out localized repairs in the following cases:

- Correction, after polymerization of the coating, of areas showing porosity, appearance or hardness defects, insufficient thickness, etc.
- Repair of accidental mechanical or chemical damages.
- Reinstating the watertightness of the coating when it has been drilled through by chemical plugging to install equipment fittings.

Implementation conditions

Environmental conditions, including temperature and humidity, must be those specified in the relevant product data sheets.

Surface preparation

- **Totally eliminate** the coating inside a square approx. 10cm by 10cm (or more, depending on the size of the defect or damage), back to the substrate, by grinding.
- **Apply an adhesive tape** at a distance of 5 to 10cm from the edges of the damaged or faulty area (a second adhesive tape placed approx.. 5cm back from the first will be applied later on in the case of a reinforced coating system).
- **Re-create the same roughness as originally both on the bared substrate and on the adjacent undamaged areas**, using appropriate mechanical means, in order to provide optimum adhesion of the new coating.

Cleaning

Must be done on all prepared areas, ensuring elimination of pollution, dust or heterogeneous particles.

Retouching

- **First apply a coat of Primer** on the bared concrete area
- **Then fill in the damaged area with AR100 RENDER**
- **In the case of a single coat system, apply the single coat to the entire surface within the adhesive tape** then remove the tape
- **In the case of a reinforced coating system, apply the reinforced coating to the entire surface within the adhesive tape** then remove the tape. **Apply a new adhesive tape 5cm back from the limit of the reinforced coating and apply the topcoat over the entire surface delimited by this new tape.** Remove the tape.
- **In the case of an originally airless-sprayed topcoat or single coat :**
 - **homogeneous or open surfaces:**
Apply the new coating using the same machine/pump as originally, after having protected the surrounding surfaces in order to avoid the deposit of spray mist or “overspray” which can cause surface roughness which, in turn, would complicate ulterior cleaning operations and reduce the sanitary characteristics of the coating.
 - **small or difficult to access surfaces :**
Apply the new coating using a flat nylon brush, followed, if necessary, by smoothing with a spalter brush.
- **In the case of an originally roller-brush applied coating :**
Proceed exactly in the same way as with the original coating.
- **Dielectric test the repaired area as per** Technical Advice Nr. 4.

Engraving of a laminate lining

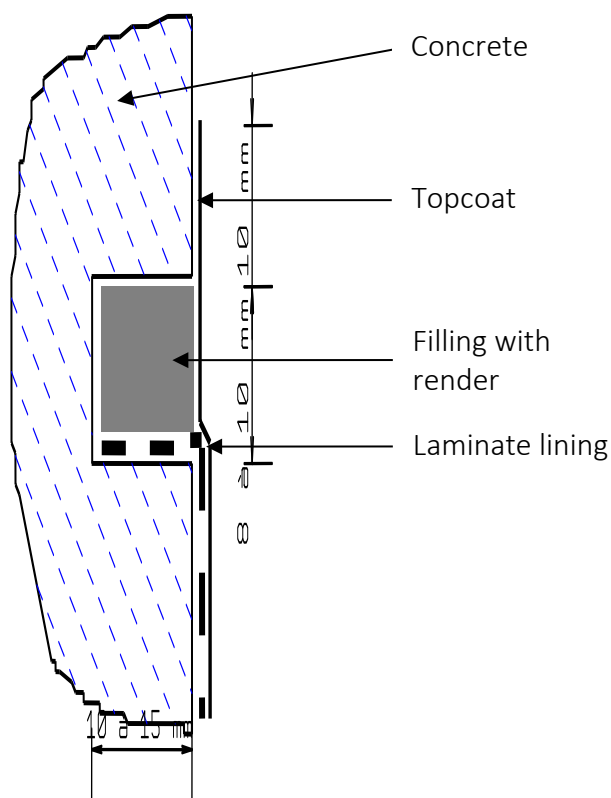
Scope

This document describes the operations to be carried out to insert a laminate coating into an engraving serving as the end of the area to be coated.

Operation

- Prepare the substrate according to the system specified and to our Technical Advices.
- Trace the limits of the engraving.
- Create a regular engraving 10 to 15 mm high or wide and 10 to 15 mm deep, by any appropriate mechanical means.
- Vacuum-clean carefully of dust.
- Place an adhesive protection starting 10mm away from the engraving, on the side which won't be coated.
- Press the reinforced laminate (topcoat excluded) into the underside of the engraving and sprinkle with Silica sand.
- Fill the engraving with AR100 Render.
- Check for any defects (such as glass fibers standing out), correct and repair.
- Apply the topcoat fully over the engraving, and until the adhesive protection is reached.
- Pull off the adhesive no longer than 10 minutes after the topcoat application.

Sketch



Replaces and cancels any former issue

The above mentioned information is given with objectiveness but cannot involve our company beyond our manufacturer's responsibility.

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Implementation of fiberglass/binder laminates

Scope

This document describes the operations to perform to obtain a homogeneous, reinforced, waterproof epoxy or vinylester coating.

Process

1. **Prepare**, before starting the operation, the required quantities of fiberglass, taking into account the necessary 4 inches / 10 cm wide overlaps and all specific cuts to be done to deal with singular points (curves, rivet lines, seams, columns, penetrations, ...)

2. **Make sure** that the application work is going to be carried out in the environmental and usage conditions prescribed in the product data sheet.

3. **Proceed** with the laminate application, making sure no interruption of more than 0h30 to 3 hours ⁽¹⁾ occurs between any two steps:

- **Apply** a first, *impregnation*, coat of the selected resin, using a medium-bristle roller or an airless spray gun, as per the quantity specified in the system sheet.

- **Unroll and lay-out** the fiberglass tissue or mat onto the resin.

- **Debubblize** carefully by strongly cross-rolling the tissue or mat with a debubbling roller ⁽²⁾ until a homogeneous impregnation is obtained. The resin's colour must come up through the tissue/mat, more or less strongly depending on the type and weight of the fiberglass (tissue or mat), knowing that for example a 300 g/sqm fiberglass tissue will "sweat" more, and more easily, than a 900 g/sqm fiberglass mat.

- **Apply** a second, *saturation*, coat of the same resin, using a medium-bristle roller or an airless spray gun, as per the quantity specified in the system sheet, preferably using new cans to benefit from a maximum period of use.

- **Debubblize again** to ensure the resin's penetration through the fibers. At this stage, the surface aspect must be perfectly homogeneous and uniform.

4. **If specified in the system sheet being used, repeat** the operation, depending on the number of fiberglass layers specified, using each time the *saturation* coat of the previous ply as the next ply's *impregnation* coat. Shift the layers of fiberglass by half a width in order to spread out the zones of overlapping.

5. **If specified in the system sheet being used, mechanically sprinkle** the still-wet saturation coat, while progressing, with 400 g/sqm of Silica sand (100/300 microns in particle size for our reference F15 , 100/600 microns for our reference SB0), respecting a minimum distance of 1m between the spray nozzle and the laminate. This in order to obtain a uniform surface roughness for proper topcoat adhesion. Use a low-pressure sand pistol.

NB: *Taking into account the dispersion resulting from the projection, prepare to use an effective quantity of 600 g/sqm of silica sand on horizontal surfaces, 800 g/sqm on vertical surfaces and 1000 g/sqm on roof undersides.*

6. **Proceed** in the same way on adjacent areas, being sure that overlaps is 10cm on previous tissue or mat.

7. After drying, **sandpaper or very softly grind off** all areas that stand out, such as fiberglass overlaps, for example, and then thoroughly vacuum away any dust.

8. **Carry out a general review of the coating** in order to detect any defects, as per our *Technical Advice nr.4 " Dielectric Testing "* and proceed with any corrections and repairs as per our *Technical Advice nr.5 " Retouching "*.

9. **Apply** the specified topcoat on the entire laminated surface, that must be non-condensing.

⁽¹⁾ Depending on the resin used and the temperature of the substrate at the time of use: if in doubt, please consult us.

⁽²⁾ Polyamide, Teflon or aluminum monoblock type rollers.

Replaces and cancels any former issue

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Mechanical fixing of a laminate

Scope

This document describes the two usual methods of mechanical fixing of reinforced “anchored” laminated structures applied to non-metallic substrates.

Nature of fixing system

L.R.Etanco polypropylene plug Exco Ø 32, 50 mm long is powerful, for multipurpose and easy to install:

It is a monoblock type piece to hit with a flat head and thin (thickness 2 mm). Its length can be adjusted depending on the substrate's nature and condition.

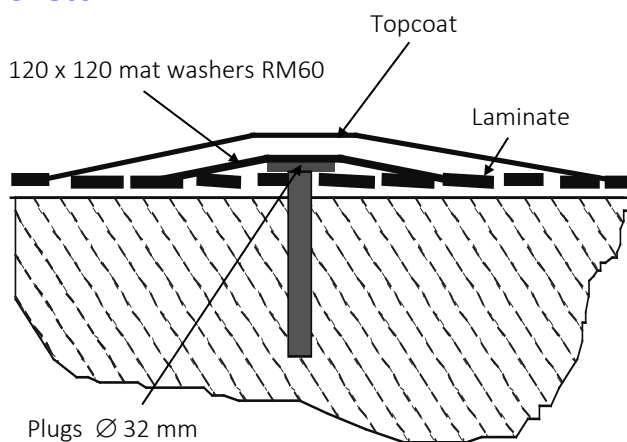
Criteria of method to use

The implementation on “dry” is simple and traditional.

The one on “wet” has the advantage of being faster, offers greater overall homogeneity and ensures an improved esthetic aspect with a less pronounced “bump” effect.

But, it requires coordination that does not make it applicable in all capacities.

Sketch



Principle

♦ Implementation on « dry » laminate:

- Apply the first or unique ply of laminate with specified reinforcement, and sprinkle with silica SB 0.
- Dry 6 to 24 h mini. depending on ambient temperature.
- Use a circular drilling machine to drill holes at the nominal plastic plug diameter and corresponding depth in a way to respect the mesh specified, generally every 50 cm in each direction, 5 to 6 per sqm.
- The operation must start in a top corner or on a reinforcement overlap making sure that the plugs are always positioned on the overlap, independently of those positioned between them. Avoid drilling less than 20 cm from the corners.
- Blow holes with air.
- Use a hammer to fit the plastic plug.
- Reinforce each head with a mat washer RM60 Ø 12 cm, impregnated with coating 20g/washer, applied and then debubbled and saturated with 10 g/washer, and sprinkled with silica SB 0 while progressing.
- NB: in case of multiple plies**, the implementation of the 2nd ply (and the 3rd ply if necessary) as per the method described in our [Technical advice nr.14](#) replaces the mat washers.

♦ Implementation on « wet » laminate:

- Drill the same holes, **before** the beginning of the laminating, in the same quantity and within the specified mesh, as well as implementation instructions.
- Blow with air.
- Place a marker (nail) in each hole.
- Apply the laminate (through the nails).
- Fit the plastic plug **after** removing the marker which have pierced the laminate.
- Recover with a mat washer.

Replaces and cancels any former issue

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Technical specification

Waterproof, Watertight and
Protective coating.

appendix 3

Reference list

Reference list

chemical and other industries

1965 – 1977

PAPETERIE LACROIX ET FILS MAZERES SUR SALAT (31)		1965
Cuve des piles HERY de préparation des pâtes	AR 100/11B	CONCRETE
PAPETERIE DE LEDAR SAINT GIRONS (09)		1968
Tour de blanchiment et cuve de désintegrateur	AR 100/11B	STEEL
MICHELIN CLERMONT-FERRAND (63)		1969
Bac d'émulsion de caoutchouc 90°C	AR 100/11B	STEEL
UNION GENERALE DES GLYCERINES YAINVILLE (76)		1969
Bac de glycérine pure 50/100°C	AR 100/11B	STEEL
ESSO CHIMIE PORT JEROME (76)		1971
Bac d'acide sulfonique chaud	AR 100/MD1	STEEL
UGINE KUHLMANN BOUSSENS (31)		1972
Wagons de transport de soude caustique chaude	AR 100/11B	STEEL
UNION CHAMPAGNE MALT VITRY LE FRANCOIS (51)		1973
Cellules de germination 90°C	AR 100/11B	CONCRETE
TUBES DE LA MEUSE BELGIQUE		1973-74
Eaux usées avec traces de solvants	AR 100/11B	STEEL
PAPETERIE DE LA RISLE PONT AUDEMER (27)		1975
Cuviers de trituration	AR 100/11B	CONCRETE
COMPLEXE SIDERURGIQUE D'EL HADJAR ANNABA (ALGERIE)		1976
3 tours de lavage de gaz	AR 100/11B	STEEL
CREUSOT LOIRE ENTREPRISES		
AZOT SANAYII - COMPLEXE D'ENGRAIS DE GEMLIK (TURQUIE)		1976
Tour de prilling de l'Urée	AR 100/11B	CONCRETE
SACILOR USINES DE : JOEUF (54), KNUTANGE (57), ROMBAS (57)		1976
Casings-dépoussiéreurs fumées 100-250°C	AR 100/MD1	STEEL
PARACHIMIC ROUEN (76)		1977
Camion-citerne de transport d'acide chlorhydrique concentré	AR 100/MD4	STEEL
PAPETERIE DALLE ET LECOMTE BOUSBECQUE (59)		1977
Cuviers de pâte à papier et eaux blanches	AR 100/MD2	CONCRETE
CELLULOSE DES ARDENNES VIRTON (BELGIQUE)		1977
Tours à chlorate de soude 80-90°C	AR 100/MD2	STEEL/CONCRETE
CDF CHIMIE - H.B.L. SAINT AVOLD (57)		1977
Trémies à fines de minerais 40-80°C	AR 100/MD2	STEEL
ARBED DIFFERDANGE (LUXEMBOURG)		1977
Casing-dépoussiéreurs fumées 120-180°C	AR 100/MD1	STEEL
SALINES DE L'EST VARANGEVILLE (54)		1977
Trémies à sel et à saumure 60-80°C	AR 100/MD2	STEEL

1978

SOLVAY DOMBASLE (54)		
• Trémies de stockage de sel	} {	AR 100/MD2
• Trémies à chlorure de baryum		
• Trémies à chlorure de calcium		
• Trémies à chlorure de potassium		
SOLLAC SEREMANGE (57)		
Trémies à fines de charbon 40-80°C		AR 100/MD2
PAPETERIE DE PONT AUDEMER (27)		
Cuviers de trituration pour traitement de papier de récupération		AR 100/MD2
ANTWERP CLEANING AND STORAGE (A.C.S.) ANVERS (BELGIQUE)		
3 réservoirs de rejets chlorés		AR 100/MD4
SUCRERIE DE VAUCIENNES (60)		
Parois d'un échangeur d'ions véhiculant du jus sucré 95°C		AR 100/MD1
CELLULOSE DE STRASBOURG (67)		
Tours de pâte à papier 40-90°C		AR 100/MD2
SOGESTROL LE HAVRE (76)		
Bac 44 : rejets chlorés		AR 100/MD4
FAUVET GIREL ARRAS (62)		
Wagons de transport d'huile d'arachide 70°C		AR 100/X
PAPETERIE GREGOIRE REMIREMONT (88)		
Tours de pâte à papier		AR 100/MD1
CELLULOSE DE LA LOIRE ALLAIRE (56)		
10 cuviers de pâte à papier sous agitation		AR 100/MD2
HEURTEY INDUSTRIES		
COMPLEXE D'ENGRAIS DE SEPA GABES (TUNISIE)		
Fosses de rétention des bacs d'acide sulfurique et phosphorique		EDB+AC3

1979

AGACHE WILLOT - FILATURES DE ARRIS (ALGERIE) Réservoirs d'eau de process	EB 100/018M stratifié	CONCRETE
PAPETERIE LA CHAPELLE DARBLAY SAINT ETIENNE DU ROUVRAY (76) 5 tours de pâte à papier et 7 cuivres de trituration	AR 100/MD2	CONCRETE
CENTRALE THERMIQUE DE RICHEMONT (57) Intérieur de la cheminée n°4	AR 100/MD1	CONCRETE
SOCIETE DES EAUX DE VITTEL (88) Laveuse Seitz	AR 100/MD4	STEEL
LESAFFRE MARCQ EN BAROEUIL (59) Intérieur d'un tambour sécheur de levure - 90°C	AR 100/MD2	STEEL
ROQUETTE FRERES LESTREM (62) Stockage glucose, dextrose, sorbitol, eau stérilisée - 90°C	AR 100/MD1	STEEL

1980

RENAULT BILLANCOURT (92) Tunnels de phosphatation et traitement de surfaces	AR 100/MD1	STEEL
A.C.S. ANVERS (BELGIQUE) Tanks 35 et 3 - Résidus d'hydrocarbures chlorés	AR 100/MD4	STEEL
ELF FRANCE RAFFINERIE DE FEYZIN (69) Décanteur biologique D 64305 eaux résiduaires	AR 100/CLX	STEEL/CONCRETE
CELLULOSE DU RHONE TARASCON (13) 2 tours stockage de pâte à papier	AR 100/MD1	STEEL
SHELL - C.R.R. RAFFINERIE DE REICHESTETT (67) Bac T2220 : eau épurée 100/110 °C	AR 100/HT	STEEL
BRASSERIE PELFORTH MONS EN BAROEUL (59) Réservoir d'eau de fabrication environ 100°C	AR 100/HT	STEEL
SHELL FRANCAISE RAFFINERIE DE PETIT COURONNE (76) Ballon V5201/DB4 : hydrocarbures lourds avec H2S, 80°C	AR 100/MD1	STEEL
CENTRE D'ETUDES NUCLEAIRES SACLAY (91) Parois internes d'une batterie d'aéroréfrigérants	AR 100/CLX	CONCRETE
RENAULT SANDOUVILLE (76) Tunnels de phosphatation et traitement de surfaces	AR 100/MD1	STEEL
CITROEN RENNES (35) Cuve cataphorèse	AR 100/MD4	STEEL
SHELL FRANCAISE RAFFINERIE DE PETIT COURONNE (76) Bac T 104 : soude 50-60°C	AR 100/MD1	STEEL

1981

JORDAN FERTILIZER CY - AQABA (JORDANIE) 2 bacs d'eau déminéralisée 110°C	AR 100/HT	STEEL
ESSO S.A.F. RAFFINERIE DE FOS SUR MER (13) Unité soufre N°2 : partie supérieure de la tour sud de traitement des eaux sûres	AR 100/HT	STEEL
ESSO S.A.F. RAFFINERIE DE PORT JEROME (76) Fosse de récupération acide sulfurique concentré	AL8+AC3	CONCRETE
REGIE RENAULT DOUAI (59) Tunnel de phosphatation	AR 100/MD1	STEEL
ESSO CHIMIE NOTRE DAME DE GRAVENCHON (76) •Bac TK 604 : méthanol pur 63°C •Bac TK 608 : méthanol + toluène + eau 80°C •Bac TK 602 : acide sulfonique 90°C	Galvaperl Galvaperl AR 100/MD1	STEEL
TOTAL - C.F.R. RAFFINERIE DE NORMANDIE (76) Bâche à soude 60/80° C (au raffinage des essences)	AR 100/HT	STEEL
ATO CHIMIE GONFREVILLE (76) •Fond du bac 1115B : benzène •Fond du bac 1115A : benzène •Fond du bac 1254B : para-xylène	AR 100/MDF	STEEL
USINOR DUNKERQUE (59) Cuve de glycol	AR 100/MD2	STEEL
SOLMA LA HAVRE (76) •Cuve d'eau déminéralisée - 70/75°C •Cuve d'oxalate	AR 100/MD2	STEEL
ROQUETTE FRERES LESTREM (62) Cuve EC1 d'eau stérilisée + chlore	AR 100/HT	STEEL
DIAMOND SHAMROCK COURTENAY (45) Cuve de Lauryl Ether Sulfate de soude	AR 100/MD2	STEEL
ESSO S.A.F. RAFFINERIE D'AMBES (33) •Fond du bac TK 1002 : eau épurée d'alimentation de chaudière •Robe du bac TK 1002 : eau épurée d'alimentation de chaudière	AR 100/MD2	STEEL

1982

TRANE EPINAL (88) Bac de lavage et rinçage tôles d'aluminium sortant des fours de brasage 80-100°C	AR 100/HT	STEEL
ELF FRANCE RAFFINERIE DE FEYZIN (69) Bac d'eau résiduaire pH 3 à 12	AR 100/MD1	STEEL
CIE PARISIENNE DES ASPHALTES ROUEN (76) Dessous toit et virole haute du bac 15 : mélasse, lignosulfite et huiles végétales ou minérales	AR 100/MD1	STEEL
BEGHIN SAY THUMERIES (59) Echangeur d'ions contenant solution de chlorure de magnésium 92°C maxi	AR 100/MD1	STEEL
ATO CHIMIE GONFREVILLE (76) • Fond du bac TK 1116 : éthylbenzène • 7 ballons au Steam Cracking d'isopentène avec soude et Mérox	AR 100/MD2	STEEL
DOCK DES ALCOOLS BORDEAUX (33) 4 cuves d'alcool éthylique	AR 100/CLX	STEEL

1983

ROQUETTE FRERES LESTREM (62) • Cuve de lait d'amidon et lait de fécule • Cuve de jus sucré 80°C maxi • 2 cuves de jus sucré 65°C maxi • 2 cuves d'eau + farine de blé • Cuve ER1 de retour de condensats 80°C - pH 3 à 8 • Essoreuse à amidon 30 à 40°C • Cuve d'eau décarbonatée • 3 cuves de sirop de sucre 80°C avec stérilisation vapeur 110°C 15mn/24h	AR 100/MD1 AR 100/MD1 AR 100/MD2 AR 100/MD2 AR 100/MD1 AR 100/MD2 AR 100/MD4 AR 100/MD1	STEEL
PAPETERIE DE GASCOGNE MIMIZAN (40) Cuvier de pâte à papier	AR 100/MD1	CONCRETE
DEGREMONT POUR CREUSOT LOIRE ENTREPRISES USINE D'ENGRAIS DE ROSTOCK (R.D.A.) Bac d'acide chlorhydrique 38 %	AR 100/MD4	STEEL
ALU PECHINEY NOGUERES (64) Intérieurs de laveurs	LP 100/612	STEEL

1984

TECHNIP - PAPETERIE DE LETJES IV JAVA (INDONESIE) Cuves de pâte à papier et tours de blanchiment : Ensemble des capacités process et stockage	AR 100/MD1 ST 100/02+AR 100/MD1	STEEL CONCRETE
ALU PECHINEY NOGUERES (64) Intérieurs de laveurs	LP 100/612	STEEL
KOREAN GAS CORPORATION PYEONG TAEK (COREE) Réservoirs TK 101 - TK 102 - TK 103 : gaz naturel liquéfié - membrane pare-vapeur	EB 100/018M	CONCRETE
PAPETERIE DE GASCOGNE MIMIZAN (40) Cuve de pâte à papier	AR 100/MD1	STEEL
SOGESTROL LE HAVRE (76) Bac 44 : rejets chlorés	AR 100/MD6	STEEL

1985

WHESOE DUBLIN (IRLANDE) Réservoirs d'huiles alimentaires et distillats acides 60°C	LP 100/612	STEEL
BATA VERNON (27) Réservoir d'eau déminéralisée de chaudière 80 à 100°C	AR 100/HT	STEEL
CELLULOSE DU RHONE TARASCON (13) Tour de pâte à papier haute densité	AR 100/MD1	STEEL
AUSSEDAT REY ARNOULD (88) Filtre de récupération pâte à papier	AR 100/MD2	STEEL
RENAULT BILLANCOURT (92) Cuves cataphorèse	AR 100/MD4	STEEL
RAFFINERIE D'AMERYA - S.N.C.M.P. ALEXANDRIE (EGYPTE) Réservoir d'eau déminéralisée 70 à 85°C	AR 100/MD1	STEEL
RENAULT SANDOUVILLE (76) Cuves cataphorèse	AR 100/MD4	STEEL
C.D.F. CHIMIE CARLING (57) Caniveaux dans station des eaux usées	AR 100/MD1	CONCRETE
WALKER ENGINEERING BIBBY'S LIVERPOOL (ANGLETERRE) Bacs à huiles alimentaires et distillats acides 60°C	LP 100/612	STEEL
ALU PECHINEY NOGUERES (64) Intérieurs de laveurs	LP 100/612	STEEL
PECHINEY ALUMINIUM SAINT JEAN DE MAURIENNE (73) Intérieur d'un refroidisseur pour gaz de four de cuisson d'anodes	AR 100/MD1	STEEL

1986

DOCKS DES ALCOOLS BORDEAUX (33) Réservoir d'alcool éthylique dénaturé par 10 % méthanol + 3 % d'alcool isopropylique	AR 100/CLX	STEEL
EUROP RAIL PARIS (75) Wagons de lessive de soude	AR 100/MD2	STEEL
GAZ DE FRANCE SAINT CLAIR SUR EPTE (95) Cuve de méthanol	AR 100/MD5	STEEL
ROQUETTE FRERES LESTREM (62) Silo de saumure saturée 70°C - pH 13	AR 100/MD2	STEEL
RHONE POULENC Wagons d'acétate de vinyle monomère	AR 100/MD2	STEEL
BIO THERM DEAUVILLE (14) Ballons d'eau salée 65°C	AR 100/MD1	STEEL
RENAULT CORDOBA (ARGENTINE) Cuves cataphorèse	AR 100/MD4	STEEL
ROQUETTE FRERES VECQUEMONT (80) Silos 1 et 2 - Jus de pommes de terre pH 4,5 à 5,5 et lait d'amidon pH 5,5 à 6	AR 100/MD2	STEEL
BUTACHIMIE CHALAMPE (68) Caniveaux à effluents acides	ST100/04+AR100/MD6	CONCRETE
ALU PECHINEY NOGUERES (64) Intérieurs de laveurs	LP 100/612	STEEL
AIR TOTAL ORLY (94) Cuve de méthanol	AR 100/MD5	STEEL
TOTAL - CFR RAFFINERIE DES FLANDRES (59) Réacteur 56R602 : charbon actif + essence aromatique	LP 100/612	STEEL
ROQUETTE FRERES LESTREM (62) Réservoir de jus sucré N° 25 - 90°C maxi - pH 3,5 à 8	AR 100/MD1	STEEL
MANUSTOCK STRASBOURG (67) Bac à soude caustique 40° C - 80°C maxi	LP 100/712	STEEL
SOCASO PORT LA NOUVELLE (11) Bac R3 : lessive de soude	AR 100/MD1	STEEL
POZNANSKIE NUORGANIKO LUBON (POLOGNE) Cuve d'acide fluosilicique + silice 10/15 % 25-35°C	AR 100/MD2	STEEL
BRASSERIE GUINNESS IKEJA (NIGERIA) Cuve d'eau chaude 90/100°C	AR 100/HT	STEEL
ROQUETTE FRERES LESTREM (62) Cuve mélangeuse de fécule et d'amidon pH 3 à 4	AR 100/MD2réf.G	STEEL

1986 (cont'd)

SERH SAINT FLORENTIN (89) Plaques d'électrolyse	LP 100/612	STEEL
STEP STE SUZANNE (25) Sous-face de dôme d'un digesteur	LP 100/612	CONCRETE
SMAE TREMERY (57) Cuve d'huile de coupe	ST 100/04	CONCRETE
ORGANIK ZACHEM BYDGOSZCZ - POLOGNE Cuve de suspension oxydes ferreux et ferriques dans acide sulfurique pH 3-4	AR100/MD4 AR100/MD1	STEEL
SOLLAC FLORANGE (57) 2 stockeurs d'effluents des émulsions usées, eau déminée avec 0 à 5 % d'huile 50°C	AR 100/MD2	STEEL

1987

CHARCUTERIE MATT GUEBWILLER (68) Réservoir d'eau alimentaire 50/80°C	AR 100/MD1	STEEL
BERTRAND FAURE PIERREFONT (54) Cuves cataphorèse	AR 100/MD4	STEEL
ATOCHER SAINT AUBAN (04) Décanteur à saumure	LP 100/612	STEEL
REGIE RENAULT DOUAI (59) Cuves cataphorèse	AR 100/MD4	STEEL
CITROEN AULNAY (93) Réservoir d'eau incendie	EB 100/018M	STEEL
C.E.C.A. FEUCHY (62) Cuve de traitement des eaux résiduaires	ST 100/02+AR 100/MD1	STEEL
ATOCHER CHAUNY (02) Bac de soude 50%	LP 100/612	STEEL
RHONE POULENC USINE CHIMIQUE/ SAINT FONS (69) Bât. Vanilline : fosse de rétention d'acide sulfurique 9%	ST 100/04+AC3	CONCRETE
KODAK CHALON S/SAONE (71) Fosse de rétention d'acide chlorhydrique 33 %	ST100/04+SV100/FG	CONCRETE
MICHELIN CLERMONT FERRAND (63) Fosse de récupération des effluents	ST 100/04	CONCRETE
RHONE POULENC USINE BELLE ETOILE/ SAINT FONS (69) Fosse de rétention d'acide sulfurique 92 %	ST 100/04+AC3	CONCRETE

1987 (cont'd)

KODAK CHALON S/SAONE (71) Fosse de rétention de soude 50 %	ST 100/04	CONCRETE
SNCF ROMILLY (10) Réservoir d'eau résiduaire	AR 100/MD4	STEEL
NEYRTEC GRENOBLE (38) Intérieur d'un taster	EB 100/018M	STEEL
RHONE POULENC USINE CHIMIQUE/ SAINT FONS (69) Ballons adoucisseur d'eau contenant du chlorure de sodium à 20°B - 90°C	LP 100/712	STEEL
ESSO CHIMIE NOTRE DAME DE GRAVENCHON (76) Sphère S1 : butane	ST100/04+LP100/612	STEEL
FABENREV PARIS (75) 16 silos à gypse	LP 100/612G	STEEL
UNISER AMPLEPUIS (69) Emulseur à incendie 80°C	AR 100/MD1	STEEL
AMBASSADE D'AUSTRALIE PARIS (75) Ballon d'eau chaude sanitaire 90°C	AR 100/HT	STEEL
RHONE POULENC USINE CHIMIQUE/ SAINT FONS (69) Fosse de rétention de soude 50 %	ST100/04+LP100/612	CONCRETE
H.B.L. CARLING (57) Fosse de rétention de soude 50 %, d'acide sulfurique 80% + eaux strippées	ST100/04+AC3	CONCRETE
U.I.O.M. COLOMBELLES - CAEN (14) Bâche à eau déminéralisée 90° C	AR 100/HT	STEEL
RHONE POULENC USINE SILICONE/ SAINT FONS (69) Bac de siloxane	AR 100/MD4	STEEL
PEUGEOT VESOUL (70) Cuves cataphorèse	AR 100/MD4	STEEL
TOTAL - CFR RAFFINERIE DE NORMANDIE (76) 2 réservoirs d'eau déminéralisée	ST 100/04	CONCRETE
SOVAB (RVI) BATILLY (54) Cuves cataphorèse	AR 100/MD4	STEEL
SAHL GAS FACILITIES SAHL (LIBYE) 4 bacs de méthyléthanol amine 13 % - 50°C	AR 100/MD4	STEEL
H.B.L. CARLING (57) Caniveaux : eaux de lavage des filtres graviers + goudrons (chlore, phénol) 60°C	ST100/04+AR100/MD4	CONCRETE

1987 (cont'd)

RENAULT FLINS (78) Cuves cataphorèse	AR 100/MD4	STEEL
RHONE POULENC USINE SILICONE/ SAINT FONS (69) Fosse de rétention siloxane	ST 100/04	CONCRETE
PEUGEOT MULHOUSE (68) Cuves cataphorèse	AR 100/MD4	STEEL
DARTY BONDY (93) Réservoir d'eau industrielle	LP 100/612	STEEL
VEB-IFA (AIR INDUSTRIE) LUDWIGSFELDE - R.D.A. Cuves cataphorèse	AR 100/MD4	STEEL
NEYRPIC BRIANCON (05) Bâche de sortie d'eau hydroélectrique	EB 100/018M	STEEL
RENAULT DOUAI (59) Cuves cataphorèse	AR 100/MD4	STEEL
SCHWEPPE CHATEAUNEUF DE GADAGNE (84) Cuve d'eau de Javel + acide chlorhydrique	AR 100/MD4	STEEL
C.E.C.A. SAINT LAURENT BLANGY (62) Cuve de noranium 60/70°C	AR 100/MD4	STEEL
RHONE POULENC USINE SILICONE/ SAINT FONS (69) 4 bacs de toluène	LP 100/712	STEEL
PEUGEOT VESOUL (70) Caniveaux et fosses des tunnels de traitement de surface (acide nitrique et phosphorique 20 %)	VP 100/01	CONCRETE
ROQUETTE FRERES BEINHEIM (67) 2 cuves de jus sucré pH 4 à 5 - 80° C maxi	AR 100/MD1	STEEL
KOREAN GAS CORPORATION PYEONG TAEK (COREE) Réservoir TK 304 : gaz naturel liquéfié - membrane pare-vapeur	EB 100/018M	CONCRETE
EUROCEL DIVES S/MER (14) 2 ballons + 1 ensemble stockeur épaisseur de boues	AR 100/CLX	STEEL
RENAULT BOURG EN BRESSE (01) Cuves cataphorèse	AR 100/MD4	STEEL
ROQUETTE FRERES LESTREM (62) Réservoir d'eau adoucie chlorée t. ambiante	AR 100/MD4	STEEL

1988

ATOCHEM SAINT FONS (69) Fosse de rétention d'acide chlorhydrique 33 %	ST100/04+AR100/MD4	CONCRETE
SOLVAY TAVAUUX (39) Réservoir de soude 11 % et de chlorure de sodium 16 %	AR 100/MD2	STEEL
MICHELIN CLERMONT FERRAND (63) Fosse de rétention de soude 50 %	ST 100/04	CONCRETE
RHONE POULENC COLLONGES AU MONT D'OR (69) Bac chaufferie	LP 100/712	STEEL
OXYSYNTHÈSE JARRIE (38) Réservoir d'eau de synthèse	ST100/04+AR100/MD6	ALU
ELF FRANCE RAFFINERIE DE GRANDPUITS (77) Bac 51 : slops - 50°C	AR 100/MD1	STEEL
ATOCHEM SAINT AUBAN (04) Bac R 3204 : soude 50 % - 80°C maxi	LP 100/712	STEEL
RHONE POULENC PONT DE CLAIX (38) Floculateur n°2 : eau résiduaire	ST 100/04	CONCRETE
KODAK CHALON S/SAONE (71) Fosse de rétention d'acide sulfurique 92 %	ST 100/04+AC3	CONCRETE
ESSO PARIS LA DEFENSE (92) Ballon d'eau chaude 85°C	AR 100/HT	STEEL
MICHELIN CLERMONT FERRAND (63) Décanteur d'eaux usées à la station d'épuration	ST 100/04	CONCRETE
RENAULT FLINS (78) Cuves cataphorèse	AR 100/MD4	STEEL
COGEM NIORT (79) Tunnel de traitement de surface	AR 100/MD1	STEEL
RHONE POULENC USINE SILICONE/ SAINT FONS (69) Réservoir de siloxane 30°C	AR 100/MD4	STEEL
CEMA AMIENS (80) Cuves cataphorèse	AR 100/MD4	STEEL
CELLULOSE DU RHONE TARASCON (13) Bac d'eaux blanchies 70°C maxi	ST100/04+AR100/MD2	STEEL
ROQUETTE FRERES LESTREM (62) Cuve de jus sucré 60°C	AR 100/MD1	STEEL
FRANCE GALVA LORRAINE MORHANGE (57) Cuves d'acide chlorhydrique dilué à 50 %	AR 100/MD4	STEEL

1988 (cont'd)

RHONE POULENC USINE SILICONE/ SAINT FONS (69) Silo de carbonate de calcium	LP 100/612G	STEEL
ATOCHEM PIERRE BENITE (69) Fosse de rétention d'acide chlorhydrique 33 % et soude 40 %	ST100/04+AR100/MD4	CONCRETE
NEYRTEC LE TEIL (07) Intérieur d'un taster	EB 100/018M	STEEL
MOBIL NOTRE DAME DE GRAVENCHON (76) Bac TK 517 de cire alimentaire 90°C	LP 100/712	STEEL
RHONE POULENC CHALAMPE (68) Réservoir d'eau industrielle	AR 100/MD1	STEEL
ROQUETTE FRERES LESTREM (62) Cuve de jus sucré 80°C	AR 100/MD1	STEEL
FRANCE GALVA SAINT FLORENTIN (89) Cuves d'acide chlorhydrique dilué à 50 %	ST100/04+AR100/MD4	STEEL
NEYRTEC GRENOBLE (38) Intérieur d'un taster	EB 100/018M	STEEL
ATOCHEM CHAUNY (02) Bac de soude 50 %	LP 100/612	STEEL
KODAK CHALON S/SAONE (71) Intérieur d'un puits	ST 100/04	CONCRETE
ICI FRANCOLOR SAINT CLAIR DU RHONE (38) 3 réservoirs d'eau pH 8,5 à 9	LP 100/612	STEEL
CPK GIVORS (69) Réservoir d'eau	LP 100/612	STEEL
THANN ET MULHOUSE THANN (68) Wagons de lessive de soude	AR 100/MD2	STEEL
ATOCHEM PIERRE BENITE (69) Réservoir d'eau pH 8 à 9	LP 100/612	STEEL
NORSOLOR CARLING (57) - ZONE ACIDE ACRYLIQUE Fosses P 280 et R 270 : eaux pluviales	ST 100/02	CONCRETE
SNECMA MELUN VILLAROCHE (77) Fosse de rejets d'effluents de laboratoire	ST 100/04+AC3	CONCRETE
WILLIAM SAURIN CHALON S/SAONE (71) Caniveaux pour graisse animale	ST100/04+AL8T/AP	CONCRETE
SOLVAY SALIN DE GIRAUD (13) Bac à carbonate de calcium 90°C	AR 100/MD1	STEEL

1989

ATOCHEM SAINT AUBAN (04) Bac R 735 de perchloréthylène	LP 100/612	STEEL
RHONE POULENC BELLE ETOILE/ SAINT FONS (69) Fosse de rétention d'acide sulfurique 92 %	ST 100/04+AC3	CONCRETE
SANOFI SISTERON (04) Zone de dépotage acide sulfurique	ST 100/04+AC3	CONCRETE
CETIC CHALON S/SAONE (71) Caniveaux à eau borée	ST100/04+AL8T/AP	CONCRETE
RENAULT SANDOUILLE (76) Cuves cataphorèse	AR 100/MD4	STEEL
IBM CORBEIL (91) Quai de déchargement et aire de dépotage acide	ST100/04+SV100/MF	CONCRETE
ATOCHEM SAINT FONS (69) Gazomètre - Secteur Nord	LP 100/612	STEEL
SOLVAY TAVAUUX (39) Fosse de rétention au plancher du bâtiment Fabrication	ST100/04+AL8/AP	CONCRETE
CIBA SAINT FONS (69) Fosse de rétention 592 : sulfonitrique 50/50	ST 100/04+AC3	CONCRETE
MICHELIN CLERMONT FERRAND (63) Fosse de rétention de soude 50 %	ST 100/04	CONCRETE
SOLVAY SALIN DE GIRAUD (13) Bac de carbonate de calcium 90°C	AR 100/MD1	STEEL
ATOCHEM VAUVERT (30) Fosse à saumure 310 gr/l	ST 100/04	CONCRETE
CIBA SAINT FONS (69) Fosse de rétention S 49 : acide sulfurique 98 %	ST 100/04+AC3	CONCRETE
RHONE POULENC PONT DE CLAIX (38) Bac FB 27 : saumure 315 gr/l	LP 100/612	STEEL
SANOFI SISTERON (04) Fosse de rétention d'acide chlorhydrique 33 %	ST100/04+SV100/MF	CONCRETE
MICHELIN CLERMONT FERRAND (63) Fosse de rétention d'acide sulfurique	ST100/04+SV100/MF	CONCRETE
RENAULT FLINS (78) Cuves cataphorèse	AR 100/MD4	STEEL
SHELL FRANCAISE / C.R.R. RAFFINERIE DE REICHSTETT (67) Cuves CPI (séparateur effluents huileux)	AR 100/MD4	STEEL

1989 (cont'd)

PAPETERIE IRIDIUM MARESQUEL (62) Cuve de pâte à papier	ST100/04+LP100/712	CONCRETE
RENAULT LE MANS (72) Fosse de rétention d'acide chlorhydrique	ST100/02+SV100/MF	CONCRETE
ATOCHEM VAUVERT (30) Zone pomperie : fosse de rétention saumure	ST 100/04	CONCRETE
CIBA SAINT FONS (69) Fosse de rétention Oléum	ST 100/04+AC3	CONCRETE
RHONE POULENC PONT DE CLAIX (38) Bac FB 11 : soude 50 % - 70°C	LP 100/712	STEEL
SANOFI SISTERON (04) Fosse de rétention de soude 50 %	ST 100/04	CONCRETE
S.N.E.A.P. LACQ (64) Bac T 8718 : tertio butyl mercaptan	AR 100/MD6	STEEL
ASTRA CALVET ASNIERES (92) Cuve à huile alimentaire 80°C	LP 100/712	STEEL
SOPAD NESTLE LISIEUX (14) Fosse de rétention d'acide nitrique, d'eau oxygénée et de soude	ST100/04+SV100/MF	CONCRETE
ROQUETTE FRERES LESTREM (62) Cuve à jus sucré pH 3,5 à 8 - 80°C maxi	AR 100/MD1	STEEL
PARC ASTERIX PLAILLY (60) Filtres à sable F1, F2 et F6	LP 100/612	STEEL
THANN ET MULHOUSE THANN (68) Wagons de lessive de soude	AR 100/MD2	STEEL
ATOCHEM VAUVERT (30) Caniveaux zone saumure	ST 100/04	CONCRETE
CIBA SAINT FONS (69) Bac de fabrication de colorants	ST100/02+SV100/MF	CONCRETE
RHONE POULENC PONT DE CLAIX (38) • 3 massifs secteur soude 2 et soude 3 • 4 massifs secteur soude 2 et soude 3	ST100/04+AR100/MD1 ST100/04+LP100/712	CONCRETE
ATOCHEM SAINT AUBAN (04) Bac R 3206 : soude 50 % - 80°C	LP 100/712	STEEL
SANOFI SISTERON (04) Fosse de rétention d'acide sulfurique 92 %	ST 100/04+AC3	CONCRETE
CIE PARISIENNE DE CHAUFFAGE URBAIN IVRY (94) 5 réservoirs d'eau industrielle 80°C	LP 100/712	STEEL

1989 (cont'd)

ATOCHEM BALAN (01) Sécheur PVC	AR 100/MD6	INOX
ICI FRANCOLOR SAINT CLAIR DU RHONE (38) 2 réservoirs d'eau déminéralisée	LP 100/612	STEEL
ATOCHEM GONFREVILLE (76) Ballon 12T03 : mélange éthylbenzène et styrène - 50°C	AR 100/MD6	STEEL
FOULD SPRINGER MAISONS ALFORT (94) Bac d'éthanol + cyclohexane+ eau + sulfate de potasse + acide chlorhydrique	AR 100/CLX	STEEL
CGE HUNINGUE (68) Ballon - poste relevage eau usées	LP 100/612	STEEL
ATOCHEM SAINT AUBAN (04) Bac R 752 : lessive de soude 50 % - 80°C	LP 100/712	STEEL

1990

HBL COKERIE DE CARLING (57) Fosse de rétention huile et eau	ST 100/04	CONCRETE
ATOCHEM VAUVERT (30) Fosse à eau brute	LP 100/612	CONCRETE
GAZ DE FRANCE BREVAL (78) Cuve de méthanol	AR 100/MD5	STEEL
MICHELIN USINE DE LADOUX - CLERMONT FERRAND (63) Fosse de rétention de soude	ST 100/04	CONCRETE
NAPHTACHIMIE/ ATOCHEM LAVERA (13) Bac R 332 : saumure 310 gr/l - 55°C maxi	LP 100/612	STEEL
SPONTEX BEAUVAIS (60) Fosse de rétention de chlorure de magnésium 350 gr/l et pentachlorophénate de sodium - 50°C maxi	ST100/04+LP100/612	CONCRETE
SHELL FRANCAISE - C.R.R. RAFFINERIE DE REICHTETT (67) Bac T802 : effluents - pH 12	AR 100/MD4	STEEL
SOLVAY TAVAUX (39) Réservoir W007 : soude 50 %	LP 100/612	STEEL

1991

ATOCHEM SAINT AUBAN (04) Bac R 711 : trichloréthane T111	AR 100/MD2	STEEL
RHONE POULENC PONT DE CLAIX (38) Réservoir R 21227B : eau déminéralisée 60°C	LP 100/712	STEEL
SOLVAY TAVAUX (39) Réservoir W 008 : soude 50 %	LP 100/612	STEEL
RHONE POULENC PONT DE CLAIX (38) Décanteur FG5 à saumure	LP 100/612	STEEL
NAPHTACHIMIE / ATOCHEM LAVERA (13) •Bac R 337 : carbonate de sodium 40°C-70°C maxi •Sol à la Salle diaphragme •Sol à la Salle mercure •Bac 226 : eau 85°C	LP 100/712 ST100/04+LP100/712 ST100/04+AL8T/AP AR 100/HT	STEEL CONCRETE CONCRETE STEEL
BRC QUAI D'ISSY LES MOULINEAUX (75) Silo de ciment en vrac	ST 100/04	STEEL
KOREAN GAS CORPORATION PYEONG TAEK (COREE) Réservoir TK 205 : gaz naturel liquéfié - membrane pare-vapeur	EB 100/018M	CONCRETE
NOROXO HARNES (62) Cuve d'oléfines	LP 100/612	STEEL
THANN ET MULHOUSE LE HAVRE (76) Fosse de rétention d'acide phosphorique et sulfurique	ST100/04+SV100/MF	CONCRETE
RHONE POULENC PONT DE CLAIX (38) Bac FA0031 : saumure 310 gr/l	LP 100/612	STEEL
ATOCHEM SAINT AUBAN (04) Bac R 3207: soude 50 % - 80°C	LP 100/712	STEEL
TRIFLEET DORDRECHT (HOLLANDE) Iso container : chlorure d'aluminium	AR 100/MD4	STEEL
CHEVRON CHEMICAL LE HAVRE (76) Cuve d'oléfines 60°C	LP 100/712	STEEL
CPCU IVRY (94) Fosse de rétention de soude	ST100+LP100/712	CONCRETE
GELATINES WEISCHARDT GRAULHET (81) Laveurs de couennes	ST100/04+EP100/MF	CONCRETE
SOLLAC FOS SUR MER (13) Fosse de rétention du poste PCB au T.A.B.	ST 100/02	CONCRETE
S.F.B.P. RAFFINERIE DE DUNKERQUE (59) Fosse de rétention d'acide phosphorique	SV100/MF+ST100/04	CONCRETE

1992

FOULD SPRINGER MAISONS ALFORT (94) Bac 8 : 25 % eau, 5% Bétainex, 70% extrait potassique	LP 100/612	STEEL
RENAULT FLINS (78) Cuves cataphorèse	AR 100/MD4	STEEL
ATOCHEM GONFREVILLE (76) Bac d'oléfines 60°C	LP 100/712	STEEL
RHONE POULENC COLLONGES AU MONT D'OR (69) Silo 8007 : silice microperle	LP 100/612	STEEL
ATOCHEM PIERRE BENITE (69) Fosse de rétention d'HCL 33 %	ST100/04+AR100/MD4	CONCRETE
THANN ET MULHOUSE LE HAVRE (76) Décanteur : eaux mères	LP 100/712	STEEL
ATOCHEM GONFREVILLE (76) Ballon 12D24 : slops 80°C	AR 100/MD6	STEEL
RHONE POULENC PONT DE CLAIX (38) Bac FA 3121 : sulfite sodium 10 %	LP 100/612	STEEL
ICI FRANCOLOR SAINT CLAIR DU RHONE (38) Réservoir : eau déminéralisée 80°C	LP 100/712	STEEL
ATOCHEM PIERRE BENITE (69) Fosse de rétention d'HCL 33 %	ST100/04+SV100/MF	CONCRETE
RHONE POULENC USINE CHIMIQUE/ SAINT FONS (69) Fosse de rétention d'acide cyanhydrique	ST 100/05	CONCRETE
MICHELIN CLERMOND FERRAND (63) Fosse de rétention H2SO4, HNO3, NaOH– BAT Y20	ST100/05+SV100/MF	CONCRETE
RHONE POULENC PONT DE CLAIX (38) Bac FB 041 : saumure	LP 100/612	STEEL
ATOCHEM BALAN (01) Sécheur de poudre PVC	ST100/05+AR100/MD6	STEEL
KOREAN GAS CORPORATION PYEONG TAEK (COREE) Réservoir TK 706 : gaz naturel liquéfié – membrane pare-vapeur	EB 100/018M	CONCRETE
RHONE POULENC USINE SILICONE/ SAINT FONS (69) Bac 1008 : siloxane acide avec présence d'HCL	ST100/04+AR100/MD4	STEEL
ATOCHEM PIERRE BENITE (69) Bac 8116 : WAC	AR 100/MD1	STEEL
NAPHTACHIMIE/ ATOCHEM LAVERA (13) •Décanteur nord : saumure 310 gr/l – 85°C •Sol à la Salle électrolyse	ST100/05+PVE11+LP100/712 ST100/04+LP100/712	CONCRETE CONCRETE

1993

ATOCHEM FOS SUR MER (13) Bac 1201 : saumure épurée	LP 100/612	STEEL
EXXON CHEMICAL PORT JEROME (76) Bac de white spirit 75°C	AR 100/MD1	STEEL
NAPHTACHIMIE/ ATOCHEM LAVERA (13) •Sol à la Salle diaphragme •Sol au stockage de soude	ST100/05+SV100/MF ST100/05+LP100/712	CONCRETE CONCRETE
NOROXO HARNES (76) Bac d'oléfines	LP 100/612	STEEL
REGIE RENAULT SANDOUVILLE (76) Cuve cataphorèse	AR 100/MD4	STEEL
ESSO ENERGIE RAFFINERIE DE PORT JEROME (76) Fosse de neutralisation des eaux usées de la centrale	ST100/05+LP100/712	CONCRETE
RHONE POULENC PARDIES (64) Terrasse de la chaudière	ST100/04+AL8/MF	CONCRETE
ATOCHEM NOTRE DAME DE GRAVENCHON (76) Bassin d'oxygénation	ST100/05+AR100/MD4	CONCRETE
GIAT INDUSTRIES LE MANS (72) Bac d'eau de rinçage : acide sulfurique 15 % - 70°C	AR 100/MD2	STEEL
LAITERIE BESNIER LAVAL (53) Fosses de rétention d'acide nitrique	ST100/05+SV100/MF	CONCRETE
REGIE RENAULT FLINS (78) Cuve cataphorèse	ST100/05+SV100/MF	STEEL
ESSO S.A.F. RAFFINERIE DE PORT JEROME (76) Bassin de trempage HCl	ST100/05+SV100/MF	STEEL
RHONE POULENC AGRO VILLEFRANCHE (69) Bacs de colle RA501 - RA503 - RA506 - R6 - RA7	AR 100/MD2	STEEL
VINYTHAI PUBLIC COMPANY BANGKOK (THAILANDE) Bacs à soude 50 %	LP 100/612	STEEL
RHONE POULENC PARDIES (64) Citerne incendie	LP 100/612	STEEL
CIPRIAL/APT-UNION APT (84) 60 cuves de saumuration de fruits	ST100/05+LP100/612	CONCRETE

1993 (cont'd)

RHONE POULENC USINE CHIMIQUE/ SAINT FONS (69)

•Atelier G.P.O. – Trémie T 26/20 : chloranyl	ST100/05+LP100/712	STEEL
•Atelier Vanilline 583 : piscine de rejets des effluents	ST100/05+LP100/612	CONCRETE
•Atelier Vanilline 1084 : fosse de rétention H2SO4 98 %	ST100/05+SV100/MF	CONCRETE
•Atelier Vanilline 583 : piscine d'eau + sulfate 4,5 % + acide organique à 0,8%. – pH 6 – 60°C	ST100/05+LP100/612	CONCRETE

CERESTAR HAUBOURDIN (59)

•Presse à pulpe	ST100/05+LP100/712	STEEL
•Fosse de rétention H ₂ S		CONCRETE

ATELIERS A.S. PIERRE BENITE (69)

Bac à eau brute	LP 100/612	STEEL
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RHONE POULENC PONT DE CLAIX (38)

Salle de chloration : fosse de rétention d'eau incendie	AL8T/AP STRATIFIE	CONCRETE
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KOREAN GAS CORPORATION PYEONG TAEK (COREE)

Réservoir TK 707 : gaz naturel liquéfié – membrane pare-vapeur	EB 100/018M	CONCRETE
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1994

NAPHTACHIMIE LAVERA (13)

•Chloé : caniveaux de chlorométhane	ST100/05+SV100/MF	CONCRETE
•Atochem T6 : sol de la salle électrolyse (soude)	ST100/05+AL8T/AP	CONCRETE

SYCTOM/ USINE TIRU IVRY S/SEINE (94)

Fosse de rejets tampon 70°C	ST100/05+LP100/712	CONCRETE
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RANK XEROX SECLIN (59)

Fosse de rétention de soude	ST100/05	CONCRETE
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HENKEL YAINVILLE (76)

Bac R655 : 20lycerine 60/80°C	LP100/712	STEEL
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WHIRLPOOL AMIENS (80)

Cuve cataphorèse	ST100/05+LP100/712	STEEL
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RHONE POULENC CHALAMPE (68)

•Caniveaux IRN1	ST100/05	CONCRETE
•Fosses de rétention à Olone IV : eau acidulée	ST100/05	
•Fosse de rétention de fuel	ST100/05	

ATOCHER JARRIE (38)

•Sous face du toit du bac R 722 : soude 50%	ST100/05	STEEL
•Charpente de fosse à saumure	LP100/712	

RHONE POULENC VITRY S/SEINE (94)

Bâche à soude	ST100/05	CONCRETE
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1994 (cont'd)

CERESTAR HAUBOURDIN (59)

•Méthaniseur : méthane et eaux	LP100/612	STEEL
•Fosses de rétention de soude 50%	ST100/05+AL8T/AP	CONCRETE

GLACERIES SAINT ROCH AUVELAIS (BELGIQUE)

Cuve inox : eau chlorée	AR 100/MD4	STEEL
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BOXAL BEAUREPAIRE (38)

Fosse de rétention de perchloréthylène	ST100/05+LP100/612	CONCRETE
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RENAULT FLINS (78)

Cuve cataphorèse	ST100/05+AR 100/MD4	STEEL
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SIETAM SECLIN (59)

Suspentes de cataphorèse	AR 100/CLX	STEEL
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RENAULT-SOVAB BATILLY (54)

Cuve cataphorèse	ST100/05+AR 100/CLX	STEEL
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RHONE POULENC PONT DE CLAIX (38)

Fosse de rétention GA 513/1.2 : 99% de soude 50 % - 1% de Javel 47-50°C	ST100/05+SV100/MF	CONCRETE
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C.P.A. DUNKERQUE (59)

Réservoirs N° 12 et 18 : soude 50 % - 50°C	LP100/612	STEEL
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GELATINES WEISCHARDT GRAULHET (81)

Bac stockant des couennes de porc (Fermentation 3% acide sulfurique)	ST100/05+EP100/MF	CONCRETE
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EXXON CHEMICAL NOTRE DAME DE GRAVENCHON (76)

•Bac TK 22142 : HCl 33% dilué à 30% dans de l'eau alumineuse	AR100/MD1	STEEL
•Bac TK 19193 : HCl 33% dilué à 30% dans de l'eau alumineuse	AR 100/MD4	
•Ballon D 040 : butène	LP100/712	

RHONE POULENC ROUSSILLON (38)

Sous face du bac 1049 : siloxane	AR 100/MD4	STEEL
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ATOCHER SAINT AUBAN (04)

Bacs R 3201 et R 3208 : soude 50 % - 75°C	LP100/712	STEEL
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THANN ET MULHOUSE LE HAVRE (76)

Cuve RC 20 : eaux mères	ST100/05+LP100/712	STEEL
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ROQUETTE LESTREM (62)

Laveuse d'amidon	AR 100/CLX	STEEL
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ATOCHER GONFREVILLE (76)

Ballon 12D24 : distillat Slops – 70/80°C	AR 100/MD4	STEEL
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C.D.R.A. PAPETERIES SAINT GAUDENS (31)

Fosse des eaux blanches	ST100/05+LP100/612	CONCRETE
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1994 (cont'd)

SANOFI L'ISLE SUR LA SORGUE (84) Fosse de rétention : HCl 33 %	ST100/05+SV100/MF	CONCRETE
NOROXO HARNES (62) Fond de bac N°120 : oléfines 60°C	ST100/05+LP 100/612	STEEL
PAPETERIE IRIDIUM MARESQUEL (62) Cuvier de pâte à papier – 60°C	ST100/05+LP100/712	STEEL
CPCU BERCY (75) Bâche : eau industrielle 80°C	LP100/712	STEEL
LEVER HAUBOURDIN (59) Fosse de rétention : soude	ST100/05+AL8T/AP	CONCRETE
RHONE POULENC ROUSSILLON (38) Château d'eau : eau industrielle	ST100/05	CONCRETE
ZENECA SAINT CLAIR DU RHONE (38) Fosse de rétention et puisard HCl 30 %	SV100/MF	CONCRETE
NOORD NATIE ANVERS (BELGIQUE) Réservoir n°5 : soude caustique 50 % - 40°C	LP100/712	STEEL
CPCU GRENNELLE (75) Bâches RE3 et RF3 : eau industrielle 80°C	LP100/712	STEEL
SOLLAC FOS S/MER (13) Château d'eau : eau industrielle	LP100/612	STEEL
RHONE POULENC USINE CHIMIQUE SAINT FONS (69) Fosse de rejet Bât.568 PMO : acide chlorhydrique, gilotherm, eau de lavage, eau + soude, chlorure d'acide, traces de Javel, hydroquinone, MIBK, toluène, perchloréthylène, trichloréthylène	ST100/05+PVE11 +SV100/MF	CONCRETE

1995

HENKEL YAINVILLE (76) Réservoir R 654 : glycérine – 60/80°C	LP100/712	STEEL
SIETAM SECLIN (59) Suspentes de cataphorèse	AR 100/MD4	STEEL
RENAULT MAUBEUGE (59) Cuve cataphorèse	ST100/05+AR 100/MD4	STEEL
NAPHTACHIMIE/ ATOCHEM LAVERA (13) Sol à la salle électrolyse	ST100/05+AL8T/AP	CONCRETE
R.V.I. ANNONAY (07) Cuve cataphorèse	ST100/05+AR 100/MD4	STEEL

1995 (cont'd)

LEVER HAUBOURDIN (59) Fosse de rétention d'acide citrique et soude	ST100/05+SV100/MF	CONCRETE
ATOICHEM GONFREVILLE (76) Ballon B 129 : diéthanolamine	AR 100/CLX	STEEL
SEFIVIN SORGUES (84) Réservoir N°8090 d'azote sec	LP100/612	STEEL
RHONE POULENC USINE CHIMIQUE/ SAINT FONS (69) Piscine (groupe 3) – Effluents	ST100/05+AR100/MD6	CONCRETE + TILING
CERESTAR HAUBOURDIN (59) • Digesteur : boues sulfureuses • Digesteur : eaux résiduaires	ST100/05+LP100/612 ST100/05+LP100/612	STEEL STEEL
TOTAL GONFREVILLE L'ORCHER (76) Fosse de rétention HCl des bacs 18B301 et 18B302	ST100/05+SV100/MF	CONCRETE
DU PONT DE NEMOURS DUNKERQUE (59) Sol de l'atelier principal : HCl 33 %	AR 100/MD4	CONCRETE
FUJILAB BOIS D'ARCY (78) Caniveau E6 recevant des réactifs de procédé de développement photo	ST100/05+SV100/MF	CONCRETE
SOGESTROL LE HAVRE (76) • Bac N°76 : soude 50 % - 35°C • Réservoir N°9 : résidus phénolés	LP100/612 ST100/05+AR 100/MD4	STEEL STEEL
RHONE POULENC LES ROCHES DE CONDRIEU (38) • Massif Est d'entraînement du four : soude • Bac 91700 : soude	ST100/05+AL8T/AP ST100/05+LP100/612	CONCRETE STEEL
CPCU GRENNELLE PARIS (75) Fond de bac RF1 et RF2 : eau industrielle 80°C	ST100/05+LP100/612	STEEL
ROQUETTE FRERES LESTREM (62) • Murs de l'atelier TS4 : gluten • Amidonnerie : laveuse – Amidon • Silos à farine • Cuve – Amidon	RP100/01 AR100/CLX ST100/05+LP100/612 AR 100/MD4	CONCRETE STEEL STEEL STEEL
DU PONT DE NEMOURS CERNAY (68) Cuve de stockage N°1271 : dibasicester 20 % + xylène 63 % + méthanol 50% + éthanol 36 % + alcool dodécylque 15 % + dibutylphthalate 30 % + di-isobutylcétone 25 %	AR100/MD5	INOX
RENAULT LE MANS (72) Cuve cataphorèse	ST100/05+AR 100/MD4	STEEL
RHONE POULENC PONT DE CLAIX (38) Chaîne 3 : fosse de rétention de soude 30%	ST100/05+LP100/712	CONCRETE

1995 (cont'd)

UGINE SAVOIE UGINE (73)

Ligne de décapage :

• 3 fosses de neutralisation	ST100/05+SV100MF	CONCRETE + TILING
• 2 fosses de rejets : effluents acides	ST100/05+SV100/MF	CONCRETE

ORIL BOLBEC (76)

• 3 bassins de stockage et 1 caniveau	ST100/05+LP100/712	CONCRETE
• 1 bassin de stockage de jus cuivrique pH 2 (HCl) sulfate de cuivre 3,5g/l – acétate d'éthyle 1 %	ST100/05+SV100/MF	CONCRETE

HOECHST LILLEBONNE (76)

Ballon V 402 : acétaldéhyde	AR 100/MD2	STEEL
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RHONE POULENC USINE SILICONES NORD/ SAINT FONS (69)

Atelier finition : fosse de rejet et de stockage d'effluents	ST100/05+LP100/712	CONCRETE
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THANN ET MULHOUSE LE HAVRE (76)

Réservoir RC 201 : eau déminéralisée + oxyde de titane + chlorures	ST100/05+LP100/712	STEEL
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SANOFI BIO-INDUSTRIES L'ISLE SUR LA SORGUE (84)

Fosse de rétention HCl 33 %	ST100/05+SV100/MF	CONCRETE
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C.P.A. GRAND QUEVILLY (76)

Bac N°7 : soude 49 % - 35/50°C	LP100/612	STEEL
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SARA LE LAMENTIN (97) MARTINIQUE

Fosse de rétention d'eaux résiduaires	ST100/05	CONCRETE
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ELF ATOCHEM SAINT AUBAN (04)

Bac R 3202 : soude 50 % - 75°C maxi	ST100/05+LP100/712	STEEL
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DORLYL LE HAVRE (76)

Silo : pulvérulents plastiques	LP100/612	STEEL
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EURO AUTOMOBILES HEULIEZ CERISAY (79)

Tunnel de rinçage	AR100/MD1	STEEL
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C.D.E. LANGRES (52) **POUR L'AIR LIQUIDE**

Réservoirs N°8164-8171-8300-8367-8450-8451 : azote sec	LP100/612	STEEL
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CHALLENGE INTERNATIONAL SANDOUILLE (76)

15 Containers : siloxane	AR 100/MD4	STEEL+INOX
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PAPETERIE IRIDIUM MARESQUEL (62)

Cuvier : eau potable	ST100/05+LP100/612	CONCRETE
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ROQUETTE FRERES BENHEIM (67)

Cuve AS 626 : lait d'amidon	LP100/512	STEEL
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ATOACHEM SAINT FONS (69)

Bac R 7301 : Javel 55°C + soude 4 à 8 gr/litre	ST100/05+AR 100/CLX	CONCRETE
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CEGECOL ROUEN (76)

Trémie : colle néoprène – 40°C	LP100/612	STEEL
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1996

ROQUETTE FRERES LESTREM (62)

• Tambour filtrant : amidon	AR100/CLX	STEEL
• Lessiveuse : gluten	AR100/CLX	STEEL
• Murs et plafond à la salle de production TS4 : gluten	ST100/05+RP100/01	CONCRETE
• Robe d'un silo à farine	LP100/612	STEEL
• Cuves : lait d'amidon	LP100/512	STEEL

ERMETAINER SANDOUILLE (76)

Container : siloxane	AR100/MD4	STEEL/INOX
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SAINT GOBAIN ANICHE (59)

Parois du réfrigérant atmosphérique	ST100/05+LP100/612	CONCRETE
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NAPHTACHIMIE LAVERA (13)

ATOACHEM T6 : poutres à la salle électrolyse	ST100/05+LP100/712	CONCRETE
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CARBONE SAVOIE LA LECHERE (73)

Taster T 18	ST100/05+LP100/612	STEEL
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NAPHTACHIMIE / ATOACHEM LAVERA (13)

Bac R 331 : saumure épurée	ST100/05+LP100/612S	STEEL
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RENAULT BOURG EN BRESSE (01)

Atelier peinture : fosse de neutralisation	ST100/05+SV100/MF	CONCRETE
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UGINE SAVOIE UGINE (73)

• Chaîne de décapage DC8 – massifs, fosse de de rétention, caniveaux : effluents pH 1 à 6	SV100/MF	CONCRETE
• Rétention HF – murs, caniveaux : acide nitrique 57 % et HF 50 %	ST100/05+SV100/MF	CONCRETE
• Caniveaux DC6 : effluents pH 1 à 6	ST100/05+SV100/MF	CONCRETE

ROQUETTE FRERES BENHEIM (67)

Cuve C1J 100 : lait d'amidon	ST100/05+LP100/512	STEEL
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LESAFFRE CERENS (50)

Cuve N°8960 : azote	LP100/612	STEEL
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ATOACHEM CARLING (57)

Bacs V 411 et V 412 : éthylbenzène 45 %, benzène 40 %, polyéthylbenzène 15 %	LP100/612	STEEL
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EIMCO WEMCO SECLIN (59)

Filtre EIMCO : H ₂ SO ₄ -70°C et TiO ₂	LP100/712	STEEL
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THANN ET MULHOUSE LE HAVRE (76)

Filtre EIMCO : H ₂ SO ₄ -70°C et TiO ₂	LP100/712	STEEL
DORR B et DORR NORD : eau déminéralisée et TiO ₂ – 70°C	LP100/712	STEEL

ATOACHEM SAINT FONS (69)

Bac R 7250 : NaOH 50% - t. ambiante	LP100/712	STEEL
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1996 (cont'd)

RHONE POULENC PONT DE CLAIX (38) Atelier AG/SC : Fosse de rétention sulfonitrique 50 %	ST100/05+SV100/MF	CONCRETE
PROPETROL STRASBOURG (67) • Réservoir R 122 : lessive de soude • Fosse de rétention : eau, hydrocarbures	LP100/712 ST100/05+LP100/612	STEEL CONCRETE
ATOCHER SAINT AUBAN (04) Bac R 3203 : NaOH 50 % - 70°C	ST100/05+LP100/712	STEEL
PEUGEOT POISSY (78) Cuve cataphorèse	AR100/MD4	STEEL
TREDI SAINT VULBAS (01) Aire de dépotage et fosse de rétention : HCl 33% - t. amb	SV100/MF	CONCRETE
DU PONT DE NEMOURS DUNKERQUE (59) Réservoirs : eau de chaudière 80°C – pH 11, neutralisation à l'HCl – pH 6 à 8	ST100/05+AR100/MD6	STEEL
SIBILLE DALLE BOUSBECQUE (59) • Cuvier : eau chargée en pâte à papier • Caniveau : eau et pâte à papier	ST100/05+LP100/712 ST100/05+LP100/712	CONCRETE CONCRETE
SNECMA CORBEIL-ESSONNES (91) Fosse de rétention : produits de traitement de surface	ST100/05+SV100/MF	CONCRETE
PEUGEOT MULHOUSE (68) Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
COCA COLA LES PENNES MIRABEAU (13) - STATION D'EPURATION • Traitement des ciels gazeux • Fosses de relevage • Fosse de rétention : chlorure ferrique, soude • Fosse de rétention : Javel, acide sulfurique	LP100/712 LP100/712 ST100/05+LP100/612 ST100/05+SV100/MF	CONCRETE CONCRETE CONCRETE CONCRETE
RENAULT FLINS (78) Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
RHONE POULENC LES ROCHES DE CONDRIEU (38) Secteur AMTPD - fosse de rétention sous centrifugeuse : effluents pH 4 à 12	ST100/05+LP100/512	CONCRETE
CITROEN RENNES (35) Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
PROTEX CHATEAURENAULT (37) Cuve : formal 94 % - 50/60°C	AR100/MD2	STEEL and INOX
STAUFFER/ FEGUY (BELGIQUE) Cuves : pesticides	LP100/612	STEEL

1996 (cont'd)

HOYER FRANCE LE HAVRE (76) Bac : eau 70°C	ST100/05+LP100/712	STEEL
NOVACARB LANEUVEVILLE DEVANT NANCY (54) Bac à saumure	AR100/MD1	STEEL
SVENSKA RAYON VALVERG (SUEDE) Réservoir N° 101 : sulfure de carbone	AR100/MD2	STEEL
LUBRIZOL FRANCE LE HAVRE (76) Fosse d'oxydation : eau, H ₂ S	ST100/05+AR100/MD2	CONCRETE
AUSSEDAT REY MARESQUEL (62) 2 cuiviers de pâte à papier	ST100/05+LP100/712	CONCRETE
GRANDE PAROISSE MORMANT (77) Fosse de rétention : H ₂ SO ₄ 96 %	ST100/05+SV100/MF	CONCRETE
RHONE POULENC USINE CHIMIQUE SAINT FONS (69) • Atelier Vanilline : fosse de rétention H ₂ SO ₄ 92 % • Bât 517 POD Groupe 1 : piscine de rejet d'effluents • Bât 142 Groupe 3 - sol et fosse de rétention : H ₂ SO ₄ 92%, acide salicylique, carbonate de soude • Bât 568 PMO Groupe 1 : fosse de rejet d'effluents	ST100/05+SV100/MF ST100/05+SV100/MF ST100/05+SV100/MF ST100/05+SV100/MF	CONCRETE CONCRETE CONCRETE CONCRETE
SEVEL NORD SAINT AMAND LES EAUX (59) Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
VINYLTHAI PUBLIC COMPANY BANGKOK (THAILANDE) Bacs K 311 - K 312 : NaOH 50 %	LP100/612	STEEL
ATMEL ROUSSET (13) • Sol : produits chimiques • Fosse de rétention : H ₂ SO ₄ 98 % et HCl 33 %	AL8/S+ST100/05+SV100/MF ST100/05+SV100/MF	CONCRETE CONCRETE
KOREAN GAS CORPORATION PYEONG TAEK (COREE) Réservoirs TK 308 - TK 309 : gaz naturel liquéfié - membrane pare-vapeur	EB100/018M	CONCRETE
D.C.A.N. CHERBOURG (50) - SS MARIN NUCLEAIRE « LE TRIOMPHANT » Local batteries : fosse de rétention	ST100/05+AL8T/AP	INOX
ORIL BOLBEC (76) Fosses de rétention : H ₂ SO ₄ 98 %	ST100/05+SV100/MF	CONCRETE
ARSENAL DE CHERBOURG (50) Fosse de rétention : fûts de solvant	ST100/05+AL8T/AP	CONCRETE
AMYLUM ALOST (BELGIQUE) • Cuve : glucose • Cuve : mélasse	AR100/MD2 AR100/MD2	STEEL STEEL
YVES ROCHER LA GACILLY (56) Cuve à parfum	AR100/CLX	STEEL

1997

NAPHTACHIMIE / ATOCHEM LAVERA (13)

•Dissolveur : saumure 85°C	ST100/05+AR100/CLX	CONCRETE
•Bac R 332 : saumure épurée	ST100/05+LP100/612S	STEEL
•Sol à la pomperie : NaOH 50 % - 60°C	ST100/05+LP100/712	CONCRETE

RHONE POULENC LA ROCHELLE (17)

•Atelier CERES : sol et caniveaux	EDO/30S+ED SOL	CONCRETE
caniveaux	ED SOL	STEEL GALVA
•Atelier SAPHIR :sol et caniveaux	EDO/30S+ED SOL	CONCRETE
caniveaux	ED SOL	STEEL GALVA
•Atelier SAPHIR III :sol et caniveaux	ST100/05+AL8T/AP	CONCRETE

LUBRIZOL ROUEN (76)

Réservoir : triphénylphosphate 30°C	LP100/712	STEEL
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ROQUETTE FRERES BENHEIM (67)

Cuve N° CH100 : lait d'amidon	ST100/05+LP100/512	STEEL
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ARKEMA (ex - S.N.E.A.P.) LACQ (64)

Bac T 8718 : tertio butyl mercaptan	AR100/MD6	STEEL
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ORIL BOLBEC (76)

•Fosse de rétention : HCl 33 %	ST100/05+SV100/MF	CONCRETE
•Fosse de rétention : H ₂ SO ₄ 98 %	ST100/05+SV100/MF	CONCRETE

ERAMET SLN LE HAVRE (76)

Sol de l'unité Cobalt	ST100/05+AL8T/AP	STEEL
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ROQUETTE FRERES LESTREM (62)

•Charpentes du bâtiment pilote	CP95	STEEL
•Fosse de rétention : HCl 35%, NaOH 4%, acide paracétique 40 %, bisulfite de soude, eau oxygénée	ST100/05+SV100/MF	CONCRETE

CARBONE SAVOIE LA LECHERE (73)

Fosse de rétention des fours N°1, 4, 5 et 6	ST100/05+LP100/612	STEEL/INOX
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ELF ATOCHEM SAINT AUBAN (04)

Bac R 712 : Trichloro-111-éthane	AR100/MD2	STEEL
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D.S.M. COMPIEGNE (60)

•Cuves N° 50, 51 et 52 : styrène	AR100/MD6	STEEL
•Cuve N° 53 : diéthylène glycol	AR100/MD4	STEEL
•Cuves N° 56 et 63 : acrylates 1 et 2	AR100/MD6	STEEL
•Cuves N° 57, 58 et 59 : monopropylèneglycol, toluène	AR100/MD2	STEEL
•Cuve N° 62 : TDI 100%	AR100/MD2	STEEL
•Cuve N° 64 : dipropylène glycol	AR100/MD2	STEEL

RHONE POULENC USINE CHIMIQUE/SAINT FONS (69)

Bât 568 PMO Groupe 1 : fosses de rétention des bacs 10464 et 10465	ST100/05+SV100/MF	CONCRETE
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1997 (cont'd)

A.I.E.A. MONACO

•Bât 4 : conduit d'extraction d'air de laboratoire	ST100/05+SV100/MF	CONCRETE
•Cuisine : conduit d'aération	ST100/05+LP100/612	CONCRETE

E.D.I.B. DIJON (21)

•Bacs N°10, 12, 17 : eau solvantée à 5 % maxi (White spirit, naphtha et essence de térébenthine)	LP100/612	STEEL
•Bacs N°11, 18 : eau et solvants halogénés (Trichloro-1,1,1 Ethane et Trichloréthylène)	LP100/612	STEEL
•Station de traitement de déchets - Stockage de fûts : - zones du local : acides pH 1	AL8/S	CONCRETE
- fosses de rétention : acides pH 1	ST100/05+SV100/MF	CONCRETE

HIT INDUSTRIES CHANTELOUP LES VIGNES (78)

Cuves : liquide de trempage des STEELS	ST100/05+AR100/MD1	CONCRETE
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UGINE SAVOIE UGINE (73)

•Aire et mur du dépotage HF : acide nitrique 57 %, acide fluorhydrique 50% - t. ambiante	ST100/05+SV100/MF	CONCRETE
•Puisard filtre presse, zone laveur, fosse de rétention RF2, escalier bac DC3 : effluents pH 1 à 6	ST100/05+SV100/MF	CONCRETE

HOTEL DES MONNAIES ET MEDAILLES PESSAC (33)

Fosses de rétention : H ₂ SO ₄ 98 %	ST100/05+SV100/MF	CONCRETE
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CITROEN AULNAY SOUS BOIS (93)

Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
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RHONE POULENC PONT DE CLAIX (38)

Toiture terrasse de l'unité B.R.	AL8T/AP STRATIFIE	CONCRETE
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EURO AUTOMOBILES HEULIEZ CERIZAY (79)

Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
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TREDI SAINT VULBAS (01)

•Caniveaux : pyralène, perchloréthylène, dégraissant CAMLEN	ST100/05+AL8T/AP	CONCRETE
•Caniveaux de l'unité de traitement des PCB	AL8T/AP	CONCRETE

R.V.I. ANNONAY (07)

Atelier CHROME - Fosse de rétention : effluents cataphorèse	ST100/05+AR100/MD4	CONCRETE
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CELLULOSE DU PIN BIGANOS (33)

Cuvier C 22 : pâte à papier	ST100/05+LP100/612	CONCRETE
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CECA ATO FEUCHY (62)

Bassin : eau industrielle	ST100/05+LP100/612	CONCRETE
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SFIM INDUSTRIES PALAISEAU (91)

Capots blindés	AR100/CLX	STEEL
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AUSSEDAT REY MARESCUEL (62)

Cuvier : pâte à papier	ST100/05+LP100/712	CONCRETE
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1997 (cont'd)

SYCTOM ISSY LES MOULINEAUX (92) Fosse de rejet d'effluents	ST100/05+LP100/712	CONCRETE
ATOCHEM GONFREVILLE (76) Ballon 12D24 : slops 80°C	AR100/MD6	STEEL
ATO GRANDE PAROISSE MAZINGARBE (62) Fosse de rétention AG5 : eau, nitrate	ST100/05+AL8T/AP	CONCRETE
KOREAN GAS CORPORATION PYEONG TAEK (COREE) Réservoir TK 310 : gaz naturel liquéfié - membrane pare-vapeur	EB100/018M	CONCRETE
SONITHERM - U.I.O.M. NICE (06) Fosse de rétention et sols : différents acides	ST100/05+SV100/MF	CONCRETE
G.I.A.T. TULLE (19) Fosse de rétention : effluents	LP100/712+SV100/MF	CONCRETE
RHONE POULENC SAINT AUBIN LES ELBEUF (76) Aéro-accelerator : effluents	ST100/05+AR100/MD4	CONCRETE
STEINER VERNON (27) Bassins de la station d'épuration : effluents teinturerie	ST100/05+LP100/612	CONCRETE

1998

ROQUETTE FRERES BENHEIM (67) Cuve de traitement de lait d'amidon n°6A	ST100/05+SV100/MF	STEEL
EURO AUTOMOBILES HEULIEZ CERIZAY (79) Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
PEUGEOT MONTBELIARD (25) Cuve cataphorèse	ST100/05+AR100/MD4	STEEL
ROQUETTE FRERES VECQUEMONT (80) Massif en CONCRETE (support de machine - séchage de l'amidon) CONCRETE	ST100/05+RP100/01	
RHONE POULENC NUTRITION ANIMALE COMMENTRY (03) Fosse de neutralisation des effluents	ST100/05+AL8T/AP	CONCRETE
RHODIA SAINT FONS (69) Piscine vaniline	ST100/05+LP100/612	CONCRETE
ELF ATOCHEM SAINT AUBAN (04) Sol de la salle électrolyse Sol du 1er étage de la salle électrolyse mercure	AL8T/AP+AL8/S AL8T/AP STRATIFIE	CONCRETE CONCRETE

1998 (cont'd)

BALSAN LE POINCONNET (66) Sol et caniveau : acide formique et acide acétique	AL8/S et ED/SOL	CONCRETE
EUROTAINER / DAHER LE HAVRE (76) Containers de transport de Noranium N2SH1	AR100/MD1	INOX
NAPHTACHIMIE / ATOCHEM LAVERA (13) Bac CIBA S 312 et caniveau Sol de la salle électrolyse mercure Sol du 1er étage de la salle électrolyse mercure	LP100/612 S AL8T/AP+AL8S AL8T/AP STRATIFIE	STEEL CONCRETE CONCRETE
TOTAL CRD GONFREVILLE L'ORCHER (76) Bassin de décarbonatation : eau déminéralisée	ST100/05+LP100/612	CONCRETE
CELLULOSE DU RHONE TARASCON (13) Silo : pâte à papier	AL8T/AP+AR100/MD1	STEEL
RHODIA ROUSSILLON (38) Fosse de rétention dans le local phosgène Filtre Philippe Fosse de rétention : H ₂ SO ₄ 92 %	AL8T/AP STRATIFIE AL8T/AP STRATIFIE ST100/05+SV100/MF	CONCRETE CONCRETE CONCRETE
TT PLAST LENS (62) 1 Cuve enterrée : alcool isopropylique 1 Cuve enterrée : acétate d'éthyle	LP100/612 LP100/612	STEEL STEEL
ATOCHEM GRANDE PAROISSE GRAND COURONNE (76) Fosse de rétention : acide nitrique	ST100/05+SV100/MF	CONCRETE
NOROXO HARNES (62) Cuves : mélange d'alcools aliphatiques C13-C15	ST100/05+AR100/MD2	STEEL
EDIB DIJON (21) Cuves : solvants divers	LP100/612	STEEL
STOLT NIELSEN LE HAVRE (76) Containers de transport de siloxane	AR100/MD4	INOX
INTERNATIONAL PAPER KWIDZEN (POLOGNE) Cuves : lait de chaux 80°C	AR100/MD4	STEEL
HOECHST LILLEBONNE (76) Méthaniseur : eaux résiduelles	LP100/612	STEEL
SOBEGI MOURENX (64) Bac T 701 : eaux biodégradables	AR100/MD2	STEEL
NESTLE BRIQUEBEC (50) Fosse de rétention : HCl	ST100/05+SV100/MF	CONCRETE
EUROTUNNEL CALAIS (62) Fosse de rétention : HCl	ST100/05+SV100/MF	CONCRETE
RAF CHESTER (ANGLETERRE) Cuves : eau + antigel Energex 20 %	LP100/612	STEEL

1999

ORIL/DEGREMONT BOLBEC (76) Fosse de rétention : HCl	ST100/05+SV100/MF	CONCRETE
SHELL BERRE (13) Bac T1601 : NaOH 50 %	LP100/712	STEEL
EUROTAINER/DAHER LE HAVRE (76) Containers de transport de Noranium M2SH-1	AR100/MD1	INOX
EUROLYSINE AMIENS (80) Bac T 5000A : lysine	LP100/712	STEEL
ATOCHEM GONFREVILLE L'ORCHER (76) Bac TK 1115B : styrène	AR100/MD6	STEEL
SANOFI SISTERON (13) Fosse de rétention R 40202: HCl	ST100/05+SV100/MF	CONCRETE
COLAS LYON (69) Bac de bitume	AR100/MD6	STEEL
LUBRIZOL ROUEN (76) Bac T 10189 : alcool en C ₃ , alcool en C ₈ acide ditiophosphorique	AR100/CLX	STEEL
RENAULT FLINS (78) Cuves cataphorèse	ST100/05+AR100/MD4	STEEL
ATOCHEM LAVERA (13) Zone Nord des Lourds à Chloé : sol de rétention	ST100/05+SV100/MF	CONCRETE
ATOCHEM SAINT AUBAN (04) Bac R 3206 : lessive de soude à 75°C	LP100/712	STEEL
PROSERPOL/HARIBO MARSEILLE (13) Cuve de neutralisation R 03 + Caniveaux (eau de lavage + 5 g/l d'acide acétique)	LP100/612 ST100/05+LP100/612	STEEL CONCRETE
RENAULT SANDOUVILLE (76) Cuves cataphorèse	AR100/MD4	STEEL
RHODIA LES ROCHES DE CONDRIEU (38) Cuve : sulfure de carbone	AR100/MD2	STEEL
CELLURHONE TARASCON (13) Tours : pâte à papier	ST100/05+AR100/MD1	CONCRETE
MARIUS FABRE SALON DE PROVENCE (13) Cuves : huiles végétales à 60°C	ST100/05+LP100/612	CONCRETE
C.D.E. LANGRES (52) pour GAZ DE FRANCE Cuves : méthanol pur	AR100/MD5	STEEL
RHODIA COLLONGES (69) Caniveaux d'une aire de dépotage H ₂ SO ₄ 92 %	ST100/05+SV100MF	CONCRETE

2000

EUROTAINER / DAHER LE HAVRE (76) Containers de Noranium M2SH1	AR100/MD1	INOX
NORD COMPOSITES LONGPRE LES CORPS SAINTS (80) Cuves : résine polyester en solution dans le styrène	AR100/MD6	STEEL
PROSERPOL USINE BONNE MERE LA BOUCAN - STE ROSE (97) Méthaniseur : traitement de vinasses	ST100/05+LP100/612	STEEL
GACHES CHIMIE ESCALQUENS (31) Bac : Alcool éthylique technique dénaturé 95 %	AR 100/CLX	STEEL
CITROEN CORMEILLES LE ROYAL (14) Cuves de phosphatation	AR 100/MD1	STEEL
R.V.I. MONDEVILLE (14) Cuve cataphorèse	ST 100/05+AR100/MD4	STEEL
TOTAL NORMANDIE HARFLEUR (76) Fosse de neutralisation d'acides	ST100/05+LP100/712	CONCRETE
RHODIA LES ROCHES DE CONDRIEU (38) Pont à bascule ISSAR : égouttures H ₂ SO ₄ 98 %	ST100/05+SV100/MF	CONCRETE
PAPETERIE DE MAUDUIT QUIMPERLE (29) Rétention : NaOH	ST 100/05+LP100/612	CONCRETE
BP/ELF DUNKERQUE (59) Bac E 17 : cire 80 à 80°C avec pointes à 120°C	ST100/05+AR100/MD1	STEEL
RHODIA CHIMIE ST FONS (69) Bâtiment R 614 : Fosse de rétention acide sulfurique 92 %	ST100/05+SV100/MF	CONCRETE
ROQUETTE FRERES BENHEIM (67) Cuve de traitement de lait d'amidon n°1 I 100	ST100/05+SV100/MF	STEEL

2001

RHODIA ROUSSILLON (38)

Atelier herbicide – fosses de rétention :

- Poste pompes HCl : eau + HCl 32 %

- Poste 4711 : HCl 32 % + Diazo (chlorures)

+ eau + chlorure de méthylène

- Poste 1022 : eau + jus stanniques (HCl 13 à 16 %

+ Sn1 10 à 12 % + Sn2 1 à 2 %) + NaOH 150 g/l

- Poste 1074 : HCl 10% + goudrons à 45°C maxi

ST100/05+SV100/MF

CONCRETE

EXXON PORT JEROME (76)

Bacs TK 19 179 – TK 19 193 – TK 19 178: boues

ST100/05+AR100/MD4

STEEL

NOROXO HARNES (62)

Cuves : mélange d'alcools aliphatiques C13-C15

ST100/05+AR100/MD2

STEEL

TEMBEC TARASCON (13)

Tour de blanchiment

ST100/05+AR100/MD1

STEEL

SOLLAC BASSE INDRE (44)

Cuve d'eaux de rejet et rinçage

LP 100/712

STEEL

NOVACARB LANEUVEVILLE DEVANT NANCY (54)

Décarbonateur

ST100/05+AR100/MD1

STEEL

SEVEL NORD SAINT AMAND LES EAUX (59)

8 cuves de traitement des effluents

ST100/05+LP100/712

STEEL

RHONE POULENC SAINT AUBIN LES ELBOEUF (76)

Fosse de récupération des eaux résiduaires

ST100/05+SV100/MF

CONCRETE

ATOFINA SAINT AUBAN (04)

Bac R 3205 : NaOH 50%

LP100/712

STEEL

EXXON MOBIL NOTRE DAME DE GRAVENCHON (76)

Bac 83 : extrait aromatique de furfuraldéhyde ou furfural, avec traces d'aldéhyde furfurylique (200 à 300 ppm)

AR100/MD1

STEEL

2002

C.P.C.U. LA VILLETTE PARIS (75)

Bâche à eau de condensats 80°C

LP 100/712

STEEL

PAPETERIE DE CASCADEX SCAER (29)

Cuvier de pâte à papier

ST100/05+LP100/612

CONCRETE

ROQUETTE FRERES BENHEIM (67)

Cuve de traitement de lait d'amidon n° C1 H 100

ST100/05+SV100/MF

STEEL

Cuve de traitement de lait d'amidon n° C1 J 100

ST100/05+SV100/MF

STEEL

PAPETERIE DE SMURFIT FACTURE (33)

Cuvier de pâte à papier

ST100/05+LP100/612

CONCRETE

P.S.A. SOCHAUX (25)

Cuve cataphorèse

ST 100/05+AR100/MD4

STEEL

ATOFINA JARRIE (38)

Salle électrolyse chlore/soude

AL8T/AP+AL8M

CONCRETE

SANOFI SISTERON (04)

Fosses de rétention soude 25% et 50%

AL8T/AP+AL8T/AP

CONCRETE

INTERNATIONAL PAPER MARESQUEL (62)

Cuvier de pâte à papier

ST100/05+LP100/712

CONCRETE

BURGO ARDENNES VIRTION (BELGIQUE)

Cuve de stockage de liqueur verte

ST100/05+AR100/MD1

STEEL

TEMBEC TARASCON (13)

Cuvier de pâte à papier

ST100/05+AR100/MD1

CONCRETE

MICHELIN CATAROUX (63)

Bassin de décantation d'acide phosphorique 5 %

ST100/05+LP100/612

CONCRETE

NOVACARB LANEUVEVILLE DEVANT NANCY (54)

Réservoir de bouillie BC sous agitation

pH 8,3 – t. 52°C

ST100/05+AR100/MD1

STEEL

ATOFINA CARLING (57)

Réservoir de naphtha

ST100/05+LP100/612

STEEL

RENAULT SANDOUILLE (76)

Bac de NaOH

LP100/612

STEEL

EXXON MOBIL NOTRE DAME DE GRAVENCHON (76)

Bac TK 19194 : eau alumineuse

ST100/05+AR100/MD4

STEEL

2003

CEREXAGRI MOURENX (64) Cuve 1441/ agrinol, slurry de Famoxate, slurry de Folpel	LP100/612	STEEL
ATOFINA SAINT AUBAN (04) Réservoir 212A : solvant chloré	ST100/05+AR100/MD2	STEEL
NOROXO HARNES (59) Bac TK 108 : oléfine	AR100/MD2	STEEL
GIREX QUIMPER (29) Fosses de rétention sous bâches T002, T003, T004, T005, T006, T007, T008, T009, T010, T011 : solvants	ST100/05+SV100/MF	CONCRETE
RHODIA SILICONES SAINT FONS (38) Fosse de rétention acide chlorhydrique 32 %	ST100/05+SV100/MF	CONCRETE
AIR LIQUIDE SALAISE (38) - Aire de dépotage et stockage extérieur : H ₂ SO ₄ 96 % - Fosse extérieure n°2 : H ₂ SO ₄ 96 % - Salle 1/3 et sol de la salle 5/1 : acide sulfurique 96 % - Fosse de rétention "tampon" extérieure : H ₂ SO ₄ , NaOH	ST100/03+SV100/MF SV100/MF	CONCRETE CONCRETE
GE PLASTICS (60) Aire de dépotage : eau oxygénée	ST100/03+SV100/MF	CONCRETE
REXIM HAM (80) Réservoir T 405 : acides glutamique, aspartique, serine, thréonine + sulfates 3 % maxi	LP100/612	STEEL
AJINOMOTO EUROLYSINE AMIENS (80) Réservoir T 5000D : effluents aqueux	LP100/512	STEEL
EUROCAT LA VOULTE (07) Fosse de rétention NaOH 50 %	AL8T/AP	CONCRETE
C.P.C.U. ST OUEN (93) Fosse de neutralisation	ST100/03+SV100/MF	CONCRETE
LUBRIZOL ROUEN (76) Réservoir T10162 : alcool en C ₃ 96 %, alcool en C ₂ 2 %, acide ditiophosphorique 2 %	AR100/CLX	STEEL
ATOFINA CARLING (57) Réservoir R 2205 : eaux chargées en benzène, styrène, éthylbenzène, coke, huiles - pH 2 à 10	AR100/MD6	STEEL
EXXON SOCABU N.D. DE GRAVENCHON (76) Aire de dépotage à ciel ouvert : H ₂ SO ₄ 98 %	ST100/05+SV100/MF	CONCRETE
PARC DES EXPOSITIONS PARIS (75) Cunette de collecteur d'eaux pluviales	LP100/512	CONCRETE
ASCOMETAL DUNKERQUE (59) Décanteurs eau + boue neutralisée	ST100/03+LP100/512	STEEL/CONCRETE

2004

TOTAL LACQ (64) Fosses de rétention 3T1516 – 4T1516 – T1516A 6T1516 – 1T1516: NaOH 48 % 6T1523 – 1T1523 – 4T1523: HCl 33 %	ST100/03 ST100/03+SV100/MF	CONCRETE CONCRETE
SOFICAR ABIDOS (64) - Fosse de rétention TEF3 : H ₂ SO ₄ 2.5 % - Fosse de rétention – bât. déminéralisation : H ₂ SO ₄ 2 % - Bassin traitement des eaux : H ₂ O + 1 % H ₂ SO ₄ – H ₂ O + 1 % NaOH	ST100/03+SV100/MF ST100/03+SV100/MF ST100/03	CONCRETE CONCRETE CONCRETE
RHODIA ROUSSILLON (38) Fosse de rétention : H ₂ SO ₄ 92 %	ST100/03+SV100/MF	CONCRETE
CEREXAGRI MOURENX (64) - Réchauffeur de la Cuve 1541 de stockage d'Agrinol, Famoxadone, slurry de Folpel, Agirec (4 % argile) à 45°C - Fosse de rétention de la zone de dépotage H ₂ SO ₄ 98 % dilué + Surfaron	LP100/712 ST100/03+SV100/MF	STEEL CONCRETE
ETS GUERBET LANESTER (56) Fosses de rétention UNTEL et zone de dépotage	ST100/03+SV100/MF	CONCRETE
RHODIA SILICONES SAINT FONS (69) Silo de silice Aérosil sous azote	LP100/612	STEEL
FONDERIE USSEL (19) Fosse de stockage d'eau entre 25 et 65°C pour le refroidissement de pièces métalliques	ST100/03+LP100/712	CONCRETE
CRITT / MDTS CHARLEVILLE MEZIERES (08) Fosses de rétention huiles / solvants / acides / bases	ST100/03+SV100/MF	CONCRETE
CASSE AUTO ROUSSILLON (38) Fosse de stockage et fosse de rétention : H ₂ SO ₄ 37 % – électrolyte	ST100/03+SV100/MF	CONCRETE
BP LAVERA (13) Unité Oxydes 3 – Tours de refroidissement D306 A et B Cellules froides et chaudes	ST100/05+LP100/712	CONCRETE
NOVACARB LANEUVILLE DEVANT NANCY (54) Cuve EMB : Chlorures 170 g/l, NH ₃ sous forme libre et liée 90 g/l, NaHCO ₃ en suspension 260 g/l, CO ₂ 45 g/l, Sulfures < 0.1 g/l	ST100/03+LP100/512	STEEL

2005

BOSCH REXROTH VENISSIEUX (69) Fosse de rétention : huile hydraulique	AL8T/AP+AL8T/AP	CONCRETE
UIOM RENNES VILLEJEAN (35) - Fosse de récupération d'eaux usées et caniveaux pH 5 à 12 – t. 40°C avec pointes à 90°C - Fosse de rétention ammoniacale	ST100/03+SV100/MF ST100/03+SV100/MF	CONCRETE CONCRETE
TOTAL LACQ (64) Capacités procédés : stockage de condensat de gaz + eaux de gisement – présence H ₂ S – 60°C	SV100/MF	STEEL
SHELL CHIMIE (13) Fosse de rétention : anhydride maléique	ST100/03+SV100/MF	CONCRETE
AIR LIQUIDE LAVERA (13) Projet H2 – Bassin aéroréfrigérant	TECHNOPERL	CONCRETE
TOTAL NORMANDIE – SOFRESID (76) Bâche à eau déminéralisée	TECHNOPERL	CONCRETE
VERMILLON LUGOS (40) Séparateur eau salée 95 % / pétrole 5 %	LP100/712	CONCRETE
NORD CHROME GRANDE SYNTHE (59) Fosse de rétention acide chromique 230 g/l	TECHNOPERL+SV100/MF	CONCRETE
ARKEMA SAINT AUBAN (04) Réservoir R 212 B : solvant chloré	ST100/03+AR100/MD2	STEEL
NOVACARB LANEUVEVILLE DEVANT NANCY (54) Cuve de stockage de NH ₃ 90 g/l, NaCl 270 g/l, CO ₂ 40 g/l	TECHNOPERL+LP100/612	CONCRETE
HEULIEZ CERIZAY (79) Zone cataphorèse : caniveaux et regards	ST100/03+SV100/MF	CONCRETE
INCINERATEUR ARIANE (06) Fosse de rétention ammoniacale 32 % et HCl 38 %	TECHNOPERL+SV100/MF	CONCRETE
CIBA SAINT FONS (69) Rétention NaOH 10 et 30 %	TECHNOPERL	CONCRETE
ASCOMETAL DUNKERQUE (59) Décanteur eau + boue neutralisée	ST100/03+LP100/512	STEEL/CONCRETE
FBFC – CERCA ROMANS (26) Zone de rétention d'HF 50 à 70 % : fosse et puisards	ST100/03+SV100/MF	CONCRETE
EXXON SOCABU N.D. DE GRAVENCHON (76) Bac 4 TK 13 : mélange soude, acide stéarique/stéarate de zinc avec traces de stéarate de calcium – pH 7 à 10 t. d'arrivée 85 à 90°C – t. de service 60°C	TECHNOPERL+LP100/712	STEEL

2005 (cont'd)

LEZUS ANGERS (49) Fosse de rétention : eau de refroidissement et solution avec : 71% eau + 20% HNO ₃ 58% + 9% HF 59%	ST100/03+SV100/MF	CONCRETE
VIVENDI WATER - MILLENNIUM - Usine du Hode (76) Station de traitement des eaux : Ouvrages de clarification : effluent neutralisé – pH 7,5 à 9,5 : suspension de gypse – concentration maxi 250 g/litre t. de service 47°C (accidentelle 58°C)	ST100/03+LP100/512	CONCRETE
IFREMER BREST (29) 2 bassins de carène : eau de mer	BIOPERL	CONCRETE
YARA AMBES (33) Sol et trou d'évacuation : nitrate d'ammonium dilué	TECHNOPERL+SV100/MF	CONCRETE

2006

TECHNIGAZ – PROJET ZEEBRUGGE (BELGIQUE) 2 bassins de stockage d'eau industrielle – pH 6 à 8 – t 15°C	TECHNOPERL	CONCRETE
FORGES DE LA LOIRE (42) Zone de rétention sous bacs de trempe : soude + HCl dilués	TECHNOPERL	CONCRETE
ETS LAGARDE CUSSET (03) Réservoir d'eau incendie	TECHNOPERL	STEEL
ACTION PIN CASTETS (40) Caniveaux d'eaux de lavage	TECHNOPERL+SV100/MF	CONCRETE
KERIMA CHIMIE LAUTERBOURG (67) - Fosses de rétention : . HCl 31 % – polychlorure d'aluminium 38 % pH 1 – chlorure ferrique 41 % . sulfate ferrique 44 % – polychlorure d'aluminium pH 2,5 chlorure ferreux 20 % – H ₂ SO ₄ 75 % - Sols : . mélange HCl 30-33 % + hydroxyde d'aluminium – pH < 1 . sulfate ferrique 44 % – polychlorure d'aluminium 38 % – eau + carbonate - Aire de dépotage : HCl 30-33 % - Bâche à eau incendie	TECHNOPERL+SV100/MF TECHNOPERL+SV100/MF	CONCRETE CONCRETE
LAFFORT CENOLOGIE FLOIRAC (33) Fosse de rétention SO ₂ - 6 à 21 %	TECHNOPERL+SV100/MF	CONCRETE
RENAULT FLINS (78) Tuyau Bonna + fosse de stockage d'eau brute	TECHNOPERL	CONCRETE
ONDEO – STEP ALSTHROM LAUTERBOURG (67) Fosse de rétention d'H ₂ SO ₄ 96 %	TECHNOPERL+SV100/MF	CONCRETE

2006 (cont'd)

LYONDELL BASEL BERRE L'ETANG (13)

Caniveau de zone de dépotage : eau + NaOH 20 à 50 %
– H₂SO₄ 94 à 98 % – tétrachlorure de carbone C₂Cl₄

CHEMPERL

CONCRETE

MICHELIN CATAROUX (63)

Réservoir d'eau 96 % + Rénacite 4 % – pH 8

TECHNOPERL

STEEL

BURGO ARDENNES VIRTON (BELGIQUE)

Bac n° 911 : liqueur blanche t. 85°C

TECHNOPERL+AR100/MD1

STEEL

2007

SOBEGI LACQ (64)

Cuve d'eaux biodégradables

LP100/512

STEEL

CENTRE BEAUBOURG PARIS (75)

Aéroréfrigérants

TECHNOPERL+LP100/512

STEEL

SERETRAM LABATUT (40)

Bâche de stockage et caniveau de jus de maïs

TECHNOPERL+LP100/512

CONCRETE

PAPETERIES DE GASCOGNE MIMIZAN (40)

Cuves d'eaux collées pH 4 à 5. – t. 60 °C max.

TECHNOPERL+ SV 100/MF

CONCRETE

CPCU VITRY (94)

Bâche à eau déminée 012 BA

LP100/512

STEEL

EXXON NOTRE DAME DE GRAVENCHON (76)

Bac TK 1235 : ETBE

LP100/512

STEEL

Ballons D118 et D119 : boues

AR100/MD4

STEEL

SBS LACQ (64)

Bac TA 1103 d'eaux biodégradables

LP100/612

STEEL

TECHNIGAZ – Projet ZEEBRUGGE (Belgique)

3 bassins de stockage d'eau industrielle – pH 6 à 8 t. 55°C

TECHNOPERL

CONCRETE

LAFARGE MAROC – Usine Tétouan III

Silo de stockage de ciment

LP100/512G

STEEL

EXXON NOTRE DAME DE GRAVENCHON (76)

Bac TK 22-102 : slops chlorés à 40°C

TECHNOPERL+AR100/MD2

STEEL

Bac TK 1610 : Oléfine C24

TECHNOPERL+LP100/612

STEEL

Bac TK 193 : eau alumineuse – pH 1

TECHNOPERL+AR100/MD4

STEEL

ORIL BOLBEC (76)

Fosse de rétention RT63 : HNO₃ 70 %

TECHNOPERL+SV101

CONCRETE

AJINOMOTO FOOD EUROPE AMIENS (80)

Fosse de rétention H₂SO₄ 96 %

TECHNOPERL+SV100/MF

CONCRETE

DCN CHERBOURG (50)

Bacs R 1/2/3/4 : Gamlen OD4000, Inipol IP80, Dispolène 36S

LP100/512

STEEL

2008

ARKEMA ST MENET (13)

Cuve n°010-08-c : acide undécylénique

LP100/712

STEEL

TEMPEC TARASCON (30)

Silo de pâte à papier

LP100/712

STEEL

AXENS SALINDRE (30)

Bâche tampon d'eaux industrielles pH 2,5 – t. 60°C maxi

SV100/MF

CONCRETE

COMMUNAUTE D'AGGLOMERATION DE MONTPELLIER (34)

Usine de méthanisation :

Bassin de réception des jus de presse bio déchets OMR

BIOPERL

CONCRETE

LTC ST CLOUD (92)

Sol des locaux de traitement des réactifs

TECHNOPERL+SV100/MF

CONCRETE

CENTRE BEAUBOURG PARIS (75)

Aéroréfrigérants

LP100/512

POLYESTER

BJSP – ALGER (ALGERIE)

Citernes d'acides

LP100/612

STEEL

BIOWANZE – WANZE (BELGIQUE)

Fermenteur n°2

LP100/712

STEEL

2009

PERSTORP – PONT DE CLAIX (38)

Robe et fond du bac FB 11 – soude 50%, t. 70°C

LP100/712

STEEL

LAFON (79)

Cuves d'éthanol

CARBOPERL

STEEL

MARIE FRAIS VIRIAT (01)

Silo à farine alimentaire

LP100/512 G

STEEL

INEOS (ex BP) LAVERA (13)

Station d'épuration industrielle – bassin FCC

Bâche : eaux souillées / hydrocarbures

BIOPERL

BIOPERL

CONCRETE

CONCRETE

CPCU VITRY SUR SEINE (94)

Bâche à eau – t. 50°C

LP100/512

CONCRETE

TOTAL Raffinerie de GRANDPUITS NANGIS (77)

Sécheur à sel

TECHNOPERL

STEEL

2010

INEOS (ex BP) LAVERA (13) Bâche F 970 eau + hexane + solvant	TECHNOPERL+SV100/MF	CONCRETE
PERSTORP PONT DE CLAIX (38) Bac FB 0041 – saumure Robe et fond du bac FA 21.1 – saumure Fond du bac FB 021 – saumure Robe et fond du bac FB 21 – carbonate de calcium Robe et fond du bac FB 27 – saumure	LP100/512	STEEL
GOODYEAR AMIENS (80) Bassin de tour aéroréfrigérante	TECHNOPERL+LP100/512	CONCRETE
COLGATE PALMOLIVE COMPIEGNE (60) Rétention de la zone sous mélangeurs	TECHNOPERL+LP100/512	CONCRETE
PCAS LIMAY (78) Intérieur de 2 tours aéroréfrigérantes	LP100/512	METAL
TRIGANO CORMEON (41) Rétention sous tunnel de traitement de surface	TECHNOPERL+LP100/612	CONCRETE
ADP ROISSY (95) Cuve de stockage d'eau glycolée	LP100/512	METAL
BRENNTAG GRETZ (77) Zone de rétention CMA	TECHNOPERL+SV100/MF	CONCRETE
ISOCEM PITHIVIERS (45) Rétentions W3 – RT 202 et RT 204	TECHNOPERL+SV100/MF	CONCRETE
AMCOR Flexibles DIJON (21) Fond du bac n°2 : acétate d'éthyle	LP100/812	STEEL
AUBERT & DUVAL CLERMONT-FERRAND (63) Fosse de récupération d'huile Débourbeur de l'aire de lavage	TECHNOPERL BIOPERL	CONCRETE CONCRETE
ALPES EMULSIONS BONNEVILLE (74) Cuve de stockage d'émulsions bitumineuses	LP100/712	STEEL
D.R.T. DERIVES RESINIQUES ET TERPENIQUES CASTETS (40) Rétention H ₂ S au local centrifuge	TECHNOPERL	CONCRETE
TOTAL Raffinerie de NORMANDIE GONFREVILLE l'ORCHER (76) Bacs E 322 & E 323: eau saumâtre – t. 70°C	TECHNOPERL+LP100/712	STEEL

2011

FIBRE EXCELLENCE ST GAUDENS (31) Cuve contenant de l'anhydride sulfureux 20g/l	TECHNOPERL+CHEMPERL	CONCRETE
CECA PARENTIS (40) Cuve charbon actif	LP100/512	STEEL
FORESA AMBARES (33) Bac n°3	LP100/512	STEEL
NOVASEP MOURENX (64) Rétention solvants neufs	TECHNOPERL+CHEMPERL	CONCRETE
SNECMA CORBEILLE-ESSONNES (91) Filtre à eau industrielle	TECHNOPERL	CONCRETE
CPCU ST OUEN (93) Cuve de stockage RE2 – eau décarbonatée 60°C	LP100/512	STEEL
BRENNTAG TOURNAN-EN-BRIE (77) Zone de dépotage produits chimiques CMA + zone CMB	TECHNOPERL+CHEMPERL	CONCRETE
COLGATE PALMOLIVE COMPIEGNE (60) Rétention sous mélangeur de produits chimiques	TECHNOPERL+CHEMPERL	CONCRETE
ARKEMA CHAUNY (02) Rétentions cyclohexane	TECHNOPERL+CHEMPERL	CONCRETE
STPE SAINT OUEN L'AUMONE (95) Réservoir de formiate de potassium	LP100/512	STEEL
SOCOMAR VANNES (56) Réservoir d'eaux industrielles	LP100/512	STEEL

2012

PAPETERIE TEMBEC TARTAS (40) Rétention dioxyde de chlore Rétention peroxyde d'hydrogène	TECHNOPERL+CHEMPERL	CONCRETE
PAPETERIE DE GASCOGNE MIMIZAN (40) Rétentions sous bacs MP5 et MP6 – eaux chargées en pâte à papier, soude, acide sulfurique	TECHNOPERL+CHEMPERL	CONCRETE
FORESA AMBARES (33) Rétention acide formique Rétention eau de javel Rétention chlore	TECHNOPERL+CHEMPERL	CONCRETE
NOVASEP MOURENX (64) Rétention TA910 – résidus de solvant dont toluène	TECHNOPERL+CHEMPERL	CONCRETE
VENCOREX LE-PONT-DE-CLAIX (38) Rétention amont – Toluène Di-Isocyanate Isophorone Toluène Di Isocyanate Aliphatique	TECHNOPERL+CHEMPERL	CONCRETE
RHODIA – GEPEIF ST FONS (69) Epaississeur AO8 – HQPC, hydroquinone, phénols, Pyrocathéchine, eaux de lavage	TECHNOPERL+ LP100/512	CONCRETE
TERLIS ROUSSILLON (38) Bac 475 – Ammoniac, soufre, acide chlorhydrique, huile, hydroquinone	TECHNOPERL+CHEMPERL	STEEL
SPEICHIM MOURENX (64) Rétentions TA 01/02/04/05 d'acide méthane sulfonique	TECHNOPERL+CHEMPERL	CONCRETE
CMIE GDF HAUTERIVES (26) 4 ballons de stockage de tri éthylène glycol	LP100/512	STEEL
PRAXY ISSOIRE (63) Local Cisailles – sol	TECHNOPERL	CONCRETE
CONT'DER ROANNE (42) Réservoir S 762 – liquide lave-glace	AR100/CLX	STEEL
UNITE DE METHANISATION MONTPELLIER (34) Stockage d'eau ammoniacuée	BIOPERL	CONCRETE
INEOS LAVERA (13) Bac F990 : eau, hexane et solvant	TECHNOPERL+ CHEMPERL	STEEL
ATELIERS D'OCCITANIE NARBONNE (11) 20 wagons de transport de dichloréthane 1,2	PRT 1,2,3	STEEL
DALKIA MONTPELLIER (34) Piscine de tour aéroréfrigérante	TECHNOPERL+LP100/512	CONCRETE

2013

NOVASEP MOURENX (64) Rétention de boues acides pH5 et toluène	TECHNOPERL+CHEMPERL	CONCRETE
DCNS TOULON (83) Sol décontaminable de la galerie souterraine de l'ANL	ELECTROPERL	CONCRETE
SIRA CHASSE SUR RHONE (69) Fosse et rétention d'effluents liquides de déchetterie	TECHNOPERL+CHEMPERL	CONCRETE
VALEO ISSOIRE (63) Sol du centre de dépotage – acide chlorhydrique, lessive de soude, acide nitrique	TECHNOPERL+CHEMPERL	CONCRETE
SPEICHIM MOURENX (64) Rétentions TA 01/2/4/5 d'acide méthane sulfonique	TECHNOPERL+CHEMPERL	CONCRETE
NAUSICAA BOULOGNE sur MER (62) Bassin des lions de mer	TECHNOPERL+LP100/512	CONCRETE
IFREMER BREST (29) Canal de courantométrie	TECHNOPERL	CONCRETE
L'OREAL ORMES (45) Cuve d'huile végétale	TECHNOPERL+SV101	CONCRETE
CAPELLE LA GRANDE (59) Tour aéroréfrigérante – immeuble Galliéni	TECHNOPERL	STEEL
AUZOU Citernes SAINT SAENS (76) Cuve d'eau de pluie	LP100/512	STEEL
USINE CHRISTOFLE ROUEN (76) Rétention de la cuve liquides cyanurés	TECHNOPERL+CHEMPERL	CONCRETE
LYON CONFLUENCE LYON (69) Réservoir d'huile de colza	LP100/512	STEEL
PSA CHARLEVILLE MEZIERES (08) Tour aéroréfrigérante	TECHNOPERL+LP100/512	STEEL
BGL BANK LUXEMBOURG VILLE Bassins de tours de refroidissement	TECHNOPERL	STEEL
IPDIA CAEN (14) Tour aéroréfrigérante et bassin de refroidissement	TECHNOPERL	STEEL
GEOGAZ LAVERA (13) Rétention de méthanol	TECHNOPERL+CHEMPERL	CONCRETE
RHODIA SALINDRES (30) Rétention d'acide sulfurique 98%	TECHNOPERL+CHEMPERL	CONCRETE

2013 (cont'd)

O.I. MANUFACTURING WINGLES (62)

Tour de refroidissement TECHNOPERL STEEL

VENCOREX LE-PONT-DE-CLAIX (38)

Bac FA 0031 – soude LP100/512 STEEL

Bac FA 806.1 – saumure LP100/512 STEEL

ARKEMA JARRIE (38)

Fosse à saumure R109.B TECHNOPERL+CHEMPERL CONCRETE

CHLORALP HAUTERIVES (26)

Bac RS3 1 – saumure LP100/512 STEEL

OCV OWENS CHAMBERY (73)

Filtre à sable LP100/512 STEEL

CRISTAL UNION CORBEILLES EN GATINAIS (45)

Rétention d'HCL 33% TECHNOPERL+CHEMPERL CONCRETE

CONSTELLIUM ISSOIRE (63)

Fosse du banc de traction TECHNOPERL T CONCRETE

PSA POISSY (78)

Tour aéroréfrigérante TECHNOPERL+LP100/512 STEEL

MBF ALUMINIUM SAINT-CLAUDE (39)

Fosse évaporateur TECHNOPERL+CHEMPERL CONCRETE

SOLVAY – ANVERS (BELGIQUE)

2 cuves Solvic – soude caustique LP100/512 STEEL

ARKEMA – BILBAO (ESPAGNE)

Cuves d'effluents chimiques fluorés LP100/512 STEEL

DALKIA METZ (57)

Trémies à charbon LP100/512 STEEL

HOPITAL Jean Verdier BONDY (93)

Tour aéroréfrigérante TECHNOPERL STEEL

GRUPO ANTOLIN RUPT-SUR-MOSELLE (88)

Bassin de la tour de refroidissement TECHNOPERL CONCRETE

GEORGIA Pacific HONDOUVILLE (27)

Bâche chaufferie TECHNOPERL+LP100/512 STEEL

GENERAL ELECTRIC - EADS BUC (78)

Tours aéroréfrigérantes TECHNOPERL+LP100/512 STEEL

RIBOULEAU MONOSEM LARGEASSE (79)

Cuve cataphorèse AR100/MD4 STEEL

2014

DOMAINE ROBINEAU – SANCERRE (18)

Stockage eau et effluents vinicoles LP100/512 STEEL

MUNKSJO – STENAY (55)

Rétention acide sulfurique TECHNOPERL+CHEMPERL CONCRETE

ACDN CTI – AGNEAUX (50)

Réserves d'eau incendie LP100/512 STEEL

ALVA REZE – NANTES (44)

Cuve graisses végétales LP100/512 STEEL

RUBIS TERMINAL – ROUEN (76)

Fond des bacs 78 + 15 + 16 – engrais ammoniacés LP100/512 STEEL

Bacs 7C + 8C - engrais ammoniacés LP100/512 STEEL

Bacs 39 et 40 – AD Blue LP100/512 STEEL

RENAULT – SANDOUVILLE (76)

Rétention Gardacid TECHNOPERL+CHEMPERL CONCRETE

CHU DE GRENOBLE – LA TRONCHE (38)

Tour aéroréfrigérante TECHNOPERL STEEL

SPEICHIM – MOURENX (64)

Rétention Toluène TA11/14/19/20 TECHNOPERL+CHEMPERL CONCRETE

Rétention toluène acide méthane sulfonique – Tr 2014 TECHNOPERL+CHEMPERL CONCRETE

CUSHMAN & WAKEFIELD – ISSY-LES-MOULINEAUX (92)

Tour aéroréfrigérante TECHNOPERL STEEL

MADIC – (82)

3 Cuves AD-Blue LP100/512 STEEL

AXER – (93)

Cuve AD-Blue LP100/512 STEEL

PACOBIA – SAUMUR (49)

Cuve AD-Blue LP100/512 STEEL

TEREOS NDG – LILLEBONNE (76)

Rétention chlorure ferrique TECHNOPERL+CHEMPERL CONCRETE

LAFON – Perpignan (66) – Maubeuge (59) – St Ouen l'Aumône (95)

Cuves AD-Blue LP100/512 STEEL

MICHELIN – CLERMONT FERRAND (63)

Rétention silane - zone 35 TECHNOPERL CONCRETE

2014 (cont'd)

VENCOREX

Réserve saumure RS1 + dégazeur LP100/512 STEEL

ARKEMA – MOURENX (64)

Rétention ammoniacque TECHNOPERL+CHEMPERL CONCRETE

AUBERT ET DUVAL – GENNEVILLIERS (92)

Rétention acide nitrique 43% + soude 10% TECHNOPERL+CHEMPERL CONCRETE

EXXON MOBIL – Notre Dame de Gravenchon (76)

Bac TK 906 au bloc 217 – effluents aqueux à base de soude et BF3-xH2O LP100/512 STEEL

Colonne T401 – eaux surs et soude usées CHEMPERL STEEL

Bac TK 179 – hydrocarbures de sludge TECHNOPERL+AR100/MD4 STEEL

TOURS MERCURIALES – BAGNOLET (93)

Bassins des centrales de traitements d'air TECHNOPERL+LP100/512 STEEL

PISCINE LE NAUTILUS – AMIENS (80)

Rétention H2SO4 51% TECHNOPERL+SV101 CONCRETE

RATP – PARIS 18ème

Rétention transformateur TECHNOPERL CONCRETE

RATP – ST OUEN (93)

Fosse CONCRETE eaux usées TECHNOPERL CONCRETE

STEP ISOLA 2000 – NICE (06)

Rétention des réactifs BIOPERL + CHEMPERL CONCRETE

LAFON :
OIL LIBYA – POINTE GALET (REUNION)

Cuve AD BLUE LP100/512 STEEL

HEPPNER – BRECE (35)

Cuve AD BLUE LP100/512 STEEL

TOTAL – GUIDEL (56)

Cuve AD BLUE LP100/512 STEEL

ISP LEFEBVRE – CHARRITTE-DE-BAS (64)

Cuve AD BLUE LP100/512 STEEL

MP ETP – SAINT PAUL (REUNION)

Cuve AD BLUE LP100/512 STEEL

EIFPAGE – SAINT ANDIOL (13)

Cuve Antigél LP100/512 STEEL

S2D – VILLERS SAINT PAUL (60)

Cuve de liquide de refroidissement LP100/512 STEEL

TRANSPORT BERTHIN – LE RHEU (35)

Cuve AD BLUE LP100/512 STEEL

2014 (cont'd)

LAFON :
TOTAL AS 24 – SAINT QUENTIN (02)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS 24 – LOUDEAC (22)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS 24 – DREUX (28)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS 24 – MONTARGIS (45)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS 24 – ANGERS (49)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS 24 – FLEURY (91)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS24 – BRIVE (19)

Cuve AD BLUE LP100/512 STEEL

TPF – VILLENEUVE LE ROI (94)

Cuve AD BLUE LP100/512 STEEL

MADIC – MARINGUES (63)

Cuve AD BLUE LP100/512 STEEL

MADIC – NIMES (30)

Cuve AD BLUE LP100/512 STEEL

S2D – LE-POIRÉ-VIE (85)

Cuve AD BLUE LP100/512 STEEL

ISP – PAU (64)

Cuve AD BLUE LP100/512 STEEL

ARECMA – MUNDOLSHEIM (67)

Cuve AD BLUE LP100/512 STEEL

ATCOME – BOUSIES (59)

Cuve AD BLUE LP100/512 STEEL

KEOLIS ARMOR – RENNES (35)

Cuve AD BLUE LP100/512 STEEL

TOTAL AS 24 – LIBOURNE (33)

Cuve AD BLUE LP100/512 STEEL

BIO SPRINGER – MAISONS ALFORT (94)

Cuve Butanol LP100/512 STEEL

2014 (cont'd)

PSA – VELIZY (78) Tour aéroréfrigérante	TECHNOPERL+LP100/512	STEEL
SOLVAY – COLLONGES AU MON T D'OR (69) Aire de dépotage H2SO4 92% et NaOH 50%	CHEMPERL+TECHNOPERL	CONCRETE
ARCELOR DIFFERDANGE – LUXEMBOURG Cuve à eau brute	TECHNOPERL	STEEL
NOVASEP – MOURENX (64) Rétention méthanol, acétate de méthyle, isopropanol, éthanol, acétate d'éthyle	TECHNOPERL+CHEMPERL	CONCRETE
FIBRE EXCELLENCE – TARASCON (13) Tour pâtes au bisulfite et dioxyde de chlore.	TECHNOPERL+LP100/812	STEEL
SFDM – LE FOUR A CHAUX (91) Cuve d'Uniserol PFP 3/3	LP100/512	STEEL
BASF AGRI (STATION D'EPURATION) – GRAVELINES (59) Rétention HCl 30% + FeCl3	TECHNOPERL+CHEMPERL	CONCRETE
VEOLIA – TOULOUSE (31) Rétention des cuves glycol UEP Pech David	TECHNOPERL+TECHNOPERL	CONCRETE
LESAFFRE – MARCQ EN BAROEUL (59) Sécheur à levure	OENOPERL	STEEL
AXENS – SALINDRES (30) Rétention CONCRETE H3PO4 10%	TECHNOPERL + CHEMPERL	CONCRETE
GSK WAVRE – Belgique Bassins de tours aéroréfrigérantes	TECHNOPERL+TECHNOPERL	STEEL
EUROTAINER – LE HAVRE (76) Isotanks de bromure d'isobutyle	LP100/512	STEEL

2015

YARA – MONTOIR DE BRETAGNE (44) Cuve 24B1910 d'effluents industriels	BIOPERL + LP100/812	STEEL
NAUSICAA – BOULOGNE SUR MER (62) Bassin eau de mer	TECHNOPERL + LP100/512	CONCRETE
IBM – MONTPELLIER (34) Tour de refroidissement	TECHNOPERL+TECHNOPERL	STEEL
BNF TOLBIAC – PARIS 13ème Tours aéroréfrigérantes	LP100/512	STEEL
ARCELOR MITTAL – DUNKERQUE (59) Cuves eau de process T12-T14	LP100/512	STEEL
VALEO – CERGY (95) Tour aéroréfrigérante	TECHNOPERL+LP100/512	STEEL
CEA VALDUC – IS-SUR-TILLE (21) Fosse récupération effluents	ELECTROPERL+ELECTROPERL	CONCRETE
HOTEL DU DEPARTEMENT – NANTERRE (92) Tour aéroréfrigérante	TECHNOPERL	STEEL
GSK WAVRE, RIXENSART – BELGIQUE Caissons MAL/PAL Plancher technique Tour aéroréfrigérante WN15 Tour aéroréfrigérante TX50	TECHNOPERL+CHEMPERL TECHNOPERL+ELECTROPERL TECHNOPERL+TECHNOPERL TECHNOPERL+TECHNOPERL	STEEL CONCRETE STEEL STEEL
CHANTIER NOVAPEX – LYON (69) Tour aéroréfrigérante	TECHNOPERL+LP100/512	STEEL
ATELIER HOLLIDAY PIGMENTS – COMINES (59) Turbines	GELCOAT SV101	STEEL
DALKIA FIAT – TRAPPES (78) Tour aéroréfrigérante	TECHNOPERL	STEEL
AJINOMOTO – AMIENS (80) Bac non calorifugé : Lysine pH10	OENOPERL + OENOPERL	STEEL
CHAROT – SENS (89) Cuves stockage engrais liquide	LP100/512	STEEL
CENTRE COMMERCIAL – ARCUEIL (94) Tour aéroréfrigérante	LP100/512	STEEL
SHELL – NANTERRE (92) Bac T2616 – additifs lubrifiants auto	LP100/512	STEEL

2015 (cont'd)

SPEICHIM – MOURENX (64) 6 Cuvettes : acide méthane sulfonique pH5	TECHNOPERL+CHEMPERL	CONCRETE
CPCU – VITRY SUR SEINE (94) Fosse de neutralisation effluents acide et basique	TECHNOPERL+CHEMPERL	CONCRETE
SAINT GOBAIN GLASS – ANCHE (59) Bassin de la tour aéroréfrigérante	TECHNOPERL+TECHNOPERL	CONCRETE
BOSCH – SAINT OUEN (93) Fosse eau de refroidissement process	TECHNOPERL+TECHNOPERL	CONCRETE
L'OREAL – GAUCHY (02) Aire de dépotage – alcools	TECHNOPERL+CHEMPERL	CONCRETE
RATP PHT DENFERT-ROCHEREAU 14ème – PARIS Fosse transformateur d'huile	TECHNOPERL	STEEL
KEM ONE – LAVERA (13) Epurateur S 312 D : saumure	LP100/812S	STEEL
LAUAK – HASPARREN (64) Rétention + caniveau (eau de lavage – divers solvants)	TECHNOPERL+CHEMPERL	CONCRETE
PSA SEVELNORD – St Amand (59) Traitement de gaines et ventilateurs	TECHNOPERL+CHEMPERL	STEEL
PSA – POISSY (78) Traitement de gaines et ventilateurs	TECHNOPERL+CHEMPERL	STEEL
PAPETERIE ALHSTROM DALLE – BOUSBECQUE (62) Sol bout de ligne de rétention : Acide Sulfurique	TECHNOPERL+SV101	CONCRETE
DGA – AIRBUS – Usine SECOIA – MAILLY LE CAMP (10) Ouvrages de rétention et zones de stockage des munitions	ELECTROPERL+ELECTROPERL	CONCRETE
GASCOGNE PAPER – MIMIZAN (44) Bacs à filtrat	TECHNOPERL+CHEMPERL	CONCRETE
LABORATOIRE PIERRE FABRE – TOULOUSE (31) Bassins sous tour aéroréfrigérante	TECHNOPERL+TECHNOPERL	CONCRETE
NAPHTACHIMIE – LAVERA (13) Bac R331 – Saumure déiodurée	TECHNOPERL+LP100/812S	STEEL
SOBEGI – MOURENX (64) Fosse BA942 – Rétention de divers solvants	TECHNOPERL+SV101	CONCRETE
RATP – LA VILLETTE PARIS 19ème Fosse de lavage des wagons	BIOPERL+CHEMPERL	CONCRETE

2015 (cont'd)

SOCIETE NIGUET – FEURS (42) Rétention H3PO4 85%	TECHNOPERL+CHEMPERL	CONCRETE
BOREALIS – MORMANT (77) Bac T1604 - stockage NaOH 50 %	LP100/512	STEEL
LESAFFRE – MARQ EN BAROEUL (59) Tambours sécheurs - Levure	OENOPERL	STEEL
CENTRE COMMERCIAL LE MILLÉNAIRE – AUBERVILLERS (93) Rétention eau de pluie	TECHNOPERL+TECHNOPERL	CONCRETE
TOURS MERCURIALES – BAGNOLET (93) Bassins des centrales de traitement d'air	LP100/512	STEEL
BASE MILITAIRE DE NEVOY (45) Cuve liquide de refroidissement	LP100/512	STEEL
VEOLIA - MOULIN LES METZ (57) Rétentions bisulfite de soude / soude / sulfate d'aluminium	TECHNOPERL+TECHNOPERL	CONCRETE
HARDI EVRARD – BEAURAINVILLE (62) Tour aéroréfrigérante	TECHNOPERL+TECHNOPERL	STEEL
CECA – PARENTIS EN BORN (40) Cuve charbon actif	LP100/512	STEEL
CECA – SAINT LAURENT BLANGY (62) Cuve R5107 Noranium	TECHNOPERL+LP100/812	STEEL
LAFON : TOTAL AS 24 – SAINT HERBLAIN (44) Cuve AD Blue	LP100/512	STEEL
KEOLIS – AIX EN PROVENCE (13) Cuve AD Blue	LP100/512	STEEL
SIPMA – LOUVERNE (53) Cuve AD Blue	LP100/512	STEEL
TOTAL – VEMARS (95) Cuve AD Blue	LP100/512	STEEL
TOTAL – VINEUIL (41) Cuve AD Blue	LP100/512	STEEL

2016

GSK - BELGIQUE Tour aéroréfrigérante - RIX MAC QUAY 2B	TECHNOPERL	STEEL
GSK - BELGIQUE Tour aéroréfrigérante - RIX MAC QUAY 3	TECHNOPERL	STEEL
ROQUETTE – VECQUEMONT (80) Cuve : ciel gazeux chlorure de (3-chloro-2-hydroxypropyl) Triméthylammonium	OENOPERL	STEEL
MARCHANI – NANTES (44) Cuves pour huile de transformateur	LP100/512	STEEL
MARCHANI – ROUEN (76) Cuves pour huile de transformateur	LP100/512	STEEL
VENCOREX – PONT DE CLAIX (38) Reprises BAC FG2	LP100/512	STEEL
ROQUETTE – LESTREM (62) Rétention Chlorure Ferrique Fond du bac 16 – lait d'amidon	TECHNOPERL+CHEMPERL TECHNOPERL+LP100/812	CONCRETE STEEL
LAFON SAS – FAYE-L'ABBESSE (79) Cuves de stockage AD Blue Cuve de stockage acétate d'éthyle	LP100/512 AR100/CLX	STEEL STEEL
SNV – LA CHAPELLE D'ANDAINE (61) Tour aéroréfrigérante, bassin de refroidissement	TECHNOPERL+TECHNOPERL	STEEL
CENTRE COMMERCIAL BELLE ÉPINE – THIAIS (94) Tour aéroréfrigérante	TECHNOPERL+TECHNOPERL	STEEL
USINE MICHELIN – BASSENS (33) 3 Ballons	AQUAPERL	STEEL
STATION LECLERC – FROUARD (54) Cuve de stockage AD Blue	LP100/512	STEEL
NAUSICAA – BOULOGNE SUR MER (62) Retouches dans grand bassin eau de mer	TECHNOPERL+OENOPERL	CONCRETE
PETROLNEOS – MARTIGUES (13) Bac soude n° D5	TECHNOPERL+TECHNOPERL	STEEL
KEM ONE – LAVERA (13) Bac R332 – saumure épurée Bac R585 Soude & Bac R780 Eaux usées	TECHNOPERL+AR100/MD4 TECHNOPERL+AR100/MD4	STEEL STEEL
STATION D'ÉCHANGE GÉOTHERMIE – IVRY SUR SEINE (94) Cuve 30 m³	LP100/812	STEEL
HARDI EVRARD – BEAURAINVILLE (62) Bassin sous tour aeroréfrigérante	TECHNOPERL+TECHNOPERL	CONCRETE

2016 (cont'd)

USINE ELECTRIQUE DE METZ (57) Rétention eau de régénération	TECHNOPERL+CHEMPERL	CONCRETE
EMULBITUME – BREAL SOUS MONTFORT (35) Stockage eau chaude de process pour émulsion bitume	LP100/812	STEEL
INTERFORGE – ISSOIRE (63) Aire de dépotage – NaOH, HNO3, H2SO4	TECHNOPERL+CHEMPERL	CONCRETE
SNECMA – EVRY (91) Bac de stockage eau douce – BAT. F Mezzanine K4	LP100/512	STEEL
LAUAK – HASPARREN (64) Rétention de divers effluents : préco 16.05.005	TECHNOPERL+CHEMPERL	CONCRETE
CHU (CENTRE HOSPITALIER UNIVERSITAIRE) DE PAU (64) 2 Ballons d'eau chaude	AQUAPERL	STEEL
RATP STATION AUBER – PARIS Dôme et couloir	TECHNOPERL	CONCRETE
AXIMUM – ROUEN (76) Cuve xylène, acétate de propyle, acétate d'éthyle	LP100/812	STEEL
TREDIT GROUPE SECHE ENVIRONNEMENT – SITE DE BEAUFORT (39) Rétention n°3 – divers solvants : préco 16.05.044	TECHNOPERL+GELCOAT SV101	CONCRETE
STATION D'EPURATION DE SANARY SUR MER (83) Aire de dépotage – rétention de sécurité : eau de javel, soude, chlorure ferrique, peroxyde d'hydrogène	TECHNOPERL+CHEMPERL	CONCRETE
SITE DE CANON – COURBEVOIE (92) Réfection tour aéroréfrigérante	TECHNOPERL	STEEL
VEOLIA – SEDE ARTOIS COMPOST – GRAINCOURT (62) - Bac hydrolyse - Fosses réception produits	TECHNOPERL+CHEMPERL TECHNOPERL+CHEMPERL	CONCRETE CONCRETE
USINE TEREOS – NESLE (80) Rétentions – divers effluents : zone cuve 2C509-10 zone évaporateurs amont : préco 16.10.006mod3	TECHNOPERL+CHEMPERL TECHNOPERL+CHEMPERL	CONCRETE CONCRETE
IBM – MONTPELLIER (34) Tour de refroidissement	TECHNOPERL+TECHNOPERL	STEEL
NAPHTACHIMIE – LAVERA (13) Bac R331 (devenu bac R680) – Saumure déiodurée	TECHNOPERL+LP100/812S	STEEL

2017

BOUYGUES E&S - TAC ALBIOMA – Saint PIERRE (LA REUNION) Cuves de stockage	CARBOPERL	STEEL
MAISON DE L'ELEVEUR – VOUZIER (08) Cuve de stockage	LP100/512	STEEL
IBM – MONTPELLIER (34) Tour de refroidissement	TECHNOPERL+TECHNOPERL	STEEL
VILLE DE BAROVILLE (10) Stockage eaux usées sanitaire	LP100/512	STEEL
DGA – AIRBUS – Usine SECOIA – MAILLY LE CAMP (10) Reprise du sol – Hall déchargement	ELECTROPERL+ELECTROPERL	CONCRETE
GSK WAVRE – Belgique TAR QC21	TECHNOPERL+ELECTROPERL	STEEL
ENGIE – CPCU DE BERCY (75) Cuve eaux osmosées	TECHNOPERL+LP100/812	STEEL
RATP ILE DE France – ST OUEN Rétentions de divers effluents (huiles, ...) - Bâtiment industriel	TECHNOPERL+TECHNOPERL	CONCRETE
IPEDIA - NORMANDIE Tour aéroréfrigérante	TECHNOPERL+TECHNOPERL	STEEL
RATP ILE DE France – ST OUEN Zone atelier et remisage - Locaux PR-PEF (liquide diélectrique - MIDEL)	TECHNOPERL+GELCOAT SV101	CONCRETE
PSA - TREMERY (57) Bac calorifugé - stockage eau chaude	TECHNOPERL + LP100/812	STEEL
CEA - SACLAY (91) Tour aéroréfrigérante	TECHNOPERL+TECHNOPERL	STEEL
RENAULT - BATILLY (54) Rétention huiles DA, BV, antigel, gasoil, éthanol	TECHNOPERL+CHEMPERL	CONCRETE

2017 (cont'd)

PSA - SEVELNORD (59) Traitement de gaines et ventilateurs	TECHNOPERL + CHEMPERL	STEEL
AUBERT & DUVAL - ISSOIRE (63) Fosse de décapage de la forge - HNO3 60% et NaOH 30%	TECHNOPERL+CHEMPERL	CONCRETE
SCEA LE BEAU BOIS - BONNEUIL (60) Cuve stockage - engrais liquide	LP 100/512	STEEL
SANOFI – NEUVILLE SUR SAONE (69) Rétention H2SO4	TECHNOPERL+GELCOAT SV01	CONCRETE
LES SIROPS FRUITES – LA ROCHE SUR FORON(74) Cuve stockage – NaOH 5%	TECHNOPERL+TECHNOPERL	CONCRETE
AREVA – Jarrie (38) Fosse à effluents	ELECTROPERL+GELCOAT SV101	CONCRETE
GSK WAVRE – Belgique TAR WN 18	TECHNOPERL+ELECTROPERL	STEEL
PSA – Trémery (57) TAR	TECHNOPERL+TECHNOPERL	STEEL
EARL LA HOUSOYE (80) Cuve stockage Engrais liquide	LP 100/512	STEEL
INEOS Réservoir R535 eau décarbonatée	AQUAPERL+AQUAPERL	STEEL
GSK RIXENSART – Belgique TAR RX35 – MAC QUAY 6	TECHNOPERL+ELECTROPERL	STEEL

2018

PSA - TREMERY (57) Bac eau chaude	TECHNOPERL+LP 100/812	STEEL
RATP ILE DE France – ST OUEN Locaux sociaux : rétention huile, eau chaude Locaux sociaux : rétention acide	TECHNOPERL+TECHNOPERL TECHNOPERL+GELCOAT SV101	CONCRETE CONCRETE
PSA - SEVELNORD (59) Traitement de gaines et ventilateurs	TECHNOPERL + CHEMPERL	STEEL
SOLVAY (69) Rétentions	TECHNOPERL+GELCOAT SV101	CONCRETE
CERTAS Cuve stockage AD Blue	LP 100/512	STEEL
LA MAISON DE L'ELEVEUR – Vouziers (08) Cuve stockage engrais liquide	LP 100/512	STEEL
ENGIE Rétention	TECHNOPERL+TECHNOPERL	CONCRETE
CONSTELLIUM – ISSOIRE (63) Bac de contrôle Ultrason U101	BIOPERL T	CONCRETE
EFR – CMI Bac de refroidissement	LP 100/512	STEEL
RATP – Station Aubert Rétention	TECHNOPERL + TILING	CONCRETE
QUARON – Formerie (60) Rétention	TECHNOPERL + CHEMPERL HRC	CONCRETE
GSK RIXENSART – Belgique TAR – Mac quay 2A TAR – Mac quay 2B	TECHNOPERL + ELECTROPERL	STEEL
GSK WAVRE – Belgique TAR – WN31	TECHNOPERL + ELECTROPERL	STEEL
INITIAL – St Sulpice et Carmeyrac (33) Fosse de neutralization	BIOPERL + CHEMPERL	CONCRETE
KEM ONE – NAPHTACHIMIE – Lavera (13) Epurateur saumure Vauvert S312C	TECHNOPERL + LP100/812 S	STEEL
CNRS – Marseille (13) Bassin à vague	TECHNOPERL + ELECTROPERL	CONCRETE

2018 (cont'd)

ARKEMA – St Menet (13) Rétention NaClO	TECHNOPERL + CHEMPERL VE-T	CONCRETE
13^{ème} BSMAT – Clermont Ferrand (63) Cuve stockage effluents	TECHNOPERL + CHEMPERL VE/HRC	CONCRETE

2019

PSA – Sevelnord (59) Traitement de gaines et ventilateurs	TECHNOPERL + CHEMPERL VE-T TECHNOPERL + GELCOAT SV101	STEEL STEEL
LYONDELL BASSELL – Berre l'étang (13) Rétention 30m ²	TECHNOPERL + CHEMPERL VE/HRC	CONCRETE
RATP Île de France Bâtiment industriel (1700m ²)	TECHNOPERL + TECHNOPERL	CONCRETE
GRT GAZ Cuve CDE	LP 100/512	STEEL
BRABANT Rétention H2SO4	TECHNOPERL + GELCOAT SV101	CONCRETE
ST BAUSSANT – AUTREVILLE SUR LA REINE (54) Réservoirs eaux hydrocarburées -t° amb	LP 100/512	STEEL
GROUPE CEDRES INDUSTRIES – Lens (62) Cuve stockage Noramium 2MBHT	TECHNOPERL + LP 100/812	STEEL
CITERNES ENTERREES (120m3) Huile végétale et ester d'Huile Végétale t° amb	LP 100/512	STEEL
ATRS – (49) Bassin de TAR 20m3	TECHNOPERL + CHEMPERL VE-T	CONCRETE
13^{ème} BSMAT – Clermont Ferrand (63) Cuve 40m3 - effluents industriels	TECHNOPERL + CHEMPERL VE/HRC	CONCRETE
SANOFI – Aramon (30) TAR STEEL	TECHNOPERL + ELECTROPERL	STEEL
SUEZ – Crolles (38) Fosse semi-enterrée - effluents industriels	BIOPERL + CHEMPERL VE-T	CONCRETE

2019 (cont'd)

RATP LES LILAS LOT 1

TECHNOPERL + CHEMPERL VE-T

CONCRETE

AUBERT et DUVAL – (63)

Rétention aire de lavage

Screenperl + GELCOAT SV101

CONCRETE

LA TRONCHE

Bassin à poissons

TECHNOPERL + TECHNOPERL

CONCRETE

STEP des 3 RIVIERES – Clermont-Ferrand (63)

Rétention

TECHNOPERL + GELCOAT SV101

CONCRETE

STEP DE PERPIGNAN – (66)

Rétention

BIOPERL + CHEMPERL VE-T

CONCRETE

ARKEMA SAINT MENET – (13)

Rétention – HCl Xylène

TECHNOPERL + CHEMPERL VE-T

CONCRETE

ARKEMA FEUCHY – (62)

Cuves 5106 & 5107B – Noranium M2SHS / 2M2HT

TECHNOPERL + LP100/812

STEEL

SNCF – TECHNICENTRE de CHAMBERY – (73)

Cuve stockage huile Shell Rimula R4X 15W-40

NAPHTOPERL + PETROPERL

STEEL

2020

CHATEAU HAUT-BAILLY – (33)

REGARDS

TECHNOPERL + CHEMPERL

CONCRETE

STEP Chantier ETANDEX – (38)

BASSIN de STOCKAGE effluents industriels

TECHNOPERL + TECHNOPERL

CONCRETE

TOTAL & GSK BELGIQUE

TECHNOPERL + ELECTROPERL

CONCRETE

PSA TREMERY (57)

TECHNOPERL + TECHNOPERL

STEEL

TECHNICAL INDUSTRIE – (13)

TECHNOPERL + GELCOAT SV101

CONCRETE

ES ENVIRONNEMENT – (67)

TECHNOPERL + GELCOAT SV101

CONCRETE

HEF GROUPE SITE de SAINT-ETIENNE – (42)

Rétention

TECHNOPERL + GELCOAT SV101

CONCRETE

CEMOI – CHAMBERY – (73)

Bassin de prétraitement

TECHNOPERL + GELCOAT SV101

CONCRETE

JOHN DEERE – ORLEANS – (45)

TECHNOPERL

STEEL

PSA SEVELNORD - (59)

TECHNOPERL + TECHNOPERL

STEEL

CONT'DER ROANNE – (42)

Rétention

TECHNOPERL + GELCOAT SV101

CONCRETE

SPEICHIM – (64)

Zone pompes

TECHNOPERL + CHEMPERL

CONCRETE

ALL'CHEM – (03)

TECHNOPERL + TECHNOPERL

CONCRETE

EP MECA – CHANTIER ANDRE LAURENT – (42)

Rétention

TECHNOPERL + GELCOAT SV101

CONCRETE

NORD CHROME – FLORANGE – (57)

Rétention acide chromique

TECHNOPERL + CHEMPERL

CONCRETE

2021

QUARON Formerie (60) <i>Rétention H₂SO₄ 96% et HNO₃ 60%</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
Usine INDUSTRIEL <i>Piscine sous tour aéroréfrigérante</i>	TECHNOPERL + TECHNOPERL	CONCRETE
PSA SEVELNORD	TECHNOPERL + CHEMPERL VE-T	CONCRETE
AXENS Salindres (30) <i>Rétention CH₃CCOH</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
ROQUETTE Lestrem (62) <i>Aire de dépotage et rétention</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
STMicoelectronics (38) <i>Rétention</i>	CHEMPERL VE-HRC	CONCRETE
Société ALMA – La Ferrière Brochard (61) <i>Caniveau</i>	TECHNOPERL + CHEMPERL VE-T	CONCRETE
RUBIS TERMINAL Dunkerque (59) <i>Bac n°11</i>	TECHNOPERL	STEEL

2022

X-FAB CORBEIL ESSONNE (91) <i>Cuve chaux à 100g/l</i>	TECHNOPERL + LP100/512	STEEL
PSA BORNY (57) <i>Cuve huile moteur</i>	TECHNOPERL + CHEMPERL VE-T	STEEL
TECHNIP LyondellBassell (13) <i>Rétention IBY1200</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
ROQUETTE VECQUEMONT (80) <i>Cuve de désaération (sous-face)</i>	LP 100/512	STEEL
VERSALIS (59) <i>Rétention Naphta</i>	TECHNOPERL + TECHNOPERL	CONCRETE
GARE LILLE EUROPE (59) <i>Bassin</i>	TECHNOPERL + LP 100/512	CONCRETE
ROUX CABERO – SITE DE MODANE (73) <i>Fosse</i>	ELECTROPERL + ELECTROPERL	CONCRETE
ORIL – BOLBEC (76) <i>Fosse GF1</i>	CHEMPERL VE-HRC + CHEMPERL VE-HRC	CONCRETE

2022 (cont'd)

PEME GOURDIN – GONNEHEM (62) <i>Bassin d'essais</i>	TECHNOPERL	CONCRETE
PEME GOURDIN – GONNEHEM (62) <i>Bassin d'essais</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
CEMEX CONCRETE – SAINT ETIENNE (42) <i>Zone de manipulation</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
SOCIETE ALMA – LA FERRIERE BROCHARD (61) <i>Caniveau</i>	TECHNOPERL + CHEMPERL VE-T	CONCRETE
MONTPELLIER METROPOLE (34) – PLANET OCEAN <i>Bassin tampon et Bassin Requin</i>	AQUAPERL S & T SAUPOUDRE F35	CONCRETE
USINE ELECTRIQUE DE METZ (57) <i>Rétention eau de régénération</i>	TECHNOPERL R + CHEMPERL VE-T	CONCRETE
SUEZ – SITE INDUSTRIEL DE SURESNES (92) <i>Aire de dépotage & caniveau</i>	BIOPERL R + CHEMPERL VE-HRC	CONCRETE
VENCOREX – PONT DE CLAIX (38) <i>Cuve FG 21 - Réparations</i>	LP 100/512	STEEL
SEQENS – CDMO – BOURGOIN-JALLIEU (38)) <i>Bac à effluents R50</i>	CHEMPERL VE-HRC + CHEMPERL VE-HRC	CONCRETE
INCINERATEUR COURNON - VERNEA (63) <i>Aire de dépotage</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
SOCIETE ALMA – LA FERRIERE BOUCHARD (61) <i>Caniveaux</i>	TECHNOPERL + CHEMPERL VE-T	CONCRETE

2023

TOTAL LA MEDE (13) <i>Sol PTT</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
INDAVER LOON PLAGE (59) <i>Aire de dépotage</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
APRR- A6 CENTRE D'EXPLOITATION <i>Cuve stockage sel de déneigement</i>	TECHNOPERL + CHEMPERL VE-T	CONCRETE
XFAB CORBEIL ESSONNES (91) <i>Puisard sous aire de dépotage</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
PPG MARLY (59) <i>Bac de cataphorèse</i>	TECHNOPERL + AR 100/MD4	STEEL
NORD ESTER (59) <i>Rétention</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
DOW CHEMICAL LAUTERBOURG (67) <i>Rétention</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
LYONDELLBASELL BERRE L'ETANG (13) <i>Rétention</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
UNISOURCE REFRESCO (34) <i>Regard</i>	TECHNOPERL + GELCOAT SV101	CONCRETE
ROUSSELLO ISLE SUR LA SORGUE (84) <i>Rétention</i>	TECHNOPERL + GELCOAT SV101	CONCRETE

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GTM DENAIN (59) <i>TAR</i>	TECHNOPERL + ELECTROPERL	STEEL
FERROGLOBE (38) <i>Cuve pour effluents</i>	CHEMPERL VE-HRC	CONCRETE
COMMUNE D'HOUDAIN (62) <i>Aire de dépotage et rétention</i>	TECHNOPERL + GELCOAT SV102	CONCRETE
PARFUMEUR A GRASSE (06) <i>Bassin de stockage d'effluents</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
SAIPOL SETE (34) <i>TAR</i>	TECHNOPERL + ELECTROPERL	STEEL
LFB LILLE (59) <i>Rétention</i>	ELECTROPERL + CHEMPERL VE-HRC	CONCRETE
MUSE MONTPELLIER (34) <i>TAR</i>	TECHNOPERL + ELECTROPERL	STEEL
SITE INDUSTRIEL VIRY-CHATILLON (91) <i>Aire de dépotage</i>	TECHNOPERL + GELCOAT SV102	CONCRETE
STEP INDUSTRIELLE DE BONTOUX (26) <i>Bassin</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
ARKEMA PIERRE BENITE (69) <i>Rétention</i>	TECHNOPERL + CHEMPERL VE-HRC	CONCRETE
BASE OPERATIONNELLE DE L'ILE LONGUE (29) <i>STEP - Rétention</i>	ELECTROPERL + ELECTROPERL	CONCRETE