



**PROTECT**  
**YOUR SURFACES**



**ECO-GRAFFITI**

# ABOUT US

## ABOUT US

*Éco-Graffiti is specialised in helping with, marketing and the qualified application of Faceal products and other solutions specifically designed for the protection of surfaces.*

## A CLOSE LINK, VALUE AND PRESERVATION

Globally, the preservation of value is a fundamental element in considering the life cycle of any work. Items made of concrete are an essential element, both in terms of being substantial and unchanging as well as presenting a durable aesthetic quality. This is where the properties of a surface can make all of the difference.

Concrete is a material which is both porous and absorbent. Untreated, it absorbs both water-based and oil-based stains. A number of scientific test confirm this. It is therefore very important to know if concrete surfaces have been treated, and if so, in what manner. Faceal represents a future-oriented technology. What is advantage of this solution? The surface of the concrete retains its typical and original appearance, while guaranteeing a high level of repelling water vapour. In order to be efficient, the modern building industry uses a large number of concrete elements.

The modern use of concrete provides ease of use, durability, and the design of structures and elements in concrete of the highest order possible with today's techniques. For integrated facility management, it is the durable nature of concrete that makes it central to the construction of buildings and other structures.

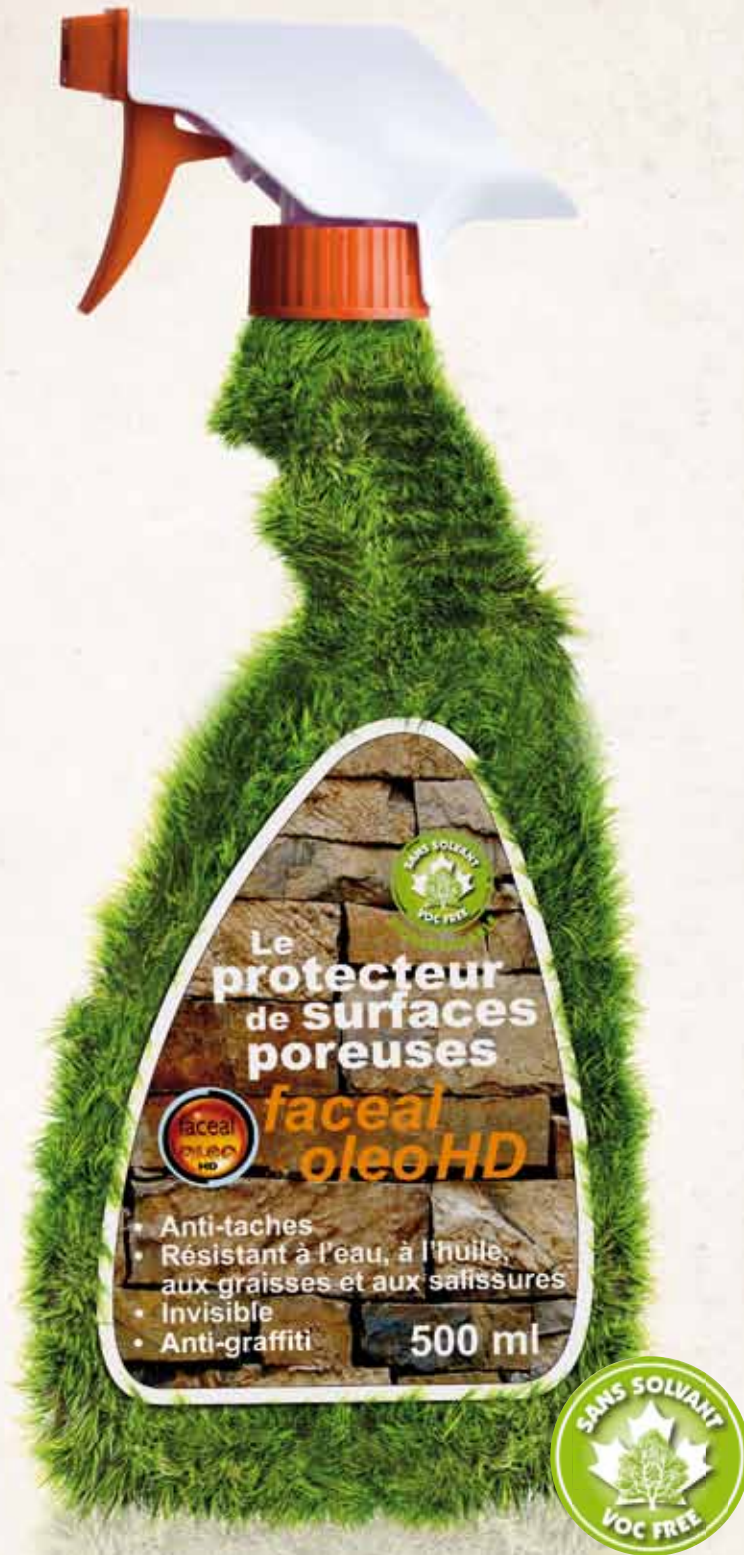
### SAFE AND ECONOMICAL

- ✓ Lasts a minimum of 10 years.
- ✓ Works on porous surfaces.
- ✓ Protected surfaces will not be damaged during graffiti removal or cleaning.
- ✓ More economical and longer lasting than other products on the market.
- ✓ Laboratory tested products.

### ECOLOGICAL AND SAFE

- ✓ Water-based, biodegradable products.
- ✓ No solvents.
- ✓ No acids.
- ✓ No aerosols.
- ✓ No effects on atmosphere, soil or water.
- ✓ Not damaging to the environment.





To the best of our knowledge, our products are the only sealants in full conformity with ecological LEED Canada standards.

# FACEAL OLEO HD

## TECHNICAL SPECIFICATIONS



**Physical State**  
Liquid

**Colour**  
Colourless

**Odour**  
None

**pH-value, undiluted**  
7-8

**Boiling Point/ Boiling Range (°C)**  
~ 100

**Point / Melting range**  
~ 0

**Flash point (°C)**  
Non applicable

**Flammability**  
Not applicable

**Ignition Temperature (°C)**  
Not applicable

**Autoflammability**  
Not applicable

**Oxidising properties**  
Not applicable

**Explosion Hazard**  
Not applicable

**Explosion limits (Vol.%)**  
**Lower:** not applicable  
**Upper:** not applicable

**Vapour pressure**  
Similar to water

**Density (g/ml)**  
1,01

**Solubility (in water)**  
Soluble

**Partition coefficient, n-Octanol/Water**  
Not available

**Permeability Rate**  
96%

**Solvent separation test**  
Not available

**Solvent content (m %)**  
Not applicable

**Solubility in grease**  
Not applicable

## PROTECTION OF SURFACES

### SURFACE COATING

Faceal Oleo HD is a water-based impregnation for absorbent mineral surfaces, and serves as a protection against graffiti and water, oil and grease-based contamination.

It also facilitates the cleaning and removal of chewing gum, ice (in the winter) and algae. Faceal Oleo HD is suitable for vertical (facades, walls), sloping surfaces and, in particular, for horizontal surfaces (floors, stairs). This high-performance impregnation is particularly resistant to mechanical abrasions. Faceal Oleo HD is a long-term, durable protection with very good self-cleaning characteristics during rain. Ask for Faceal Oleo HD to protect surfaces like garage doors, warehouse floors, sidewalks and other surfaces.

Faceal Oleo HD does not change the water vapour diffusion characteristics of the treated substrates, and is normally indiscernible to the eye. **Faceal Oleo HD is non-reversible and constitutes a so-called permanent graffiti protection system.**

#### EFFECTIVE ON THESE TYPES OF SURFACE:



Slate



Brick



Concrete



Ceramic



Plaster



Mortar joints



Paving Stone



Stone



APPLICATION OF FACEAL OLEO HD



PROTECTED SURFACE

## TECHNICAL SPECIFICATIONS

**Physical State**

Liquid

**Colour**

Slightly Cloudy

**pH Value**

7

**Boiling Point**

100°C

**Flammability**

Non-flammable

**Density**

1-1,1

**Viscosity**

6000-7200 cpa

**Release of Toxic Gas on decomposition under heat**

No

**Water vapour permeability**

Sd-value 0.012 m according to DIN 52615

**Resistance to Carbonization**

Good retardant effect, similar to a concrete glaze

**Reversibility**

Yes (Hot Water)

**Reactivity**

Highly alkaline conditions are to be avoided.

PSS 20 normally impedes the sound absorption capability of noise protection walls to an insignificant degree (Test Deutsche Bahn, FT-Centre Munich, of 20.02.98).

PSS 20 is compatible with the most diverse substrates; appropriate tests have been carried out over several years, jointly with the relevant producers; the results are available where required.



PROTECTED SURFACE



PROTECTED SURFACE

## PROTECTION OF SURFACES

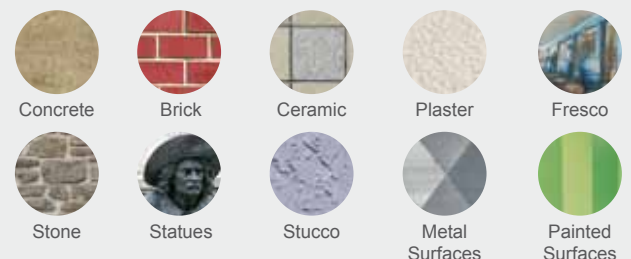
### SURFACE COATING

PSS 20 is a graffiti protection application made from vegetable polysaccharides (cellulose, starch) and water for vertical surfaces. The graffiti is removed with hot water and pressure adjusted for the type of structure. This is a **sacrificial layer system**, (also known as a temporary system) and is completely reversible.

Actually, the protective film is removed at the same time as the graffiti and should be reapplied while the surface is still damp. The PSS 20 film is open to water vapour diffusion, and is normally indiscernible to the naked eye. PSS 20 has been comprehensively tested by well-known institutes, and is completely non-toxic to humans, animals or the environment. It is particularly suitable for natural stone, artificial stone, concrete and non-porous surfaces.

**PSS 20 is recommended and used for the protection and cleaning of numerous historical monuments in a number of European countries.**

**EFFECTIVE ON THESE TYPES OF SURFACES:**



# FACEAL HYDRO CP

## TECHNICAL SPECIFICATIONS



### Physical State at 20°C

Liquid

### Colour after drying

Colourless

### Odour

Solvent

### pH

11

### Boiling Point [°C]

100°C

### Density

0.882±0.3

### Solubility in water [vol/vol]

Insoluble

### Flashpoint [°C]

> 62°C

### COV

< 80 g/l

## PROTECTION OF SURFACES

### SURFACE COATING

Ready-to-use product specially designed to reduce concrete reinforcement corrosion.

**Curative:** It remedies and stops existing corrosion on concrete structures (max corrosion rate of 5 microns/cm<sup>2</sup>).

**Preventative:** Metal reinforcement in contact with humidity and chlorides (de-icing salts, etc.) oxidize, resulting in expansion which cracks the concrete and weakens the mechanical strength of the material components.

Unlike other corrosion inhibitors, Faceal Hydro CP penetrates very deeply into concrete (up to 6 centimetres) and thus blocks humidity and chlorides. It is also effective with micro-cracks (up to 0.3 mm).



MATERIAL TO BE PROTECTED



MATERIAL TO BE PROTECTED

## ADVANTAGES

- ✓ Increases the service life of concrete.
- ✓ Can be applied to vertical and horizontal structures.
- ✓ High penetration.
- ✓ Fully efficient within 2 weeks.
- ✓ Excellent durability (> 15 years).
- ✓ Suitable for poured concrete and prefabricated concrete.
- ✓ Does not alter the aesthetic appearance of the structure.
- ✓ Easy application by spray.
- ✓ Non film-forming, allows the support to breathe.
- ✓ Silicone-free.
- ✓ UV-resistant, does not yellow.
- ✓ Invisible after drying.
- ✓ Effective under high humidity conditions.
- ✓ Effective on structures subject to high corrosion.
- ✓ Ready to use.

**Faceal Hydro CP's** exceptional water-repellent properties make it effective in preventing water penetration and therefore eradicates the harmful effects caused by humidity (infiltrations, acid rain, erosion, freeze/thaw cycles, moss and lichen growing, efflorescence, etc.).

**Faceal Hydro CP** is ideal for protecting civil engineering structures (bridges, pillars, parking lots...), architectonic concrete, etc. It provides strength and durability which reduces repairs to structures.

Typical concrete repair.

Repair of concrete treated with Faceal Hydro CP.

To counter the anode effect Faceal Hydro CP disrupts the electronic effect and the cycle of corrosion between different sections of concrete.

## CHEMICAL NATURE

**Faceal Hydro CP** does not contain any organic halogens.

## REDUCTION OF THE AGGRESSIVITY OF CHLORIDES

Conforms to ASTM 1152 standards at 12.5 mm, 32 mm, 50 mm and 69 mm.

Depth in mm	12 weeks	24 weeks	48 weeks	12 weeks	24 weeks	48 weeks
12,5	0,7033	0,861	1,02	< 0,007	0,01	< 0,007
32	0,321	0,628	0,645	< 0,007	< 0,007	< 0,007
50	0,032	0,386	0,0386	< 0,007	< 0,007	< 0,007
69	< 0,007	0,04	0,04	< 0,007	< 0,007	< 0,007

## OFFICIAL TESTS

**Faceal Hydro CP** has had numerous test evaluating its performance and efficiency.

**Examples of tests:** resistance to chlorides and sulphates, resistance to water, permeability in air and water vapour...

**Polymer Kiwa Institute (Germany):**

Test of conformity to the EN 1504-2 standard.

**CBI BetongInstitutet AB (Sweden):** Test

of penetration in concrete, breathability, water infiltration, resistance to freeze/thaw and to chlorides as established by the Swedish Road Agency.



**LIFETIME**

# FACEAL HYDRO RF

## TECHNICAL SPECIFICATIONS



### Physical State at 20°C

Liquid

### Colour after drying

Colourless

### Odour

None

### pH

NA

### Boiling Point [°C]

186°C

### Density

0.88

### Solubility in water [vol/vol]

Insoluble

### Flashpoint [°C]

63°C

### COV

< 20 g/l

## PROTECTION OF SURFACES

### SURFACE COATING

**Faceal Hydro RF** is a colourless, solvent-free impregnation product designed to provide in-depth protection of concretes and materials of mineral origin against water, humidity, chlorides, carbonation and corrosion. Faceal Hydro RF penetrates up to 5 cm.

**Faceal Hydro RF** is a non film-forming product (it allows the material to “breathe”) used to protect reinforced concrete structures. It is also very effective on micro cracks up to 0.3 mm and stops alkali-silica or alkali aggregate reactions in concrete and construction materials.

**Faceal Hydro RF** is ideal for protection of civil engineering structures (bridges, pillars, car parks...), architectonic concretes, etc.

**Faceal Hydro RF** can also be used to regulate the absorption of materials before application of the protective products or eventually paint.



PROTECTED MATERIAL



PROTECTED MATERIAL



## ADVANTAGES

- ✓ Excellent durability > 15 years.
- ✓ Efficient in only a few hours.
- ✓ Permeable to water vapour.
- ✓ Non film-forming: does not affect the mineral appearance of surfaces.
- ✓ Very powerful penetration.
- ✓ Highly resistant to alkaline substances.
- ✓ Complies with EN 1504 norm.
- ✓ Immediately ready for use.
- ✓ Effective even in high humidity conditions.
- ✓ Protection against chemical or biological agents that are water soluble (particularly chlorides).



PROTECTED STRUCTURE



PROTECTED STRUCTURE

## OFFICIAL TESTS

**Faceal Hydro RF** has passed numerous tests demonstrating its performances and its effectiveness.

**Examples of tests:** resistance to chlorides and sulfates, resistance to water, permeability in air and water vapour...

**LR Vision Laboratories (France):** Test on water penetration and chloride resistance.

**Kiwa Polymer Institute (Germany):** conformity to EN 1504-2 Norm.

**CBI BetongInstitutet AB (Sweden):** Test on penetration depth inside concrete, breathability, resistance to freeze and thaw cycles, resistance to chlorides according to Swedish National Road Authorities.



LIFETIME

# REVOLUTIONARY COMPONENTS

## ONE OF THE PRIORITIES IS THE PERMANENCE OF CONCRETE

One of the classic methods for the treatment of concrete surfaces involves the application of a water-repellent. This solution does not meet today's expectations as adequately as more innovative approaches, like those which result from the technology used in Faceal. This technology provides a number of more significant advantages.

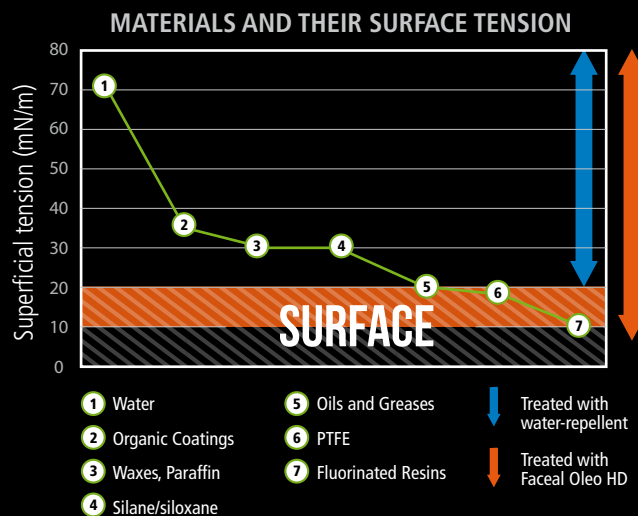
The high-performance penetration provided by Faceal is based on the latest scientific discoveries in the field of nano-scale technology. The molecules form a truly unique molecular structure, resulting in high-performance penetration, which is both water-repellent and oil-repellent, without any visible change to the surface appearance.



## CONCRETE STRUCTURES, A SOLID BASIS FOR LONGLASTING MANAGEMENT

Advantage: a modification of the surface which maintains oil and water-repellent properties, and, depending on the product, offers RAL certified graffiti protection. Faceal technology treats concrete surfaces to the point where virtually no known stains or dirt, whether oil or water based, can penetrate the surface. An important point to note: the typical mineral appearance of the surface is totally maintained.

Numerous scientific studies confirm the excellent properties of this product. After treatment with high-performance, deep-penetration Faceal, the concrete become highly water-repellent, without any change in vapour permeability. Because the molecules bond to the surface, their effectiveness is maintained, even under mechanical wear and tear. An additional benefit is available for noise-resistant walls, where Faceal technology performs at the highest of levels.



UNTREATED TREATED



Water

Oil

TREATED WITH WATER-REPELLENT



Water

Oil

TREATED WITH FACEAL OLEO HD



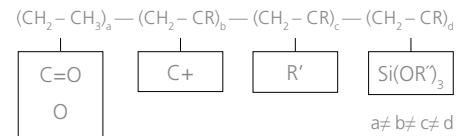
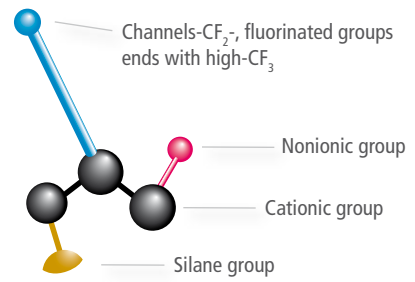
Water

Oil

# THE CHEMICAL STRUCTURE OF FACEAL OLEO HD

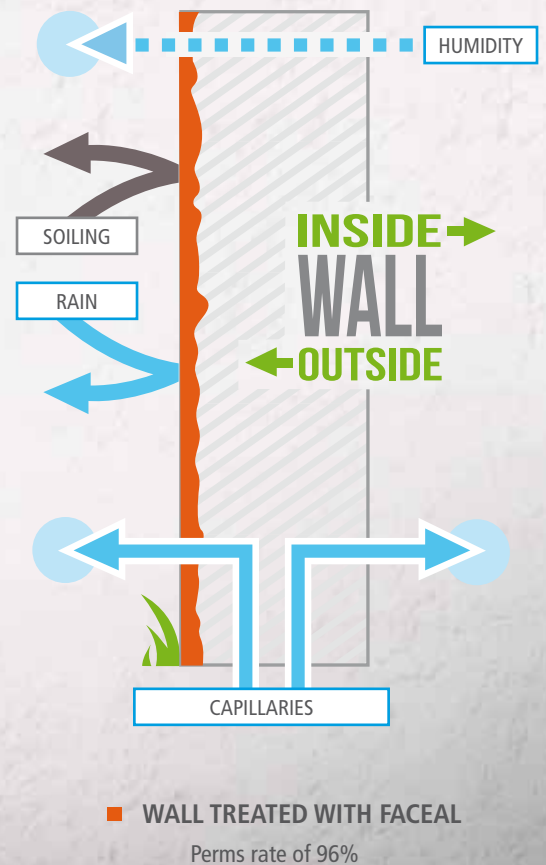
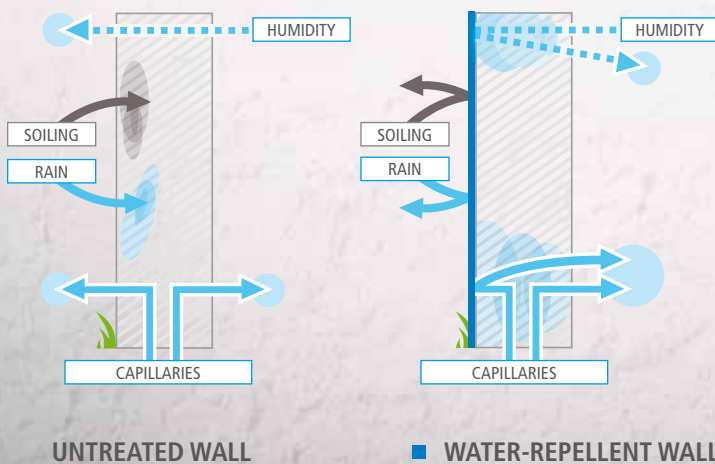
Faceal oleo HD is a fluorinated acrylic copolymer. Its acrylic skeletal structure consists of various side-chains, each of which fulfills various functions:

- **The fluorinated groups provide protection against water and oil.** This property is due to the fluoride atom, which is non-reactive with other most other chemical elements, thereby its water and oil repellent quality.
- **The cationic group (C+)** allow the polymer to be water-soluble, and also provides for bonding with the mineral base.
- **The nonionic group (R')** is necessary for application of the product and allows effective organisation of the fluoridated chains to the surface of the material.
- **The silane group (Si(OR'')<sub>3</sub>)** allow Faceal Oleo HD to have a better bond with the mineral sub-surface, and to create chemical links, thereby ensuring stronger and more permanent protection.



# HOW THE TREATMENT WORKS

Faceal Oleo HD does not in any manner change the aesthetic state of the surface, or the permeability of the material to water vapour, in fact the loss of permeability measured according to the DIN 52516 standard is less than 10%. The fluorinated resin covers the face of the pores of the material with an extremely thin coating, thus creating a "negative" capillary force which prevents water from penetrating the material. As the pores are not blocked, the material is able to retain nearly all of its porous nature. Permeability to water vapour, and consequently, the manner in which the construction material dries, are barely changed. This protection system respects the basic rules for the protections of buildings specifying that the water vapour inside the building must have the means to freely dissipate.

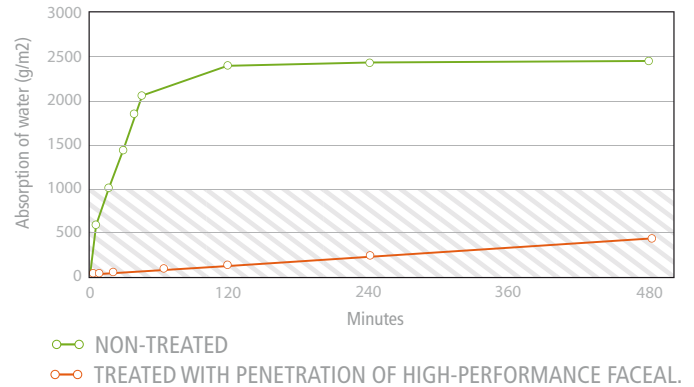


# A MULTI-FUNCTIONAL PRODUCT

## HIGHLY HYDROPHOBIC

Unprotected concrete immediately absorbs water, and water-based dirt. A concrete surface which has been protected with Faceal remains 95% water-repellent even after two full hours of permanent presence of water, without modifying the degree of dispersion of water vapour.

TEST OF WATER ABSORPTION



## A PRODUCT WHICH BREATHES

Faceal Oleo HD allows the treated surface to breathe at 96% of its untreated capacity (see data below).

### PERMEABILITY RATE

SAMPLE	TREATED	CONTROL
Thickness of equivalent air SD (m)	0.96 +/- 0.03	0.63 +/- 0.08
Equivalent air space (SD – Sdtémoin)(m)	0.05 +/- 0.03	/
Water vapor permeability resistance factor $\mu$	96 +/- 2	91 +/- 2
Vapor transfer rate ITV (kg.s-1/m2)	95 +/- 1%	/

## RESISTANT TO MECHANICAL ABRASION

Faceal products are composed of fluorinated acrylic copolymer resin in an aqueous dispersion, with expansive functionality. Activated molecules join themselves on a nano-scale to the capillaries of the treated surface, creating a firm bond. Abrasion tests demonstrate the high-performance penetration, and resistance to mechanical wear and tear.



## FACEAL OLEO HD, AN EFFECTIVE AND LASTING PROTECTION

	Faceal Oleo HD	Faceal Hydro CP	Faceal Hydro RF	Faceal Wood	Faceal Wet Look	Faceal Oleo NC
Single element anionic system		✓	✓	✓	✓	✓
Single element cationic system	✓					
Pigmented						
Transparent	✓	✓	✓	✓	✓	✓
Water repellent	✓	✓	✓	✓	✓	✓
Waterproof		✓	✓			
Oil repellent	✓			✓	✓	✓
Abrasion resistant	✓			✓	✓	✓
Anti-graffiti protection	✓				✓	✓
Renews colour					✓	
Wood				✓		
Concrete	✓	✓	✓		✓	✓
Stone	✓				✓	✓

# SOME OF OUR MORE RECENT PROJECTS

## CENTRAIDE OF GREATER MONTREAL

Upon the recommendation of the project's architect, we applied anti-graffiti and anti-stain protection (atmospheric pollution) on the facing and sides of the building located on Sherbrooke street in downtown Montreal.

**Project Year**  
2011

**Customer**  
Centraide of Greater Montreal

**Product Used**  
PSS 20



## METRO GROCERY STORE

Anti-graffiti protection was applied to the exterior of the building to a height of 10 feet. Anti-stain protection also was applied inside the building, in particular in the kitchen, pastry, cooked meals, and bakery areas. Protection was also applied to the concrete floor behind the building (reception of merchandise).

**Project Year**  
2010

**Customer**  
Metro Marché Marciano et Fils Inc. (Bélanger Street)

**Product Used**  
Faceal Oleo HD



## COLLÈGE JEAN-DE-BRÉBEUF

A Protection was applied on the walls on the north side of the building. We also applied a water-repellent sealant to prevent penetration of rain water. The product provided stain protection of the concrete steps.

**Project Year**  
2011

**Customer**  
Collège Jean-de-Brébeuf

**Product Used**  
Faceal Oleo HD



## RESIDENTIAL

Protection of pavé uni against stains from oil and de-icing salt. The pave uni was also treated with water-repellent to protect against penetration of rain water and breakage due to the effects of freeze and thaw.

**Project Year**  
2011

**Customer**  
Private Residence

**Product Used**  
Faceal Oleo HD



## MASCOUCHE (SOUNDPROOFING WALL)

Anti-graffiti protection was applied to the soundproofing walls along the length of the autoroute.

**Project Year**  
2011

**Customer**  
Armtec

**Product Used**  
Faceal Oleo HD



## CITY OF POINTE-CLAIRE

Protection was applied to the pave uni to protect against de-icing salt and stains from food, coffee, etc. (greasy substances) in the downtown area of Pointe-Claire. It should be noted that stains are washed away naturally with rain water.

**Project Year**  
2010 and 2011

**Customer**  
City of Pointe-Claire

**Product Used**  
Faceal Oleo HD



## QUEBEC MINISTRY OF TRANSPORT

Anti-graffiti treatment was applied to the brick wall of the Quebec Ministry of Transport Building in Ville LaSalle.

**Project Year**  
2011

**Customer**  
Quebec Ministry of Transport

**Product Used**  
Faceal Oleo HD



# ECO-GRAFFITI

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