



**EUROPE STRONG FORCE
POST TENSIONING LLC**

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SOUPLETHANE

**100% polyurethane coating
no solvent
flexible
cold applied in liquid phase
strongly bonded to its substrate**

for any problem of water sealing, corrosion, wear and sticking.

main characteristics

very strong bonding on :

concrete, steel, stainless steel, cement, aluminium, wood, bitumen, asphalt, lead, various insulating materials.

- SOUPLETHANE combines its qualities of very strong bonding to many different substrates (concrete, steel, aluminium, wood, etc.) and elasticity. These properties allow SOUPLETHANE to follow without any damage the dimensional changes of the substrate, bridging cracks and concrete of 1 to 2 mm width.
- Excellent mechanical properties against wear-shocks-impacts and abrasion.
- Estimated half life time : greater than 30 years.
- Good resistance to thermal shocks (tests made between -50°C up to 120°C)
- SOUPLETHANE can be used in contact with food
- SOUPLETHANE can be overcoated with a paint.
- Once applied on a substrate, SOUPLETHANE is non flammable
- In case of unexpected damage, SOUPLETHANE can easily be repaired
- SOUPLETHANE has a very low friction coefficient reducing sticking or head losses in liquid flow.

applications

industry

steel or concrete tanks, pipes, floors, steel or concrete structures, industrial equipment, offshore platforms and jackets.



building

roofs, terraces, floors, parkings, pools, swimming pools, gutters, accessible terraces, balconies, loggias...



corrosion protection against many chemical agents

- demineralized water • sea water • acetic acid (20%) • sulphuric acid (20%) • hydrochloric acid (30%) • nitric acid (20%) • phosphoric acid (50%)
- oleic acid • formic acid • fluorhydric acid (30%) • lactic acid • adipic acid • sodium hydroxide (30%) • potassium hydroxide (20%) • ammonium hydroxide (20%)
- ammonium salts • aluminium salts • aluminium chloride • borax solutions • calcium bisulfite • calcium sulfate • hydrogen peroxide
- ozone • glycérine • éthylene glycol • propylene glycol • animal fats • formaldehyde • fruit juices • wine • alcohol (90°) • castor oil • minéral oil
- crude oil • fuel oil • aliphatic hydrocarbons • naphta • kérosene • white spirit • gasoline • cyclohexane

INDUSTRY



concrete tanks, sewers-treatment of wastes

ADVANTAGES

- anti-corrosion, anti-acid
- ensures complete sealing (up to cracks of 1 to 2 mm width)
- resists to abrasion and erosion
- prevents sticking
- easily cleaned or repaired

USE

- retention tanks
- neutralization tanks
- sewers
- concrete tanks
- waterproofing of floors
- protection of walls on steel and concrete structures

APPLICATION

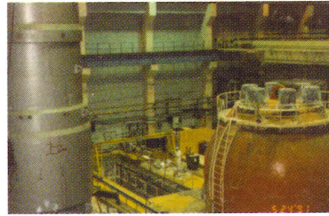
Preparation : cleaning, degreasing or sand or water blasting

- flat and smooth substrate
- application SOUPLETHANE concrete primer

Application of SOUPLETHANE :
1 to 3 kg/m²

REFERENCES

- Electricity of France : thermal power Plants
- COGEMA/Hague : storage for nuclear wastes
- BEGHIN SAY : sugar factories
- CGE : water tanks.



nuclear plants

ADVANTAGES

- very easily decontaminated (99% tests of C.E.A.)
- excellent resistance to irradiations (up to 10⁸ rads)
- strongly resistant to acids : boric acid, nitric acid, formic, etc.
- provides protection and water proofing of concrete tanks. Replaces stainless steel
- resists without degradation to thermal shocks with water vapour (ADR test)
- does not alter demineralized water

USE

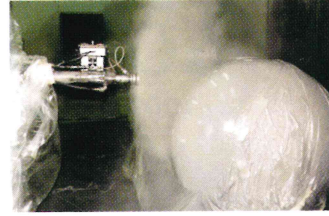
- coating of tanks storing effluents or nuclear muds
- easily decontaminated floors
- water proofing of tunnels and sewers
- protection of tanks
- internal coating of pipes, etc.

APPLICATION

To precise depending upon the end use.

REFERENCES

- EDF : Paluel, coating of floors (reactor area)
- EDF : Pierrelatte, coating of effluent tanks
- EDF : Fessenheim, coating of concrete drums
- COGEMA ; steel pipe coating
- COGEMA : coating of concrete tanks, replaces stainless steel.



industrial equipment

ADVANTAGES

- anti-corrosion
- anti-wear
- anti-sticking
- easy to apply and maintain
- long lifespan

USE

- internal coating of silos or hoppers : coal, wet sand, carbon black, etc.
- to help solve sticking and wear problems
- internal and external coating of steel or concrete pipes to protect from wear, corrosion and head losses.
- protection of metallic or concrete structure in corrosion environment.
- repair of tanks (roofs and bottoms).
- coating of railway hoppercars (against corrosion, sticking, etc.).

APPLICATION

preparation :

- sand or grid blasting SA 2,5
- apply SOUPLETHANE steel primer

application of SOUPLETHANE :

- 0,5 mm up to 1 cm if necessary

RÉFÉRENCES

- RENAULT : foundry sand hoppers
- CDF chimie
- GDF : dome of a concrete tank
- SIMOTRA : potassium salt hopper cars
- DCAN : nuclear submarine pipe.



industrial floors

ADVANTAGES

- anti-corrosion, anti-acid
- ensures water-proofing
- resists to thermal shocks
- resists to wear
- can be made non-skid
- no joints or seals
- easy to clean and repair
- contact with food (solid and liquid) accepted

USE

- floors for food industry (milk, breweries, slaughter houses, etc.)
- floors for transportation by air cushions
- anti-acid floors for chemical and petro-chemical industry
- hospital floors
- water-proofing of floors or technical rooms
- accessibles terraces.



marine, offshore

ADVANTAGES

- very strong bonding to substrate
- strongly resistant to mechanical shocks
- can be applied in a thick coat in one single layer (up to 5 mm or more)
- follows easily deformations of substrate
- resists to U.V. and aging
- anti-sticking (algus, shells...)

USE

- water proofing of decks (steel, wood, polyester)
- corrosion protection of hulls
- protection of splash zone
- protection of submarine pipes and risers
- protection of ballasts
- coating of water-tanks

APPLICATION

preparation :

- sand blasting SA 2,5
- apply SOUPLETHANE steel primer

application of SOUPLETHANE :

- 0,5 mm up to 2 mm if necessary

RÉFÉRENCES

- ELF : steel tanks and pipes
- FRENCH NAVY : water proofing of decks
- CEA : coating of aluminium shuttle to dig nodules in deep depths.



APPLICATION

preparation :

- degreasing, mechanical cleaning or brushing or sand blasting.
- smoothen the surface with mortar if necessary
- apply SOUPLETHANE concrete primer

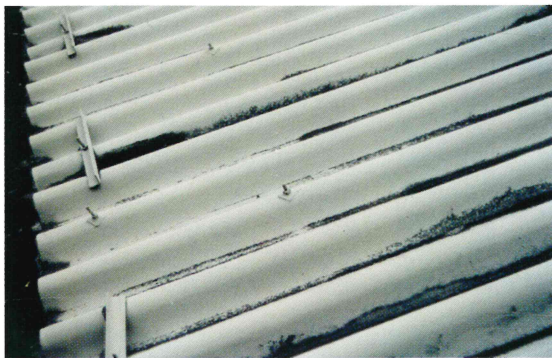
application of SOUPLETHANE :

- 1 to 3 kg/m² depending upon use.

REFERENCES

- DASSAULT : floors for planes industry
- U.B. : floors for breweries
- NORSOLOR : anti-acid floors
- ELF : floors for oil refineries
- RENAULT : non skid floor in workshop.

BUILDING



accessible terraces, balconies

ON NEW OR OLD SUBSTRATES

ADVANTAGES

- very resistant to U.V., freeze, changes in temperature
- does not need mechanical protection
- can be applied on concrete
- can be painted
- very resistant to wear
- can be made non skid
- no risk of water infiltration between the coating and the substrate

APPLICATION

application of a SOUPLETHANE concrete primer

application of SOUPLETHANE
1,3 to 2 kg /m²

REFERENCES

- U.A.P. rue Paul Doumer - Paris (balconies)
- Sté Doucède, rue des Pyramides - Paris (balconies)
- Entreprise Legros - Champs Elysées - Paris (balconies)
- Architect M. Perillat, rue du Pré St-Gervais - Paris (balconies)
- Plage 50, rue du Fg St-Denis - Paris (accessibles terraces)



roofs, terraces, gutters

ON NEW OR OLD SUBSTRATES

ADVANTAGES

- directly applied on the substrate old or new
- repairs are easy and fast
- application in one single layer
- protects against corrosion (fumes and aggressive vapors)
- bonds to the substrate
- very resistant to U.V. rays
- easy to repair
- expected aging superior to 30 years

SPECIFICATION

- **CONCRETE ROOFS, DOMES, CELLULAR CONCRETE**

preparation : brushing, H.P. water blasting, smoothening of the surface with a cement mortar

application of SOUPLETHANE
1 to 1,3 kg /m²

- **ASBESTOS CEMENT ROOFS**

preparation : H.P. water blasting, bridging of holes with fiber glass cloth.

application of SOUPLETHANE
1 to 1,3 kg /m²

- **METALLIC ROOFS**

preparation :

- sand blasting
- application of steel primer

application of SOUPLETHANE
1 kg /m²

- **ASPHALT OR BITUMEN**

preparation : brushing and dust cleaning, cutting of the blisters

application of SOUPLETHANE
1 kg /m²

- **WOOD PANELS**

preparation : cleaning, checking of the dryness of wood.

application of SOUPLETHANE
1 kg /m²

REFERENCES

- Uniprix : warehouse terrace in bitumen
- Nouvelles Galeries : zinc gutter
- Rhône poulenc : asbestos ciment, corrugated roof
- Dassault : terraces, gutters.



floors, parkings

ON NEW OR OLD SUBSTRATES

ADVANTAGES

- ensure a perfect water proofing
- resists to wear
- no dust sticking
- easy to clean
- can be made non skid
- strong bonding
- no joint coating
- resists to most chemicals

APPLICATION

preparation :

- degreasing, mechanical brushing, sand blasting
- smoothening of surface by a cement mortar
- application of concrete primer

application of SOUPLETHANE :
recommended thickness :
1 to 1,3 kg /m²

REFERENCES

- floors of technical rooms
- kitchen floors
- shower floors
- parking spaces



pools, swimming pools, tanks

ON NEW OR OLD SUBSTRATES

ADVANTAGES

- resists to counter pressure up to 10-kg/cm²
- protects metallic and concrete structures against corrosion
- perfect sealing without joints
- can be used in contact with food (drinkable water, etc.)
- resistant to chemicals
- can bridge cracks up to 2 mm
- can bridge dilatation joints with reinforced fiber glass cloth
- easy to clean

APPLICATION

preparation :

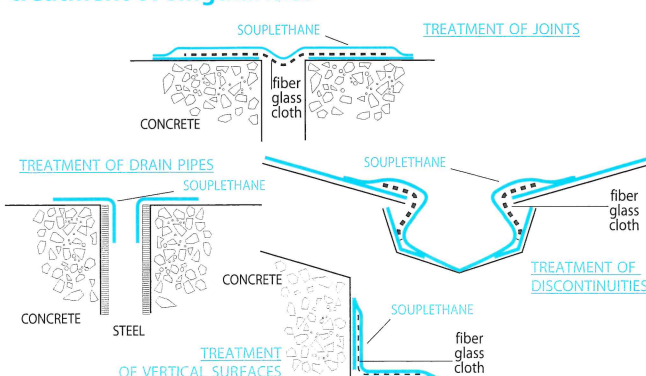
- degreasing, mechanical brushing, sand blasting
- priming with SOUPLETHANE concrete primer

application of SOUPLETHANE :
1 to 2 kg /m²

REFERENCES

- Pools : Golden boys bassin - Château de Versailles
- Swimming pools : Blomet, St-Fargeau
- City concrete water tanks
- Waste water tanks

treatment of singularities



APPLICATION

- Packing :**
- in 20 liters pails
 - in 200 liters drums
- Storage :**
- 12 months, protected from heat and humidity.
- If the filler in SOUPLETHANE has deposited, stirr before use to homogenize the component.

STEEL SUBSTRATE

- Preparation :**
- sand blasting SA 2,5 or mechanical brushing and dedusting

SOUPLETHANE P111 primer, mono-component :

- stirr before use
- must be applied on dry surface, T°C > 5°C
- thickness : 25 microns
- use protective gloves, masks, etc.
- primer must be applied on dry surface. It can be covered 1 hour after application, and must be overcoated the same day
- application technics : roller, brush, airless pump

Application of SOUPLETHANE :

- can be applied in one single layer from 400 microns up to 1 cm thickness
- apply on SOUPLETHANE primer, at temperature of substrate 3°C above dew point
- no solvent. Use protective gloves and masks
- SOUPLETHANE 5 : use brush or roller
- SOUPLETHANE 6 : use mono component airless spraying machine
- mixing ratio : in volume 3 to 1

CONCRETE SUBSTRATE

- Preparation :**
- abrasive blasting, high-pressure-water, mechanical brushing, degreasing, dedusting, smoothening of surface

SOUPLETHANE concrete primer :

The primer is not always necessary but recommended in case of laitance. It increases bonding and improves quality of substrate

- single component, solvented
- use gloves, masks, etc.
- must be applied on dry substrate, 3°C above dew point, T°C > 5°C
- can be covered 3 hours after application, preferably 24 hours
- application technics : brush, roller
- recommended thickness : 100 microns

Application of SOUPLETHANE

- apply first an impregnating layer of approximately 300 microns
- mixing ratio : 3 to 1 in volume
- second layer can be applied by roller or airless spraying machine

Application technics :

- SOUPLETHANE can be either sprayed through high pressure twin component airless spray equipment or applied by normal brushing technics, for instance in case of small surfaces or repairs. (see technical data)



TECHNICAL DATA

- Color :** cream, grey
- Dry content :** 100%
- Density :** 1,3
- Flash point :** SOUPLETHANE polyol : 248°C
SOUPLETHANE isocyanate : 212°C
- Temperature :**
- for application : preferably above 0°C
 - in service : - in immersion, up to 70°C
 - in gas, up to 120°C
- Bond strength :**
- steel : > 100 kg/cm²
 - concrete : > internal cohesion of concrete (30 kg/cm²)
- Ultimate cure :** 7 days at 25°C
- Theoretical coverage :** 1 liter covers 1 m² on 1 mm thickness
- Shrinkage :** zero
- Mixing ration :** 3 : 1 in volume
- Electrical insulation :** 1/10 mm resist 1500 Volts D.C.
Resistance increase proportionally with thickness
- Tear strenght :** 180 kg/cm²
- Elongation :** 50%
- Shore hardness :** A95
- Pot life :** SOUPLETHANE 5 : 20 mn
SOUPLETHANE 6 : 1 mn
- Fire resistance :** applied on a substrate, SOUPLETHANE is self-extinguishing and non toxic
- Storage :** 12 months
- Decontamination :** 99%
- Water vapor permeability :** 0,0018 perm/cm

OFFICIAL TESTS AND CONTROLS :

- CETU, Ministry of équipement : counter pressure resistance
- Laboratoire des Ponts et Chaussées : resistance to cracks, ref. : 329236
- Ministry of transportation : n°78 SSBAIF/A2/5 : resistance to wear as a floor covering
- Laboratory testing of Poitiers : ref.: 2953/TN - contact with food.
- Resistance to fire : self extinguishing. Does not propagate flame.
- SEPTEN : aging test : simulating 40 years
- CEMETE : qualifying tests for use as floor coverings in nuclear plants
- CEA : decontamination : 99%
- CEA : irradiations : 5 X 10⁹ rads
- CNEXO : pressure 600 kg/cm²
- IFP : pressure 10 kg/cm² of methane
- SEPTEN : electrical insulation of connectors
- CEMETE : ADR tests
- Laboratoire Poitiers : demineralized water and food tests
- Laboratoire des Ponts et Chaussées : resistance to cracks up to 2 mm
- TECHNIGAZ : cold temperature tests and water vapor permeability tests.
- Resistance to fire : self-extinguishing, does not propagate flame

