SOUPLETHANE 5 COR THIXO

Anti-corrosion protective coating, based on polyurea-urethane resin, solvent-free, with high chemical and mechanical resistance (Liquid Sealing System). High thixotropy for vertical applications.

Areas of application

- Abrasion-resistant protective coating, intended for the protection of structures in the presence of high chemical aggression on any substrate (e.g. concrete, mortar, epoxy mortar, etc.).
- Protective liner for chemical storage tanks and tanks, hoppers, silos, chutes, chemical reactors and retention tanks.
- Corrosion protection in the chemical, pharmaceutical, agricultural and wastewater treatment industries.
- Reinforcement possible with bidirectional glass fabric to resist cracking of storage tanks and retentions.

Characteristics

Chemical nature: Polyurea-urethane resin (aromatic) 2-component

Composition : Component A - polyol: Opaque colored liquid
Component B – isocyanate: Transparent amber liquid

Solvent-free: Dry matter 100% *(ISO 1515)*

Colors: Cream (Ivory, close to Ral1015), gray (close to Ral 7040)

Mix Ratio: Comp A / Comp B = 2/1 by volume

Density (at 20°C) Mixture A+B: ~ 1.1 kg/l *(DIN 53217 / EN ISO 2811)*

Sans Bisphenol A

Benefits

Very good resistance to chemical agents (**pH 1 to 14**) *refer to the chemical resistance table (Appendix)*
Very good mechanical strength,
Mechanical impact resistance (CSTB tests)
Resistance to thermal shocks: from **-50°C to +120°C**
Resistance to cracking of concrete: **bridging of cracks caused by concrete of 4.9 mm**
Chemical resistance / non-development of bacteria

Solvent-free, odourless
Bisphenol A Free
Fast commissioning
Ease of application

Properties

Chemical resistance		Thermal resistance	
Corrosion resistance	**pH 1 to 14**	Resistance to thermal shock	**-50 °C to + 120 °C**
refer to the chemical resistance table (Appendix)			

Mechanical properties			
Shore Hardness D	**72** *(ISO 868)*	Tensile strength	**22 MPa** *(EN ISO 5470-1)*
Adhesion to concrete	**3.5** MPa (break in concrete) *(NF EN 1542)*	Lengthening	**65 %**
Adhesion to steel	**7** MPa *(NF EN 1542)*	Compressive strength	**113** MPa
Resistance to salt spray	**2,000 hours** *(ASTM B117 ASTM D1654)*	Chloride permeability	**< 10 coulombs** *(ASTM C 1202)*
Resistance to back pressure	**1** MPa	Water permeability	**No penetration** *(DIN 1048)*

Packaging	In kits
5 kg	Pre-dosed kit
13 kg	Pre-dosed kit
33 kg	buckets (Kit 1 bucket A: 20L + 1 bucket B: 10L)
66 kg	buckets (Kit 2 buckets A: 2 x 20L + 1 bucket B: 20L)
660 kg	kegs (Kit 2 kegs A: 2 x 200L + 1 keg B: 200L)

Storage

From the date of manufacture and in its original unopened packaging, under cover at more than 5°C in a cool, ventilated place (frost-free)
Shelf life: 12 months

Implementation

Preparation of the mixture	Carefully re-homogenize each component before mixing Knead the mixture A + B with a mechanical stirrer for 2 minutes Then pour the product into a second container and resume mixing for 10 seconds. To minimise the air entrainment during mixing, it is advisable to carry out this operation at a low speed (approx. 400 rpm), taking care to keep the agitator at the bottom of the bucket during its rotation.
Application	Check the substrate humidity, relative humidity, product and substrate ambient temperatures, and dew point beforehand. If the moisture of the substrate is > 4%, the KEMIPOX system or the water-based PU primer can be used to form a temporary moisture rise barrier.

Media Temperature	-20°C min. / +70°C max.	**Dew Point:** The substrate should be at a temperature of +3°C from the dew point to reduce the risk of condensation.
Relative humidity	The relative humidity should be less than 95%.	

Roller or brush application	2-3 layers	**Mechanized with high-pressure two-component airless pump**	
Application with a notched comb	1 layer of mass	Viscosity	Component A: 1,5000 cps / 20°C Component B: 150 cps
		Temperature	Component A: 35°C / Component B: 20°C
		Pressure	180 / 200 bar
Recovery period	8 hours	Recovery period	8 hours on the ground, 2 hours vertical
Commissioning	24 hrs	Commissioning	24h

Thickness: 2 to 5 mm (for more details see the chemical resistance table in the Appendix)

Practical duration of use

Temperature	+ 10°C	+ 20°C	+ 30°C
DPU	~ 40 minutes	~ 30 minutes	~20 minutes

The D P U decreases as the temperature and/or quantity of product prepared increases.

Recovery period

Before application of SOUPLETHANE 5 COR to KEMIPOX or AQUEOUS PU

Temperature	+ 10°C	+ 20°C	+ 30°C
Mini	24 hours	12 hours	8 hours
Maxi	4 days	2 days	1 day

Drying/ Resumption of service

Temperature	+ 10°C	+ 20°C	+ 30°C
Light loads	30 hours	24 hours	12 hours
Full curing	15 daysS²	9 days	7 days

Tool Cleaning

The tools can be cleaned with acetone or MEK immediately after use.
In the hardened state, the product can only be removed mechanically.

These data are only indicative because curing times vary according to drying conditions (temperature and relative humidity in particular).

Qualifications

Decontaminable Class 1 standard NF T 30-901 (C.E.A.)
HQE A++ / Classified A+: Regulatory labelling of VOC emissions and compliance with the AgBB protocol (2012)

SOUPLETHANE COR THIXO (5 ou 6)

CHEMICAL AGENT RESISTANCE TABLE

Chemical retention
Soil
Contact : 72 h

Storage tanks
Concrete/Steel
Contact permanent

		Temperature		
Chemicals		< 80°C	< 40°C	< 70°C
ACIDS	**Concentration**	**Thicknes**	**Thickness**	**Thickness**
hydrochloric	33 %	3 mm	3 mm	5 mm
nitric	60 %	2 mm	3 mm	5 mm
sulphuric	40 %	3 mm	3 mm	5 mm
phosphoric	100 %	2 mm	3 mm	5 mm
acetic	70 %	3 mm	3 mm	5 mm
lactic	30 %	2 mm	3 mm	5 mm
all acid Ph >1		2 mm	3 mm	5 mm
all acid Ph <1		Contact test 72	Immersion 3 weeks	
BASES	**Concentration**	**Thicknes**	**Thickness**	**Thickness**
soda	50 %	3 mm	5 mm	5 mm
potash	50 %	2 mm	5 mm	5 mm
any base Ph <13		2 mm	2 mm	5 mm
any base Ph >13		Contact test 72	Immersion 3 weeks	

Hydrocarbons	**Concentration**	**Thickness**	**Thickness**	**Thickness**
Crude oil	100 %	2 mm	3 mm	5 mm
Gas oil	100 %	2 mm	5 mm	5 mm
Aliphatic gasoline	100 %	2 mm	2 mm	5 mm
Kerosene	100 %	2 mm	2 mm	----------
Aromatic **Benzene, xyléne**	100 %	2 mm	----------	----------

CHLORIDES	**Concentration**	**Thickness**	**Thickness**	**Thickness**
Sel sodium	100 %	2 mm	3 mm	5 mm
Ferric chloride	30 %	2 mm	3 mm	5 mm
Other		2 mm	3 mm	5 mm