KEMICA COATINGS *Reinventing coatings*

Technical Datasheet

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SOUPLETHANE SPIRIT

Two-component, solvent-free polyurea-urethane resin solvent producing a liquid waterproofing membrane, anti-corrosion protection for metallic or concrete substrates, coating of basins, concrete or steel tanks.

EXCELL PLUS qualified for alimentary contact : direct contact

Application Fields

SOUPLETHANE SPIRIT is used on metal or concrete substrates for: waterproofng of concrete or metal tanks storing wine - coating of floors, walls and cellar ceilings

INFRASTRUCTURES INDUSTRY	BUILDING
Tanks storing food liquids (alcohols, wine, fruit juice, beers, soft drinks, coca cola, etc.)	Floors, walls and cellar ceilings

Characteristics

Chemical Nature 2-Component polyurea-urethane resin (aromatic)

Composition Component A - polyol : Colored opaque liquid
Component B – isocyanate : Transparent amber liquid

Solvent-free 100 % solid content *(ISO 1515)*

Mixing ratio Comp. A / Comp. B = 3 / 1 per volume

Density (at 20°C) Mixture A+B : 1.35 g / ml *(DIN 53217 / EN ISO 2811)*

Flash point component A 229 °C

Flash point component B 220 °C

Colors : Crème-Cream (Ivory, approx. Ral1015)

Advantages

Bisphenol A - free

- Excellent adhesion : 3 MPa on concrete / 9 MPa on metal
- Resistant to thermal shocks and hydrolisis : 90°C
- Compression strength **:** > 110 MPa
- Chemical resistance / no bacterial development
- Without solvent, no odor
- Fast start-up time
- Easy application
- No chalking

Properties

Concrete adhesion	**3 MPa** (concrete failure) *(NF EN 1542)*	Shrinkage	**0**
Metal adhesion	**9 MPa** *(NF EN 1542)*	Tensile strength	**20 MPa**
Service temperature (air)	**- 40°C to + 100°C**	Elongation	**35 %**
Service temperature (under water immersion)	**80°C**	Hardness shore A	**95** *(ISO 868)*
Thermal shocks resistance	**- 50 °C to + 120°C**	Chloride permeability	**<10 coulombs** *(ASTM C 1202)*
Compression strength	**113 MPa**	Water permeability	**No penetration** *(DIN 1048)*
Resistance to back pressure	**1 MPa**	Salt spray resistance	**2 000 hours** *(ASTM B117 / D1654)*
Chemical resistance **1< pH<13**			

Packaging	In pre-dosed kits	
Manual application version	**Mechanical application version**	
37 kg	**37 kg**	**(20 L component A + 7 L component B)**
109 kg	**109 kg**	**(3 x 20 L component A + 1 x 20 L component B)**
1 090 kg	**1 090 kg**	**(3 x 200 L component A + 1 x 200 L component B)**

Storage

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

This product is used in accordance with the provisions of the Specifications, Technical Specifications, Technical Advice of the Company

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Implementation

Preparation of the mixture (for manual version)	Thoroughly homogenize the polyol (A) before mixing Mix the mixture Comp A + Comp B with a mechanical stirrer for 40 seconds Then pour the product into a second container and resume mixing for 10 seconds. To minimize the air entrainment during mixing, it is advisable to perform this operation at low rotation speed (approx. 400 rpm), taking care to keep the agitator at the bottom of the bucket during its rotation.
Application	The substrate must be clean, dry, free from all traces of grease and/or dust. New or old concrete must be prepared accordingly. Check the humidity of the substrate, the relative humidity, the ambient temperature of the products and the substrates, and the dew point beforehand.

Substrate temperature	from -20°C to 70°C	**Dew point :** The substrate must be at + 3 ° C above the dew point to reduce the risk of condensation.
Relative Humidity (RH)	< 95 %	

Manual application version		**Mecanical application version (with airless 2-component HP pump)**	
Pot life (20°C)	30 min	Pot life (20°C)	2.5 min
Roller or brush application	0.2 mm per layer (0,3 kg/m²)	Viscosity	Component A : 3 800 cps (30°C)
Application with a notched comb	Up to 4 kg/m²	Temperature	Component A: 30-35°C / Component B: 20°C
Thickness	1 to 3 mm	Pressure	180 / 200 bars
Covering time at 20°C	5 h for flooring 1h in verticall	Covering time	3 h

Pot life

Manual Application version			
Temperature	+ 10°C	+ 20°C	+ 30°C
Pot life	~ 40 minutes	~ 30 minutes	~15 minutes

The pot life decreases as the temperature and / or amount of prepared product increases

Drying / Start-up time

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

These data are only indicative because the curing time varies according to the drying conditions (temperature and relative humidity in particular)

Cleaning tools

Tools are cleaned with acetone or MEK immediately after use. In the cured state, the product can only be removed mechanically.

Notes on the application / limits

- Substrates should not be under water pressure or condensation during the application and polymerization of SOUPLETHANE SPIRIT.
- Protect SOUPLETHANE SPIRIT from contact with moisture, condensation and water for 2 hours.
- Incorrect treatment of substrate defects will reduce the life of the coating.
- Beware of the gas exchange that may be caused by a warming of the substrate before the total polymerization which may lead to a bubbling (blistering) phenomenon. It is recommended to work by down temperature.
- To avoid color differences, it is necessary to use a single lot number for each site.
- An exposure of the coating under UV may alter its color or appearance, but without impairing its mechanical performance.

Qualifications

EXCELL + Direct Contact. No usage reserve. Certificate N° 192-16679
Certificate of Sanitary Conformity issued on 16/12/2015 - N° 15 MAT NY 154
HQE Class A+ : Regulatory Labeling of VOC Emissions and Compliance with the AgBB Protocol (2012)

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