SOUPLETHANE 5

Two-component, solvent-free, polyurea-urethane resin providing a continuous and with no microporosities liquid membrane for waterproofing, anti-corrosion protection or floor coating, applicable manually (brush, roller) or by spraying with airless spraying equipment.

Technical Evaluation by CSTB (Avis Technique) N° AT : 12/15-1704_v1

Application Fields

SOUPLETHANE 5 can be used on every substrate : concrete, wood, metal, PS, asphalt, bituminous membrane, PVC

BUILDING		CIVIL ENGINEERING INDUSTRY - MARITIME	
Accessible or not terraces	Technical locals	Works of engineering	Pools, Fountains
Parking terraces	Intermediate floors	Bridges (concrete, wood, metal)	Swimming pools
Balconies, corridors	Elevator pits	Viaducts	Beaches of pools
Metallic roofs, Gutters	Foundations	Tunnels (extrados)	Buffers
On thermal insulation, PSE / PU	Bleachers	Pharmaceutical industry flooring	Ozonation tanks
			Agro-alimentary industrial flooring

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 in volume
Density (at 20°C) Mixture A+B : 1.3 g / ml *(DIN 53217 / EN ISO 2811)*
Fire resistance : Bfl-S1
Flash point Component A 248 °C **Flash point Component B** 212 °C
Colors : Crème-Cream (Ivory, prox. Ral1015), gris-grey (prox. Ral 7040), green, red – Others upon request

Advantages

- Excellent adhesion: 4 MPa on concrete
- Resistance to cracking concrete : 5 mm
- Resistance to thermal shocks and hydrolysis : 90 ° C
- Compression strength : > 110 MPa
- Excellent chemical resistance / no bacteria development
- Solvent-free, Odor-free
- Bisphenol A-free
- Fast start-up time
- Easy application
- No chalking

Properties

Concrete adhesion	**4 MPa** (concrete failure) *(NF EN 1542)*	Shrinkage	**0**
Steel adhesion	**9 MPa** *(NF EN 1542)*	Tensile strength	**20 MPa** *(NF EN ISO 527-3)*
Service temperature (air)	**- 50°C to + 160°C**	Elongation	**60 %** *(NF EN ISO 527-3)*
Fire resistance	**Bfl-S1** *(NF EN 13501-1 + A1 :2013)*	Shore A Hardness	**95** *(ISO 868)*
Chemical resistance	**1< pH<13**	Compression strength	**113 MPa**
Resistance to Radon gaz / compared to PVC	Attenuation Coeff. C1/C2 **159 000 / 9**	Chloride permeability	**<10 coulombs** *(ASTM C 1202)*
Resistance to back pressure	**1 MPa**	Service temperature (in immersion in water)	**80°C**
Chemical attack due to concrete	**No effect**	Water permeability	**No penetration** *(DIN 1048)*
Thermal shock resistance	**- 50 °C to + 160°C**	Salt spray resistance	**2 000 hours** *(ASTM B117 / D1654)*

Packaging	in kits
5 kg	Pre-dosed Kit
35 kg	(20 L component A + 7 L component B)
104 kg	(3 x 20 L component A + 1 x 20 L component B)
1 042 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

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Implementation

Preparation of the mixture	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	Check the humidity of the substrate, the relative humidity, the ambient temperature of the products and the substrates, and the dew point beforehand. If the humidity of the substrate is > 4%, the KEMIPOX or PU AQUEUX system can be used to form a barrier against ascending humidity.

Substrate temperature	-20°C min. / +70°C max.	**Dew point :** The substrate must be at + 3 ° C above the dew point to reduce the risk of condensation.
Relative Humidity (RH)	< 95 %.	**Treatment of singular points :** according to the technical assessment (Avis Technique)

Roll or brush application	1 mm / layer (1,3 kg/m²)	**Spraying through high-pressure 2-component airless pump**	
Application with notched comb	Up to 4 kg/m²	**Viscosity (20°C)**	Comp. A : 3 800 cps / Comp. B : 150 cps
		Temperature	Component A : 35°C / Component B : 20°C
Thickness	1 to 3 mm	**Pressure**	180 / 200 bars
Covering time at 20°C	mini 5 h / maxi 72h for flooring 1h vertically	**Covering time**	3 h
Start-up time	24 h	**Start-up time**	24h

Pot life	Temperature	+ 10°C	+ 20°C	+ 30°C
	Pot life	~ 30 minutes	~ 20 minutes	~10 minutes
	The pot life decreases as the temperature and / or amount of prepared product increases.			
Covering time	Before application of SOUPLETHANE 5 on KEMIPOX or PU AQUEUX			
	Temperature	+ 10°C	+ 20°C	+ 30°C
	Mini	24 hours	12 hours	8 hours
	Maxi	4 days	2 days	1 days
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 5
- Protect SOUPLETHANE 5 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

Technical Evaluation (AVIS TECHNIQUE) - CSTB N° AT : 12/15-1704 _v1
DTA N° 5.2/18-2615-V1 / ETE-13/0156
Fire resistance: Bfl-S1
European flooring standards : N°RSET -09-260138
HQE A++ / Class A+ : Regulatory Labeling of VOC Emissions and Compliance with the AgBB Protocol (2012)

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SOUPLETHANE 5 ATE

Solvent-free, two-component polyurea-urethane resin that provides a liquid waterproofing and corrosion protection membrane for roofing applications.

Technical Evaluation by CSTB (Avis Technique) / ETE-13/0156 - DTA N° 5.2/18-2615_V1

EUROPEAN CLASSIFICATION OF FIRE REACTION : Broof (t1)

Application Fields

SOUPLETHANE 5 ATE is used on all type of substrates: concrete, wood, insulating materials, metal, asphalt, bituminous membrane, tiles

External / Apparent use - New and refurbishment works - Liquid wtarproofing of:

- **inaccessible flat roofs**
- **accessible roof terraces**
- **technical flat roofs**
- **Balconies, loggias, corridors, bleachers, for private or public use**

Characteristics

Chemical Nature	2-Component Polyurea-urethane resin (aromatic)	**Mixing ratio**	Comp. A / Comp. B = 3 / 1 in volume
Composition	Component A - polyol : Colored opaque liquid Component B – isocyanate : Transparent amber liquid	**Density (at 20°C)**	Mixture A+B : 1.3 g / ml *(DIN 53217 / EN ISO 2811)*
Solvent-free	100 % solid content *(ISO 1515)*	**Bisphenol A-free**	

Flash point Component A 248 °C **Flash point Component B** 212 °C

Colors : Crème-Cream (Ivory, prox. Ral1015), gris-grey (prox. Ral 7040) – Others upon request

Advantages

Double function: Waterproofing and Anticorrosion
On new substrates and during renovation on existing waterproofing system
Excellent adhesion: 4 MPa (concrete) / 9 MPa (metal)

- High resistance to cracking (> to 4 mm)
- Fast start-up time
- Easy application
- Bisphenol A-free
- Solvent-free, Odor-free
- No chalking

Properties

Concrete adhesion	**4 MPa** (concrete failure) *(NF EN 1542)*	Shrinkage	**0**
Steel adhesion	**9 MPa** *(NF EN 1542)*	Tensile strength	**>12 MPa** *(NF EN ISO 527-3)*
Service temperature (air)	**Air : - 20°C à + 80°C** **Backwater : max 60°C**	Elongation	**40 %** *(NF EN ISO 527-3)*
Fire resistance	**Broof (t1)** *(NF EN 13501-5 :2016)*	Shore A Hardness	**95** *(ISO 868)*
Chemical resistance	**1< pH<13**	Compression strength	**113 MPa**
Water permeability	**No penetration** *(DIN 1048)*	Chloride permeability	**<10 coulombs** *(ASTM C 1202)*
Chemical attack due to concrete	**No effect**	Salt spray resistance	**2 000 hours** *(ASTM B117 / D1654)*
Thermal shock resistance	**- 50 °C to + 160°C**		

Packaging	in kits
5 kg	Pre-dosed Kit
35 kg	(20 L component A + 7 L component B)
104 kg	(3 x 20 L component A + 1 x 20 L component B)
1 042 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

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Implementation

Preparation of the mixture	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	Check the humidity of the substrate, the relative humidity, the ambient temperature of the products and the substrates, and the dew point beforehand. If the humidity of the substrate is > 4%, the KEMIPOX or PU AQUEUX system can be used to form a barrier against ascending humidity. If an adhesion higher than 9 MPa is desired, Souplethane UR5 is recommended as an adhesion promoter (primer).

Substrate temperature	-20°C min. / +70°C max.	**Dew point :** The substrate must be at + 3 ° C above the dew point to reduce the risk of condensation.
Relative Humidity (RH)	< 95 %.	**Treatment of singular points :** according to the technical assessment (Avis Technique)

Roll or brush application	1 mm / layer (1,3 kg/m²)	**Spraying through high-pressure 2-component airless pump**	
Application with notched comb	Up to 2 kg/m²	**Viscosity (20°C)**	Comp. A : 3 800 cps / Comp. B : 150 cps
		Temperature	Component A : 35°C / Component B : 20°C
Thickness	1 to 3 mm	**Pressure**	180 / 200 bars
Covering time at 20°C	mini 5 h maxi 72h	**Covering time**	mini 5 h maxi 72h
Start-up time	24 h	**Start-up time**	24h

Pot life	Temperature	+ 10°C	+ 20°C	+ 30°C
	Pot life	~ 30 minutes	~ 20 minutes	~10 minutes
	The pot life decreases as the temperature and / or amount of prepared product increases.			
Covering time	Before application of SOUPLETHANE 5ATE on KEMIPOX or PU AQUEUX			
	Temperature	+ 10°C	+ 20°C	+ 30°C
	Mini	24 hours	12 hours	8 hours
	Maxi	4 days	2 days	1 days
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)

Tools cleaning

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 5 ATE
- Protect SOUPLETHANE 5 ATE 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

Technical Evaluation (CSTB) / ETE-13/0156 - DTA N° 5.2/18-2615_V1
EUROPEAN CLASSIFICATION OF FIRE REACTION : Broof (t1)
HQE A++ / Class A+ : Regulatory Labeling of VOC Emissions and Compliance with the AgBB Protocol (2012)

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SOUPLETHANE FLOOR

Two-component, solvent-free, polyurethane resin providing a continuous and with no microporosities liquid membrane for floor coating,

Application Fields

SOUPLETHANE FLOOR can be used with or without primer on concrete for a continuous floor coating. Crack resistant and durable.

Characteristics

Chemical Nature 2-Component polyurethane 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 in volume

Density (at 20°C) Mixture A+B : 1.4 g / ml *(DIN 53217 / EN ISO 2811)*

Bisphenol A-free

Flash point component A >200 °C **Flash point component B** 220 °C

Colors : Crème-Cream (Ivory, prox. Ral1015), gris-grey (prox. Ral 7040), green, red – Others upon request

Advantages

Excellent adhesion to concrete without preparation and without primer

- Solvent-free / Odor-free
- Self-levelling
- Longer pot life and working window
- Economical solution
- Bisphenol A-free
- Fast start-up time
- No chalking
- Easy application

Properties

Adhesion to concrete without preparation and without primer	**2.4 MPa** (concrete failure) *(NF EN 1542)*	Shrinkage	**0**
Elongation	**20 %**	Tensile strength	**20 MPa** *(NF EN ISO 527-3)*
Hardness of self-levelling system (3-component)	**80 Shore D**	Hardness (14 days)	**100 Shore A** **70 Shore D**
Chemical resistance	**1< pH<13**	Chemical attack due to concrete	**No effect**

Packaging (predosed kits)

38.6 kg	pails (Kit 1 pail A : 30 kg + 1 pail B : 8.6 kg)
115 kg	pails (Kit 3 pail A : 90 kg + 1 pail B : 25 kg)
1 150 kg	drums (Kit 3 drums A : 900 kg + 1 drum B : 250 kg)

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

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Implementation

Preparation of the mixture	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. If the humidity of the substrate is > 4%, the KEMIPOX or PU AQUEUX system can be used to form a barrier against ascending humidity.

Substrate temperature	from 0°C to 50°C	**Dew point :** The substrate must be at + 3 ° C above the dew point to reduce the risk of condensation.
Relative Humidity (RH)	< 95 %	

Main layer : application with notched comb or squeege	**SOUPLETHANE FLOOR :** Consumption up to 4 kg/m² (1 mm = 1.4 kg/m²)	
Self-levelling system : Application with a notched comb	**System SOUPLETHANE FLOOR A :** 2 mm thickness density : 2.1 kg/l (Consumption: 2.1 kg/m²/mm)	3-Component system : 1 kit de 38.6 kg + 75 kg (3 bags of 25 kg) calibrated quartz 0,1/0,5
	System SOUPLETHANE FLOOR B : 1.5 mm thickness density : 1.9 kg/l (Consumption : 1.9 kg/m²/mm)	3-Component system : 1 kit de 38.6 kg + 50 kg (2 bags of 25 kg) calibrated quartz 0,1/0,5
Covering time at 20°C	4 h	
Start-up time	24 h	

Pot life			+ 20°C	
			~ 50 minutes	
Covering time	Temperature	+ 10°C	+ 20°C	+ 30°C
	Mini	24 hours	5 hours	4 hours
	Maxi	4 days	2 days	1 day
Drying / Start-up time	Temperature	+ 10°C	+ 20°C	+ 30°C
	Light loads	30 hours	24 hours	12 hours
	Durcissement complet	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 FLOOR.
- Protect SOUPLETHANE FLOOR 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.

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SOUPLETHANE WP

Solvent-free 2-component polyurea-urethane resin for waterproofing, anticorrosive protection (concrete and metal), internal linings of pipes, water towers and other structures that contain potable water.

Certificate of Sanitary Conformity issued on 16/12/2015 - N° 15 MAT NY 154

Application Fields

SOUPLETHANE WP is used on any concrete or metal substrate: potable water storage tank, pipelines, equipment immersed in potable water (pumps, ladders, etc ...)

INFRASTRUCTURES	INDUSTRY
Storage tanks for potable water / water towers Potable water pipes	Food industry equipment

Characteristics

Chemical Nature 2-Component polyurethane 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 in volume
Density (at 20°C) Mixture A+B : 1.35 g / ml *(DIN 53217 / EN ISO 2811)*
Bisphenol A-free
Flash point component A 229 °C
Flash point component B 220 °C
Colors : Crème-Cream (Ivory, prox. Ral1015)

Advantages

Bisphénol 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	**Mecanical application version**	
36 kg	37 kg	(20 L component A + 7 L component B)
107 kg	109 kg	(3 x 20 L component A + 1 x 20 L component B)
1 072 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

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Technical Datasheet

N° : SPTWP_en_v2.0
Update : 21/11/2019

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 bi-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) Component B : 150 cps (20°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 WP.
- Protect SOUPLETHANE WP 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

Certificate of Sanitary Conformity issued on 16/12/2015 - N° 15 MAT NY 154
HQE A++ / Class A+ : Regulatory Labeling of VOC Emissions and Compliance with the AgBB Protocol (2012)

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SOUPLETHANE 5 COR FRB M1

NON-FLAMMABLE 2-component polyurea-urethane resin, solvent-free, for waterproofing, anticorrosion protection (concrete and metal) and protection against chemical attack (acid or base). Easily decontaminatable.

FIRE CLASSIFICATION FOLLOWING THE EUROPEAN STANDARD NF EN 13501-1 : B-s2, d0

Application Fields

SOUPLETHANE 5 COR FRB M1 is used on any substrate: steel, alloy, concrete, fiber concrete, plaster, wood, etc.

- Non-flammable coating for flooring, chemical retentions, concrete or steel tanks, pipes, various metal structures, tunnel walls.
- Non-flammable anti-corrosion protection in the chemical, pharmaceutical, agricultural and sewage treatment plants.

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 in volume

Density (at 20°C) Mixture A+B : 1.43 g / ml *(DIN 53217 / EN ISO 2811)*

Flash point component A > 200 °C **Flash point component B** 220 °C

Colors : Crème-Cream (Ivory, prox. Ral1015), gris-grey (prox. Ral 7040)

Advantages

Non-flammable coating, Fire classification : B-s2, d0

- Excellent adhesion : 3 MPa on concrete / 9 MPa on metal
- Resistance to thermal shocks and to hydrolysis : 90°C
- Compression strength : > 110 MPa
- Excellent chemical resistance (pH range: 1 to 13)
- Solvent-free, Odor-free
- Fast start-up time
- Easy application
- No chalking

Properties

Concrete adhesion	**3 MPa** (concrete failure) *(NF EN 1542)*	Shrinkage	**0**
Steel adhesion	**9 MPa** *(NF EN 1542)*	Tensile strength	**22 MPa** *(NF EN ISO 527-3)*
Service temperature (air)	**- 20°C to + 100°C**	Elongation	**25 %** *(NF EN ISO 527-3)*
Service temperature (in immersion in water)	**80°C max**	Shore D Hardness	**72** *(ISO 868)*
Thermal shock 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 kits
38.6 kg	(20 L component A + 7 L component B)
115.0 kg	(3 x 20 L component A + 1 x 20 L component B)
1 150.0 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

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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	Check the humidity of the substrate, the relative humidity, the ambient temperature of the products and the substrates, and the dew point beforehand. If the humidity of the substrate is > 4%, the KEMIPOX or PU AQUEUX system can be used to form a barrier against ascending humidity.

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

Manual Version		**Machine Version (Spraying through high-pressure 2-component airless pump)**	
Pot life (20°C)	20 min	**Pot life (20°C)**	1.5 min
Roller or brush application	0.4 mm / layer (0,35 kg/m²)	**Viscosity (20°C)**	Comp. A : 6 000 cps / Comp. B : 150 cps
Application with notched comb	Up to 4 kg/m²	**Temperature**	Comp. A : 30-35°C / Comp. B : 20°C
Thickness	1 to 3 mm	**Pressure**	180 / 200 bars
Covering time (20°C)	mini 5 h / maxi 72h for flooring 1h vertically	**Covering time (20°C)**	3 h

Covering time

Before application of SOUPLETHANE 5 COR FRB M1 on KEMIPOX or PU AQUEUX

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

Pot Life

Manual Version

Temperature	+ 10°C	+ 20°C	+ 30°C
Pot-life	~ 25 minutes	~ 20 minutes	~12 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)

Tools cleaning

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

Notes sur l'application / limites

- Substrates should not be under water pressure or condensation during the application and polymerization of SOUPLETHANE 5 COR FRB M1
- Protect SOUPLETHANE 5 COR FRB M1 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

FIRE CLASSIFICATION FOLLOWING THE EUROPEAN STANDARD NF EN 13501-1 : B-s2, d0 (CSTB, n° RA08-0460)
Class A+ : Regulatory Labeling of VOC Emissions and Compliance with the AgBB Protocol (2012)

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SOUPLETHANE 5 COR

Anticorrosion protection coating, based on a polyurea-urethane resin, solvent-free, presenting high chemical and mechanical resistance (Liquid Waterproofing System).

Application Fields

 Abrasion-resistant protective coating intended for the protection of structures in the presence of high chemical attack on any substrate (eg concrete, mortar, epoxy mortar, etc.).

 Protective coating for reservoirs and chemical storage tanks, hoppers, silos, chemical reactors and retentions.

 Corrosion protection in the chemical, pharmaceutical, agricultural and sewage / waste water treatment plants.

 Can be reinforced with 2D glass fabric to resist cracking of storage tanks and retentions.

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)*

Colors : Crème-Cream (Ivory, prox. Ral1015), gris-grey (prox. Ral 7040)

Mixing ratio : Comp. A / Comp. B = 2 / 1 in volume

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

Bisphenol A-free

Advantages

Excellent resistance to chemical agents (pH 1 to 14)
please refer to chemical resistance chart (Appendix)
Very good mechanical resistance
Mechanical shock resistance (tests CSTB)
Thermal shock resistance: from **-50°C** to **+120°C**
Resistance to concrete cracking: **bridging of concrete cracking of 4.9 mm**
No Bacteria Development

Solvent-free, Odor-free

Bisphenol A-free

Fast start-up time

Easy application

Properties

Chemical resistance		Thermal resistance	
Corrosion resistance	**pH from 1 to 14**	Thermal shock resistance	**from -50 °C to + 120°C**
please refer to chemical resistance chart (Appendix)			

Mechanical properties			
Shore D Hardness	**72** *(ISO 868)*	Tensile strength	**22 MPa** *(EN ISO 5470-1)*
Concrete adhesion	**3.5** MPa (concrete failure) *(NF EN 1542)*	Elongation	**65 %**
Steel adhesion	**7** MPa *(NF EN 1542)*	Compression strength	**113** MPa
Salt spray resistance	**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

33 kg	pails (Kit 1 pail A : 20L + 1 pail B : 10L)
66 kg	pails (Kit 2 pail A : 2 x 20L + 1 pail B : 20L)
660 kg	drums (Kit 2 drums A : 2 x 200L + 1 drum B : 200L)

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

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Implementation

Preparation of the mixture	Thoroughly homogenize the two components - polyol (A) and isocyanate (B) before mixing Mix the mixture Comp A + Comp B with a mechanical stirrer for 60-120 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	Check the humidity of the substrate, the relative humidity, the ambient temperature of the products and the substrates, and the dew point beforehand. If the humidity of the substrate is > 4%, the KEMIPOX or PU AQUEUX system can be used to form a barrier against ascending humidity.

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

Roll or brush application	2-3 layers	**Spraying through high-pressure 2-component airless pump**	
Application with notched comb	1 main layer	Viscosity	Component A : 1 500 cps / Component B : 150 cps
		Temperature	Component A : 35°C / Component B : 20°C
		Pressure	180 / 200 bars
Covering time	8 hours	Covering time	8h for flooring, 2 h for vertical applications
Start-up time	24 h	Start-up time	24h

Thickness : 2 to 5 mm (for more details, please refer to the chemical resistance chart at the Appendix)

Pot life

Temperature	+ 10°C	+ 20°C	+ 30°C
Pot life	~ 30 minutes	~ 20 minutes	~10 minutes

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

Covering time

Before application of SOUPLETHANE 5 COR on KEMIPOX or PU AQUEUX primer

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

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

Tools cleaning

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

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

Qualifications

Decontaminatable Class 1 according to NF T 30-901 (C.E.A.)
HQE A++ / Class A+ : Regulatory Labeling of VOC Emissions and Compliance with the AgBB Protocol (2012)

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VISCOUS VERSION (THIXOTROPIC) : SOUPLETHANE 5 COR – THIXO

The viscous version of SOUPLETHANE 5 COR allows the roll application of 700 g/m^2 in one single layer.

Viscosity – Component A : 15 000 mPa.s (23°C)
Consumption : Up to 700g/m^2

The other characteristics of the system remain unchanged.

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Appendix

SOUPLETHANE COR (5 or 6)

TABLE OF CHEMICAL RESISTANCE

Chemical retentions
Flooring
Contact : 72 h

Storage tanks
Concrete/Steel
Permanent contact

		Temperature		
Chemicals		< 80°C	< 40°C	< 70°C
ACIDS	**Concentration**	**Thickness**	**Thickness**	**Thickness**
Hydrochloric acid	33 %	3 mm	3 mm	5 mm
Nitric acid	60 %	2 mm	3 mm	5 mm
Sulfuric acid	40 %	3 mm	3 mm	5 mm
Phosphoric acid	100 %	2 mm	3 mm	5 mm
Acetic acid	70 %	3 mm	3 mm	5 mm
Lactic acid	30 %	2 mm	3 mm	5 mm
All acids with pH >1		2 mm	3 mm	5 mm
All acids with pH <1		Contact test 72 h	Immersion 3 weeks	
BASES	**Concentration**	**Thicknes**	**Thickness**	**Thickness**
Sodium hydroxide	50 %	3 mm	5 mm	5 mm
Potassium hydroxide	50 %	2 mm	5 mm	5 mm
All bases with pH <13		2 mm	2 mm	5 mm
All bases with pH >13		Contact test 72 h	Immersion 3 weeks	

Hydrocarbons	**Concentration**	**Thickness**	**Thickness**	**Thickness**
Petrol	100 %	2 mm	3 mm	5 mm
Gas oil	100 %	2 mm	5 mm	5 mm
Aliphatic essence	100 %	2 mm	2 mm	5 mm
Kerosene	100 %	2 mm	2 mm	----------
aromatic **Benzene, xylene**	100 %	2 mm	----------	----------

CHLORIDES	**Concentration**	**Thickness**	**Thickness**	**Thickness**
Sodium salt	100 %	2 mm	3 mm	5 mm
Iron chloride	30 %	2 mm	3 mm	5 mm
Others		2 mm	3 mm	5 mm

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