

Dencryl™ M42-SP

Cold, Spray Applied Bridge Deck Waterproofing Membrane

DESCRIPTION

Dencryl™ M42-SP is a polyurethane & methylmethacrylate hybrid spray applied waterproofing membrane for use at concrete- and steel bridges. **Dencryl™ M42-SP** is cold spray applied as a waterproofing membrane underneath asphalt on bridges or underneath sidewalks on bridges.

BENEFITS

- Sufficiently resilient even after 45 – 60 minutes of being applied to allow hot rolled asphalt equipment to traffic Dencryl™ Membrane without protection board.
- Will adhere well to dry and clean surfaces including steel and pipe outlets etc.
- Will resist rain and snow within 45 – 60 minutes of installation.
- Bond of membrane in excess of concrete tensile or cohesive strengths.
- Flexibility sufficient to bridge cracks in excess of 3.5 mm in well below freezing conditions.
- Very easily repaired if damaged.
- Rapid setting and curing enables limited 'possession' and rapid handover irrespective of ambient conditions.

MIXING

Mixing ratio: Component A: Component B = 1 : 1 (parts by weight).
 Mix the required catalyst amount in Part B 1 hour prior to installation.

SYSTEM CONSTRUCTION

Primer for metal:
 On metal surfaces use **Dencryl™ P12** which will have great adhesion to the substrate and ensure a strong mechanical bond.

Primer for concrete:
Dencryl™ P11 is used on damp and standard concrete surfaces.

SUBSTRATE PREPARATION

The substrate must be sound and sufficiently compression-resistant (at least 25 N/mm²), with a minimum adhesive strength of 1.5 N/mm².
 The substrate must be clean and dry and free of dirt, oil, grease and other soiling. Concrete substrates must be prepared

mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.

Weak concrete and loose cementitious levelling must be removed and surface damage such as blowholes and voids must be repaired and then primed again. All dust, loose and friable material must be fully removed from all surfaces before the product is applied, preferably using a brush and/or industrial vacuum cleaner. The concrete, metal or screed substrate must be primed. Uneven substrates must be levelled to achieve an even substrate. Please see respective Technical Data Sheets for more information. If the surface is older than 48 hours, always perform a preliminary adhesion test.

APPLICATION CONDITIONS

Surface temperature:
 Minimum -5°C, maximum +30°C

Ambient temperature:
 Minimum -5°C, maximum +30°C

Surface moisture content:
 < 6% moisture
 To be tested with a carbide measurement.

Relative air humidity:
 Maximum 70% R.H.

Dew point:
 Beware of condensation!

Check the moisture content of the surface, the R.H. and dew point before applying. It is recommended to use the spraying method to apply the material. The temperature of the non-hardened material must be at least 3°C higher than the dew point to prevent the risk of condensation formation, efflorescence or mold formation.

CURING TIME

Processing time at 20°C	10 min
Touch dry at 20°C	20 min
Can be walked at 20°C	2 hours

REMARKS

- Do not use **Dencryl™ M42-SP** on surfaces with rising damp.
- After application **Dencryl™ M42-SP** must be protected from damp, condensation and water for at least 24 hours (+20°C).
- Uneven or dirt covered substrates should not be treated with thin coatings. Both substrate and adjacent areas should

always be thoroughly prepared and cleaned prior to application.

- Immediately process all mixed material, otherwise at the end of the processing time the flow and de-aeration will decrease.
- Use material with the same batch numbers to be sure of an exact and even color match.
- If heating is required do not use gas, oil, paraffin or other fossil fuel heaters as they produce large quantities of both CO² and water vapor which may adversely affect the finish. Only use electrically powered warm air blower systems when heating is needed.

PACKAGE

Set: 400 kg
 Component A: 200 kg barrel
 Component B: 200 kg barrel
 Dencryl Hardener: 25 kg cardboard box

FORM

Component A:
 Liquid, white to yellow white.
 Component B:
 Liquid, white to yellow white.

SHELF LIFE

Up to 6 months after the production date if kept in the original, sealed, unopened and undamaged packaging and stored dry between +5°C and +30°C.

WARNINGS AND PRECAUTIONS

Wear safety gloves, goggles and protective clothing. Avoid contact with the skin and eyes. In case of eye contact, seek medical attention. Avoid inhalation of the fumes. Respiratory protection must be worn when spraying or when in the vicinity of the spraying operation. When working well ventilated areas combined charcoal filter and particle filter masks (A-P2) should be worn. When working in less well ventilated and in confined spaces, air-fed helmets are to be worn by sprayer and assistant(s). When working with the product do not eat, smoke or work near a naked flame. The regulations of the local trade association and/or other authorities, regulating safety and hygiene of workers handling polyurethane and isocyanates must be followed. For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the Material Safety Data Sheet (MSDS) from our office or our website.

CONSUMPTION

Screed floor system	Product	Consumption
Primer for concrete	Dencryl™ P11	0.4 – 0.6 kg/m ²
Primer for steel	Dencryl™ P12	0.4 – 0.6 kg/m ²
Membrane Dencryl™ M42-SP	Dencryl™ M42-SP MMA	
1 mm layer thickness		1.4 kg/m ²
2 mm layer thickness		2.8 kg/m ²
Tack coat	Dencryl™ B24	0.3 – 0.5 kg/m ²

TECHNICAL PROPERTIES

Property	Test Method	Approx. value
Application Temperature		-20°C to +35°C*
Gel Time	Internal	6-11 minutes at 20°C
Processing time 20°C (min.)		+/- 20
Overcoating Time	Internal	45 minutes at 20°C
Water Absorption	ASTM D570-81	< 3.5%
Water Vapor Transmission	ASTM E96-00	1 gm/m /day (≤1.0 perms)
Tensile strength 28d (N/mm ²)		~12
Adhesion strenght (N/mm ²)		> 1.5 (Concrete facture)
Elongation at break 28d [%]		≥130 (%)
Low Temperature Flexibility -25°C	CAN CGSB	Pass
Resistance To Aggregate Indentation	BD 47	Recovered Thickness
At 40°C		100%
At 125°C		100%
Dynamic Ballast Impact	SNCF 181kN/2x10 cycles	No damage or leak
Density (g/cm ³)	DIN 51757	1.20 g/cm ³
Viscosity (mPa·s)	DIN 53015	8000-10000
Shore D Hardness	ASTM D6132	≥40

* Temperatures below 0°C requires low temperature additive.

CE	
Dencoat™ International · E-mail: info@dencoat.com · Website: www.dencoat.com	
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M42-SP - 001	
EN 13813 SR-ART-B1,5-IR4	
Synthetic resins for internal uses (Application in accordance with the newest technical information)	
Reaction to fire:	E _{fl}
Release of corrosive substances (Synthetic Resin Screed):	SR
Water permeability:	NPD ²⁾
Wear resistance (Abrasion Resistance):	AR 1 ³⁾
Bond strength:	B 1,5
Impact resistance:	IR 4
Sound insulation:	NPD ²⁾
Sound absorption:	NPD ²⁾
Thermal resistance:	NPD ²⁾
Chemical resistance:	NPD ²⁾

CE-labelling

- 1) Last two digits of the year in which the ce marking was affixed.
- 2) NPD = No performance determined.
- 3) Refers to a smooth surface without broadcasting.

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