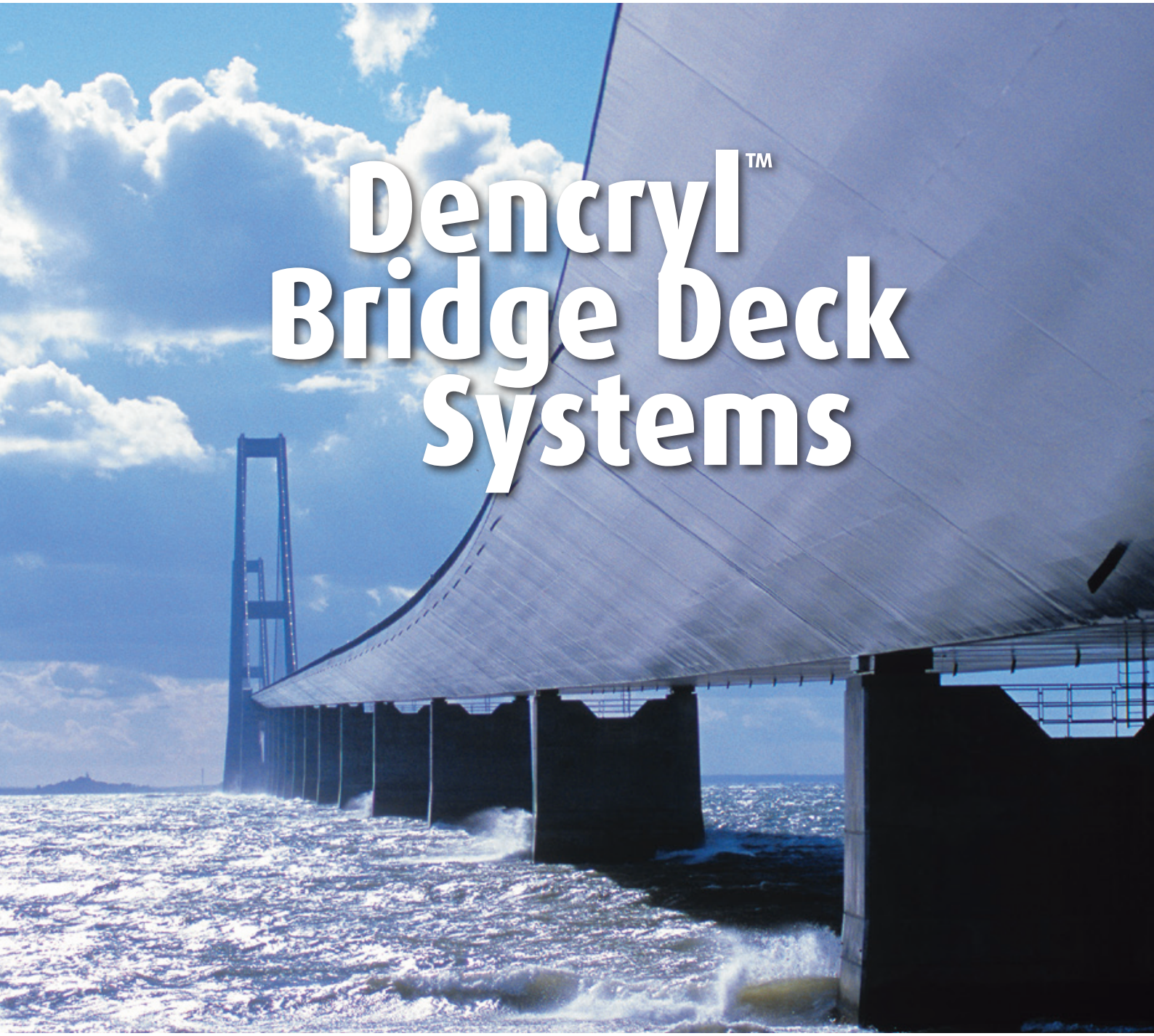
DenCoat™

Tomorrows Floors Today



Dencryl™ Bridge Deck Systems

Dencryl™ · Denpox™ · Denpur™ · Dencrete™

Dencryl™ -ready in no time to last a life time...

Dencryl™ Bridge Deck Systems are membrane solutions for concrete and steel bridges, rail bridges and pedestrian wearing surfaces.

Dencryl™ is a seamless MMA Resin based membrane system with quite unique properties. The popularity is due to the fact, that Dencryl™ is hardwearing, flexible and resistant to a wide range of chemicals, thanks to the unique characteristic of the acrylic binder.
Due to the constant changes weather and climate, stringent attention has to be paid.
The selection of Bridge Deck™ Waterproofing Systems thus necessitates total compliance with tight specifications and where the systems are installed only by nominated partner applicators with the relevant training and experience.
It must be remembered that a 'prevention is better than cure' approach, is a far more cost effective solution than to repair and replace at a later stage.
With many global installations of deck waterproofing experience, our technical experts can design a solution that is tailor made to suit your project specifications and requirements.

Dencryl™ Bridge Deck Systems typically comprise of three protection and service exposures, namely:

Road
Waterproofing of concrete and steel decks under asphalt wearing layers

Traffic
Waterproofing of concrete and steel decks as exposed wearing layers

Rail
Waterproofing of concrete and steel rail bridges under rail ballast

Dencryl™ Bridge Deck Systems

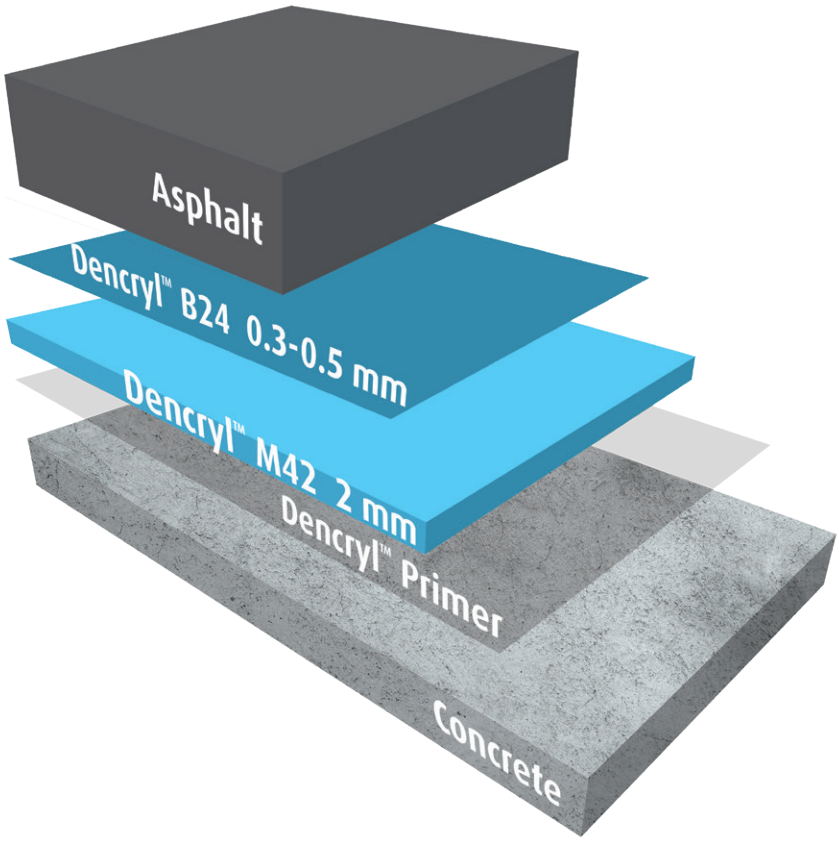
Highlights

- Available in spray and manually applied grades to meet job site conditions
- Installs at a wide range of ambient and substrate temperatures –20 to +35°C (–4 to +95°F) to extend the construction season to year round
- Rapid set time promotes fast installation, lower labour costs and efficient handover to next construction phase
- Rapid setting also enables any unanticipated repairs to be quickly and easily effected
- Weather resistant and ready for use 60 minutes after application
- V.O.C. compliant; contains no solvents
- Chemically inert; does not require HAZMAT precautions for disposal once cured
- Dencryl™ Bridge Deck Systems are only installed by authorised and approved contractors
- Cold applied – does not require heating equipment or conditioning
- Flexible membrane capable of bridging severe cracks
- Elongation (> 300%) in excess of conventional resinbased systems
- Shear bond of membrane to both concrete, and steel well in excess of international requirements
- Shear and tensile bond of membrane to asphalt wearing layers exceeds international standards
- Tensile bond well in excess of concrete cohesive and tensile strength
- Tough and durable enough to resist indentation by rail ballast, backfill and construction equipment and traffic

Dencryl™ Bridge Road

Waterproofing membrane layer under asphalt

Bridges are continuously exposed to severe stresses and typical factors affecting their longevity, include inadequate protection specified at design phase, quality and handling of concrete and/or steel, physical and chemical exposure, climatic conditions, traffic types and frequency and regularity and quality of maintenance.
Dencryl™ Bridge Deck Waterproofing systems provide 100% effective seamless waterproofing thereby denying entry of water, chloride and de-icing salts from permeating into and percolating through the structural concrete deck and thus preventing the steel reinforcement corroding. This also includes corrosion inhibition of orthotropic steel decks etc. where these are the decks of choice.



Properties	Value
Fully cured at 20°C	2 hours
Applied thickness	3-4 mm
Water Permeability	Nil – Karsten test (impermeable)
Hardness	SHORE D 80
Compressive strength	85 MPa
Reaction to fire	D_{fl}-s_1
Bond strength	>1.5 MPa
Temperature resistance	Up to 80°C at 4 mm
Thermal expansion coefficient	<40 ppm
Abrasion resistance	50 mg/1000 cycles (Taber Abrader)
Thermal conductivity	< 0,8 W/m·K
Slip resistance	R9 – R13

System build up

Layer	Material	Application Rate	Thickness
Primer on substrate[1]	Dencryl™ P11 or P12	0.3-0.5 kg/m²	0.3-0.5 mm
Broadcast aggregate	Quartz 0.3-0.7 mm	0.3 kg/m²	
Membrane[2]	Dencryl™ M42	Min. 2.8 kg/m²	Min. 2.0 mm
Tack Coat	Dencryl™ B24	0.3-0.5 kg/m²	0.3-0.5 mm
Broadcast aggregate	Quartz 0.3-0.8 mm	Min. 1.0 kg/m²	
2nd Tack Coat[3] (if required)			

[1] Porous or uneven substrates may require multiple primer coats.

[2] Membrane application rate/thickness: min. 2.8 kg/m² for single layer.

[3] If the asphalt being placed on the Dencryl™ Waterproofing System is less than 80 mm total, an additional hot melt polymer-modified bitumen tack coat will be required.

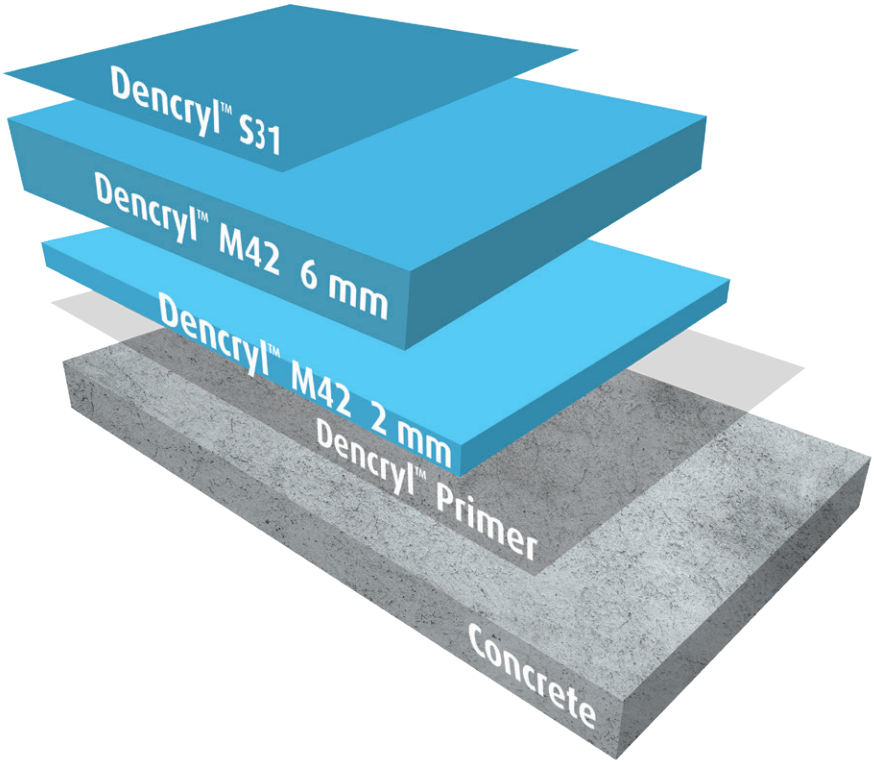
Benefits

- 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.

Dencryl™ Bridge Traffic

Exposed waterproofing membrane layer as wearing layer

For bridges where asphalt is not an option, we offer a heavy duty driving wear layer based on a flexible PMMA mixed with hard and extremely bauxite aggregate.
This system bonds with the substrate and provides a sealed wear layer in combination with a flexible, crack-bridging barrier membrane and surface friction suited for walking and cycling.
Dencryl™ Bridge Traffic provides a low density option to provide a wear, impact and abrasion resistant surface that will offer corrosion resistance, slip resistance and limited maintenance requirements. It can be used on new bridge construction, routine maintenance or bridge restoration applications.
Dencryl™ Bridge Traffic systems are only installed by authorised and approved applicators.



Properties	Value
Fully cured at 20°C	2 hours
Applied thickness	6 - 10 mm
Water Permeability	Nil – Karsten test (impermeable)
Hardness	SHORE D 80
Compressive strength	85 MPa
Reaction to fire	D_{fl}-s_1
Bond strength	>1.5 MPa
Temperature resistance	Up to 80°C at 4 mm
Thermal expansion coefficient	<40 ppm
Abrasion resistance	50 mg/1000 cycles (Taber Abrader)
Thermal conductivity	< 0,8 W/m·K
Slip resistance	R9 – R13

System build up

Layer	Material	Application Rate	Thickness
Primer on substrate[1]	Dencryl™ P11 or P12	0.3-0.5 kg/m²	0.3-0.5 mm
Broadcast aggregate	Quartz 0.3-0.7 mm	0.3 kg/m²	
Membrane[2]	Dencryl™ M42	Min. 2.8 kg/m²	Min. 2.0 mm
Wear layer	Dencryl™ M42 + aggregate	10 kg/m²	6 mm
Seal coat	Dencryl™ S31	0.3-0.5 kg/m²	0.5-08 mm

[1] Porous or uneven substrates may require multiple primer coats.

[2] Membrane application rate/thickness: min. 2.8 kg/m² for single layer.

Benefits

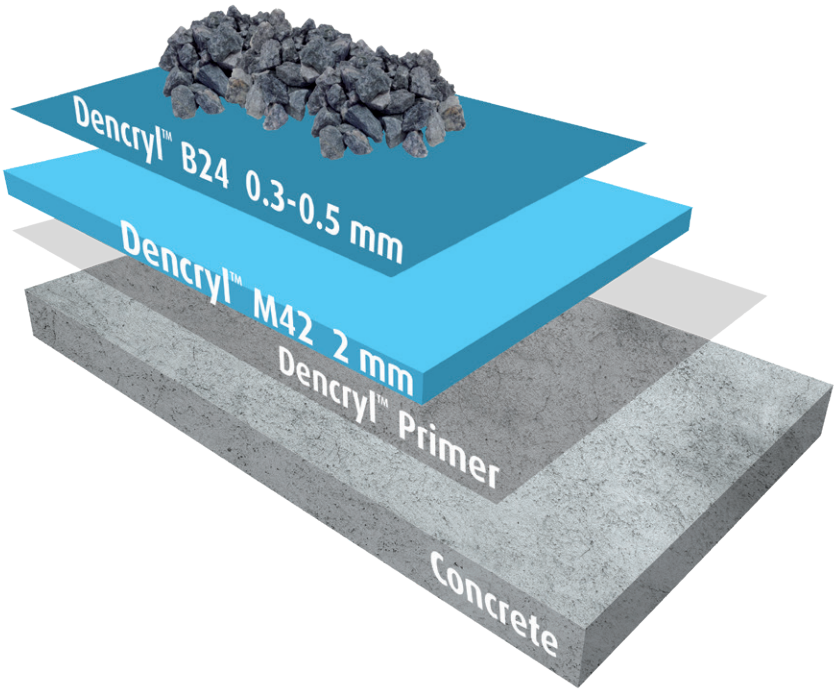
- Will adhere well to dry and clean surfaces including steel and pipe outlets etc.
- Flexibility sufficient to bridge cracks in excess of 3.5 mm in well below freezing conditions.
- Will resist rain and snow within 45 – 60 minutes of installation.
- Very easily repaired if damaged.
- Rapid setting and curing enables rapid handover.

Dencryl™ Bridge Rail

Waterproofing membrane under rail ballast

Dencryl™ Bridge Rail provides seamless waterproofing and extreme impact and indentation resistance under rail ballast.
When required by specification, a proprietary ballast mat can be placed.
Dencryl™ Bridge Rail can be used with new construction, restoration or replacement rail bridge and grade separation applications.

The Dencryl™ Bridge Rail membrane may also be used without protection board.



Properties	Value
Fully cured at 20°C	2 hours
Applied thickness	3-4 mm
Water Permeability	Nil – Karsten test (impermeable)
Hardness	SHORE D 80
Compressive strength	85 MPa
Reaction to fire	D_{fl}-s_1
Bond strength	>1.5 MPa
Temperature resistance	Up to 80°C at 4 mm
Thermal expansion coefficient	<40 ppm
Abrasion resistance	50 mg/1000 cycles (Taber Abrader)
Thermal conductivity	< 0,8 W/m·K
Slip resistance	R9 – R13

System build up

Layer	Material	Application Rate	Thickness
Primer on substrate[1]	Dencryl™ P11 or P12	0.3-0.5 kg/m²	0.3-0.5 mm
Broadcast aggregate	Quartz 0.3-0.7 mm	0.3 kg/m²	
Membrane[2]	Dencryl™ M42	Min. 2.8 kg/m²	Min. 2.0 mm
Tack Coat	Dencryl™ B24	0.3-0.5 kg/m²	0.3-0.5 mm
Broadcast aggregate	Quartz 0.3-0.8 mm	Min. 1.0 kg/m²	

[1] Porous or uneven substrates may require multiple primer coats.

[2] Membrane application rate/thickness: min. 2.8 kg/m² for single layer.

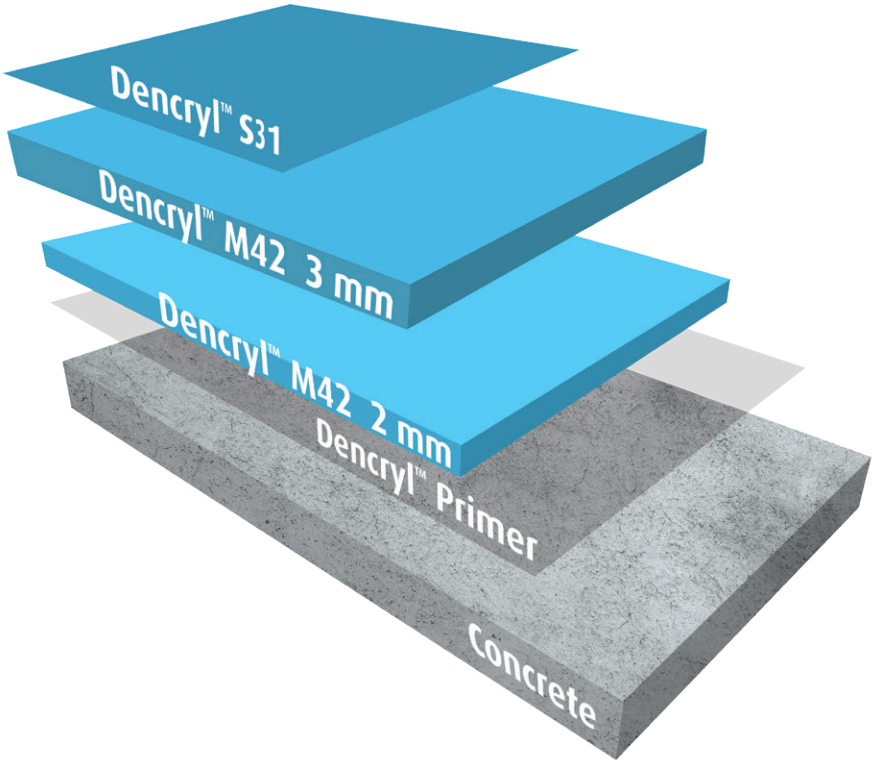
Benefits

- Extreme impact resistance to rail ballast.
- Bond of membrane in excess of concrete tensile or cohesive strengths.
- Will resist rain and snow within 45 – 60 minutes of installation.
- 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 rapid handover.

Dencryl™ Bridge Pedestrian

Exposed waterproofing membrane layer as wearing layer

Safety and durability are key for pedestrian and cycle bridges. Dencryl™ Bridge Pedestrian bonds with the substrate and provides a sealed wear layer in combination with a flexible, crack-bridging barrier membrane and surface friction suited for walking and cycling.
Dencryl™ Bridge Pedestrian provides a low density option to provide a wear, impact and abrasion resistant surface that will offer corrosion resistance, slip resistance and limited maintenance requirements. It can be used on new bridge construction, routine maintenance or bridge restoration applications. Dencryl™ Bridge Deck Systems are only installed by authorised and approved applicators.



Properties	Value
Fully cured at 20°C	2 hours
Applied thickness	5-6 mm
Water Permeability	Nil – Karsten test (impermeable)
Hardness	SHORE D 80
Compressive strength	85 MPa
Reaction to fire	D_{fl}-s_1
Bond strength	>1.5 MPa
Temperature resistance	Up to 80°C at 4 mm
Thermal expansion coefficient	<40 ppm
Abrasion resistance	50 mg/1000 cycles (Taber Abrader)
Thermal conductivity	< 0,8 W/m·K
Slip resistance	R9 – R13

System build up

Layer	Material	Application Rate	Thickness
Primer on substrate[1]	Dencryl™ P11 or P12	0.3-0.5 kg/m²	0.3-0.5 mm
Broadcast aggregate	Quartz 0.3-0.7 mm	0.3 kg/m²	
Membrane[2]	Dencryl™ M42	Min. 2.8 kg/m²	Min. 2.0 mm
Wear layer	Dencryl™ M42 + aggregate	6 kg/m²	3 mm
Seal coat	Dencryl™ S31	0.3-0.5 kg/m²	0.5-08 mm

[1] Porous or uneven substrates may require multiple primer coats.

[2] Membrane application rate/thickness: min. 2.8 kg/m² for single layer.

Benefits

- Will adhere well to dry and clean surfaces including steel and pipe outlets etc.
- Bond of membrane in excess of concrete tensile or cohesive strengths.
- Will resist rain and snow within 45 – 60 minutes of installation.
- 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 rapid handover.

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