

## Quick Spray INDUSTRIAL – Hot Spray – 2 part coating – aromatic

POLYUREA

### 1. Characteristics:

**QuickSpray INDUSTRIAL** (aromatic) is a very fast set, premium, 2-component 100% solids coating/elastomer derived from a reaction of an Isocyanate Pre-Polymer and an Amine terminated resin blend. This general purpose “pure” Polyurea has been especially designed to protect and coat most all surfaces assuring enduring pore density. The product reacts within seconds and once cured, leaves a flexible, durable, tough surface. It is extremely effective when used as a protective coating whether applied over concrete, steel, any other surface or as a substrate on Geotextile fabric. The material must be applied utilizing high pressure, heated plural component spray proportioning equipment.

### 2. Features:

- **PURE Polyurea utilization even under extreme climatically conditions**
- Fast reactivity and cure times from 5 seconds up
- Fast return to service time > long life-cycle > almost maintenance free > significant savings
- Anti corrosive & waterproofing
- Excellent adhesion on concrete, steel, aluminum, plastics, fibers, wood, foam etc.
- Hydrolysis firm > non sensitive to humidity
- Resistant to most aggressive chemicals, solvents, acids and caustics
- High impact & abrasion resistance, maintains flexibility
- Seamless and joint-less coating and lining, solid, high application thickness possible
- Allows accurate reproduction of surface detail
- High elongation at break
- Very good tensile and structural strength
- 100% solids, VOC-free, no solvents
- Little or no odor
- Without the use of catalysts
- Excellent muffling of noises
- UV- , chlorine- and saltwater resistant
- High abrasion resistance
- Thermal stabile
- Broad colour spectrum ( RAL)

### 3. Typical Uses:

- Industrial & manufacturing facilities, storage, load and high traffic areas
- Water- and wastewater treatment, containment areas, landfill, manholes, sewer-lining
- Refineries, pipelines, tank coating, gas-stations, car-wash
- Pools, reservoirs, digester-towers, storage tanks, active carbon tanks
- Roofs, park decks, garages, ramps
- Airports, shipbuilding, marine, mining
- Wind energy plants (on-off-shore), blades, biogas reactors, cooling towers, pylons
- Bridge-, street- and tunnel construction
- Wear and tear parts, platforms, vibrating stoker, edge guard, belt-conveyors
- Leisure parks, biotope, playgrounds, slip-hazard areas
- Molds, furniture industry

**Quick Spray INDUSTRIAL – Hot Spray – 2 part coating – aromatic**

**POLYUREA**

<b>4. Processing properties:</b>	<b>Datas</b>		
Mixing ratio of Comp. A to Comp. B	100 : 100 per volume		
Material consumption [kg/m <sup>2</sup> /1mm]	ca. 1,2		
Recommended thickness [mm]	Minimum: 0,5	Maximal: indefinitely	
Gelification time at 20 °C [sec.]	5 – 15 (dependent on the temperature of the substrate)		
Tack.Free-Time at 20 °C [sec.]	15 – 30 (dependent on the temperature of the ambient)		
Over coat cycle [h]	0 – 12 (without any pre-treatment)		
Curing/loading after [h]	Walkable: 1	Mechanical: 2	Chemical: 12
Temperature range for application (ambience) [°C]	-10 - +50		
Temperature range for application (substrate) [°C]	-10 - +50		
Material Temperature (Preconditioning) [°C]	25 – 30		
Material Temperature (Spraying) [°C]	70 - 80		
Maximal relative air humidity for application [%]	98		
Pay attention to the dew point limit	min. 3K > DP (dew point)		

<b>5. Physical Properties:</b>	<b>Datas</b>		
Chemical Base	-	Comp. A: MDI-Prepolymer Comp. B: Polyetheramine-Mixture	
VOC-content	DIN EN ISO 11890-1 / ASTM D-1259	0%	
Solids content	DIN EN 827 / ASTM D-2697	100%	
Colour	-	miscellaneous (on request)	
Viscosity [mPa*s] @ 25 °C	DIN EN ISO 2884-2 / ASTM D-4878	Comp. A: 600 – 1.000	Comp. B: 500 – 900
Density [g/cm <sup>3</sup> ] @ 20 °C	DIN EN ISO 2811-1 / ASTM D-1217	Comp. A: 1,09 – 1,13	Comp. B: 1,00 – 1,04
Density [g/cm <sup>3</sup> ]	EN ISO 1183 / ASTM D-792	1,01 – 1,05	
Tensile strength [MPa]	ISO 37-2005 / ASTM D-638	≥ 25	
Modul [MPa]	ISO 37-2005 / ASTM D-638	100% Elongation: ≥ 10	300% Elongation: ≥ 20
Elongation at break [%]	ISO 37-2005 / ASTM D-638	≥ 340	
Hardness [Shore D]	ISO 868-2003 / ASTM D-2240	45 ± 5	
Rebound resilience [%]	ISO 4662 / ASTM	≥ 32	
Tear growth resistance [N/mm]	ISO 34-1 method A	≥ 45	
Volume abrasion [mm <sup>3</sup> ]	DIN ISO 4649	≤ 130	
Taber Abrasion [mg]	ASTM D-4060	< 6 (Wheel CS17 / 1.000g / 1000 Cycles) < 185 (Wheel H18 / 1.000g / 1000 Cycles)	
Peel off strength [N/mm]	ISO 813 / ASTM	Concrete: ≥ 4	Steel: ≥ 8
Pull off strength [N/mm <sup>2</sup> ]	DIN EN ISO 4624 / ASTM D-4541	Concrete: ≥ 1,5	Steel: ≥ 6
Max. Process temp. [°C]	ISO 11346 / ASTM D-2485	Wet: 60	Dry: 130 Peak temperature dry: 150

\* All datas measured at 77 °F @ 50%rH. Meanderings at different ambience- and processing parameters have to be taken into account.

## Quick Spray INDUSTRIAL – Hot Spray – 2 part coating – aromatic

<b>5. Physical Properties:</b>		<b>Datas</b>
Water vapour transmission rate [g/m <sup>2</sup> *d]	ISO 15106-3	6,1 (at 23°C a. 85% relative humidity) 17,5 (at 38°C a. 90% relative humidity)
Permeation coefficient [g*mm/m <sup>2</sup> *d]	ISO 15106-3	17,3 (at 23°C a. 85% relative humidity) 51,0 (at 38°C a. 90% relative humidity)
Water diffusion air-layer-thickness [m]	-	sd-value =6,5 (at 23°C a. 85% relative humidity) sd-value =6,0 (at 38°C a. 90% relative humidity)
Methane transmission rate [cm <sup>3</sup> /m <sup>2</sup> *d*bar]	ISO 15105-1	91,5 (at 23°C a. 0% relative humidity)
Permeation coefficient [cm <sup>3</sup> *mm/m <sup>2</sup> *d*bar]	ISO 15105-1	279,1 (at 23°C a. 0% relative humidity)
Heat Conductivity [W/m*K]	-	0,245
Resistance to Root Penetration	EN 14416	Yes (approval)
Crack bridging abilities [mm] (thickness of the sample 2-3 mm)	DIN EN 1062-7 Procedure C.2	+23°C: > 15,5 -10°C : > 6,8 -20°C : > 6,4
Fire protection classification	DIN 4102-Part 1	B2 (normally inflammable )
Sound absorption	-	> 10 dB (A)
Surface resistance [Ohm]	DIN IEC 60167	≥ 1,0*10 <sup>11</sup>
Volume resistance [Ohm]	DIN IEC 60093	≥ 1,0*10 <sup>11</sup>
Storage conditions [°C]	DIN EN 12701	10 – 30 (in closed original drums, stored at dry and well ventilated place; beware of freezing)
Shelf life	-	12 months

### 6. Hints for the application:

The drying times depend naturally on the climate and environmental influences, e.g. ambient temperature, relative humidity of air and ventilation etc.

Therefore the times specified can only be used as guidelines. The exact times have to be determined by testing on site.

*Aromatic Polyurea Coating Systems are UV-stable but are not color stable. The cured coating system may exhibit discoloration when exposed to sunlight. This does not influence the physical properties of the material!*

**Quick Spray INDUSTRIAL – Hot Spray – 2 part coating – aromatic**

**7. Form of delivery:**

Product name	Unit	Ref.-No.
Quick Spray Industrial Comp. A+B	2 x 20 l (small drums)	On Request
Quick Spray Industrial Comp. A+B	2 x 200 l (drums)	On Request

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the users responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein is the only one which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and VIP GmbH makes no claim that these tests or any other tests, accurately represent all environments.

The laws of the purchaser regarding of the quality of our materials follows completely our general terms and conditions. For requirements, which exceed the scope of the above mentioned applications, contact our technical staff at any time under the following number +49-(0)89-89 55809 30.

Valid is only the actual version of this technical data sheet in each case.

© Copyright, VIP GmbH, QSP INDUSTRIAL

**Version: July 2012-007**