

## QuickSpray SUPREME HP – Hot Spray – 2 part coating – aromatic

POLYUREA

### 1. Characteristics:

**QuickSpray SUPREME HP** (aromatic) is a premium, fast set 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 developed for higher demands and is especially designed to protect and coat surfaces which are subjected highly severe conditions. 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, earth or on Geotextile fabric. The material must be applied utilizing high pressure, heated plural component spray proportioning equipment.

### 2. Features:

- **Significant improved chemical resistance to acids and bleaches**
- **Superior wear and tear resistance and a high abrasion resistance and barrier**
- **Extremely high values for tensile strength at high elongation properties**
- **Higher Hydrolysis resistance**
- 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.
- Resistant to most aggressive chemicals, solvents, acids and caustics
- Non sensitive to humidity
- High impact resistance, maintains flexibility
- Seamless and joint-less coating and lining, solid, high application thickness possible
- Allows accurate reproduction of surface detail
- 100% solids, VOC-free, no solvents
- Little or no odor
- Without the use of catalysts
- Excellent muffling of noises
- UV-, chlorine- and saltwater resistant
- Thermal stable
- Broad colour spectrum ( RAL)

### 3. Typical Uses:

- Industrial & manufacturing facilities, storage, load and high traffic areas
- Rain storage tanks, cleanwater tanks
- Pools indoor-outdoor, reservoirs, recreation areas, slip-hazard areas
- Biotope, fishponds, playgrounds,
- Filtration systems, oxygen-tanks, sedimentation-tanks
- Wastewater infrastructure, pipeline coating
- Cold-storage, loading docks, ramps,
- Laboratories, refrigerating warehousing
- Wear and tear parts, vibrating stoker, belt-conveyors

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| <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 to +50   |                       |              |
| Temperature range for application (substrate) [°C] | -10 to +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<br>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: 500 – 900   | Comp B: 500 – 900     |
| Density [g/cm <sup>3</sup> ] @ 20 °C | DIN EN ISO 2811-2 / ASTM D-1217  | Comp. A: 1,11 ± 0,02   | Comp. B: 1,00 ± 0,02  |
| Density [g/cm <sup>3</sup> ]         | EN ISO 1183 / ASTM D-792         | 0,97 ± 0,02  |                       |
| Tensile strength [MPa]               | ISO 37-2005 / ASTM D-638         | ≥ 32   |                       |
| Modul [MPa]                          | ISO 37-2005 / ASTM D-638         | 100% Elongation: ≥ 8   | 300% Elongation: ≥ 20 |
| Elongation at break [%]              | ISO 37-2005 / ASTM D-638         | ≥ 380  |                       |
| Hardness [Shore D]                   | ISO 868-2003 / ASTM D-2240       | 45 ± 5   |                       |
| Rebound resilience [%]               | ISO 4662 / ASTM                  | ≥ 38   |                       |
| Tear growth resistance[N/mm]         | ISO 34-1 method A                | ≥ 45   |                       |
| Volume abrasion [mm <sup>3</sup> ]   | DIN ISO 4649                     | ≤ 116  |                       |
| Taber Abrasion [mg]                  | ASTM D-4060                      | < 10 (Wheel CS17 / 1.000g / 1000 Cycles)<br>< 120 (Wheel H18 / 1.000g / 1000 Cycles) |                       |
| Peel off strength [N/mm]             | ISO 813 / ASTM                   | Concrete: ≥ 4  | Steel: ≥ 8            |
| Pull off strength [MPa]              | DIN EN ISO 4624 / ASTM D-4541    | Concrete: ≥ 1,5  | Steel: ≥ 6            |

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

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| 5. Physical Properties:  |               | Datas   |          |                           |
|--------------------------|---------------|---|----------|---------------------------|
| Max. Process temp. [°C]  | ASTM D-2485   | Wet: 60   | Dry: 150 | Peak temperature dry: 180 |
| Sound absorption at 2 mm | -             | > 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:

**IMPORTANT:**

Especially for the ISO-componente of *QuickSpray Supreme HP* it could be possible that eventually a generation of some agglomerations (“undercooled liquefied material”) in the mixture takes place during the cooling down of the material (ambient temperature is lower than +5°C) induced by transport or storage, but this process is reversible by conditioning respectively heating up the material at a temperature 20 - 30°C.

All the technical properties like the physical-mechanical, thermal and chemical features will be not influenced by the this phenomenon.

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!*

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**7. Form of delivery:**

| <b>Product name</b>                     | <b>Unit</b>                   | <b>Ref.-No.</b>   |
|---|-------------------------------|-------------------|
| <b>Quick Spray Supreme HP Comp. A+B</b> | <b>2 x 20 l (small drums)</b> | <b>On Request</b> |
| <b>Quick Spray Supreme HP Comp. A+B</b> | <b>2 x 200 l (drums)</b>      | <b>On Request</b> |

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