

LONGYAN HUISINS CHEMICAL INTERNATIONAL LIMITED

TDS (Technical Data Sheet)

P/N: Special polyurea coating

Name: Cable-stayed bridge steel strand wires special polyurea coating(PS900B)

Customer: N/A
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Customer Desc: N/A

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Version History

Rev.	Status	Revision Description	Author/Approved	Date
A	Approved	Initial Release	Sha LIU	2016-01-18

Product Name: Cable-stayed bridge steel strand wires special polyurea coating

Model No: PS900B

1.Description

PS900B Stay Cable Speciality Polyurea is a 100% solid-content aromatic polyurea elastomer. Specifically designed for the corrosion protection of steel cables in cable-stayed bridges, this material offers outstanding resistance to corrosion, abrasion, and long-term wear. It has been widely adopted in cable-stayed bridge projects across Europe, the United States, and China.

Formulated to provide long-term durability for bridge stay systems, PS900B effectively blocks moisture, chlorides, and other corrosive agents, significantly extending the service life of the structure. Its 100% solid content means zero VOC emissions during application, making it an environmentally friendly solution. The product also features rapid curing, which greatly enhances construction efficiency.

The resulting elastic coating offers high impact resistance and excellent aging stability, maintaining performance under extreme temperature fluctuations and strong UV exposure without blistering, cracking, or delamination. Moreover, it demonstrates strong adhesion to metal substrates, ensuring long-term integrity even under dynamic loads.

2.Features

- * Solvent free, 100% solid content, safe, environmentally friendly and odor free.
- * Rapid cure, can be sprayed forming on any bent, slope and vertical surfaces, no sagging.
- * Dense coating, seamless, with good flexibility and adhesive strength
- * Excellent impact resistance and abrasion resistance
- * Excellent corrosion resistance and chemical resistance to acids, alkali, salts etc.
- * Excellent anti-aging performance
- * Good shock absorbing performance
- * Excellent resistance to temperature variation
- * Fast cure, application site back to service quickly
- * Excellent durability to reduce maintenance cost of service life
- * Extend the service life of sprayed structure

3.Application Scopes

Anticorrosion waterproof protection of various steel wires of bridges.

4. Products information

Item	Part A	Part B
Appearance	Pale yellow liquid	Adjustable color
Specific gravity	1.12	1.05
Viscosity (cps) @25℃	800	650
Solid content (%)	100	100
Mix ratio (by volume)	1	1
Gel time (second) @25℃	4-6	
Tack-Free Time (second)	15-40	
Theoretical Coverage (dft)	1.08kg/m ² Film thickness 1mm	

Physical properties

Item	Test standard	Result
Hardness (Shore A)	ASTM D-2240	92
Elongation at Break (%)	ASTM D-412	480
Tensile strength (Mpa)	ASTM D-412	19
Tear strength (kN/m)	ASTM D-624	67
Impermeability(0.3Mpa/30min)	HG/T 3831-2006	impermeable
Wearable (750g/500r) /mg	HG/T 3831-2006	4.2
Adhesive strength (Mpa) concrete base	HG/T 3831-2006	3.2
Adhesive strength (Mpa) steel base	HG/T 3831-2006	11.5
Density (g/cm ³)	GB/T 6750-2007	1.02
Cathodic disbondment [1.5v,(65±5)°C, 48h]	HG/T 3831-2006	≤15mm

Chemical resistance

Acid resistance 10%H ₂ SO ₄ or 10%HCl,30d	No rust, no bubbles, no peel off
Alkali resistance 10% NaOH, 30d	No rust, no bubbles, no peel off
Salt resistance 30g/L,30d	No rust, no bubbles, no peel off
Salt spray resistance, 2000h	No rust, no bubbles, no peel off
Oil resistance 0# diesel, crude,30d	No rust, no bubbles, no peel off

(For reference: the above data is acquired based on GB / T9274-1988 test standard. Pay attention to the influence of ventilation, splash and spillage. Independent immersion testing is recommended if requires other specific data)

Application environment

Environment temperature	0°C-45°C
Product spray heating temperature	65°C-70°C
hose heating temperature	55°C-65°C
Relative humidity	≤90%
Dew point	≥3°C

Application guide

Recommend spray machine	GRACO H-XP3 Polyurea spray equipment
Spray gun	Fusion-air purge or mechanical purge
Static pressure	2300-2500psi
Dynamic pressure	2000-2200psi
Recommend film thickness	1000-3000μm
Recoating interval	≤6h

Curing time

Substrate temperature	Dry	Walking intensity	complete solidify
+10°C	30s	45min	7d
+20°C	23s	15min	6d
+30°C	17s	5min	5d

Note: the curing time varies with the environment condition especially the temperature and relative

humidity.

4.Application note

Agitate part B uniform prior to application, thoroughly mix the deposited pigments, or the product' quality will be affected.

spray polyurea within the proper time if the substrate surface is primed. For the application method and interval time of HUISINS polyurea speical primer please refer to HUISINS companies' other brochure.

5.**Package:** Two-component, A component 220KG / 200L barrel, B component 210KG / 200L barrel.

6.**Color:**Spray polyurea material standard color is gray, can also provide other colors according to user requirements

7.**Storage/Shelf Life:** Ideal storage condition is 5-35 °C in cool and dry place, avoid direct sunlight. / Nine months

8.Safety

Spraying polyurea materials should be equipped with basic labor protection measures during it was be used.It is recommended that operators be equipped with protective clothing, goggles, plastic gloves,masks and other protective equipment.

9. Disclaimer

All technical data provided in this datasheet are derived from controlled laboratory testing. Actual performance may vary depending on application-specific conditions. Users are advised to conduct their own tests to verify suitability for intended use. HUISINS guarantees product quality as specified but shall not be held liable for application-specific performance. We reserve the right to modify product information without prior notice.