

LONGYAN HUISINS CHEMICAL INTERNATIONAL LIMITED

TDS (Technical Data Sheet)

P/N: Special polyurea coating

Name: Aerospace industry special polyurea coating PS900A

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: Aerospace industry special anticorrosion polyurea coating

Model No: PS900A

1.Description

PS900A is a 100% solids aromatic polyurea elastomer specifically developed for the aerospace industry. With its exceptional performance, it has gained recognition and has been successfully applied in satellite and rocket components within China's aerospace sector, providing ideal protection.

It offers excellent resistance to abrasion, impact, chemicals, and extreme temperatures, and features rapid curing even on complex surfaces. This coating ensures lightweight yet highly reliable protection for critical high-end equipment.

2.Features

- Solvent-free, 100% solid content, safe, environmentally friendly and odorless.
- Rapid curing, can be sprayed on curved, sloped or vertical surfaces without sagging.
- Forms a dense, seamless coating with good flexibility.
- High adhesion strength to various substrates including steel, concrete, wood, and fiberglass.
- Excellent impact and abrasion resistance.
- Outstanding corrosion and chemical resistance to acids, alkalis, salts, and more.
- Superior waterproofing performance.
- Good shock-absorbing and vibration-damping properties.
- Maintains performance across a wide temperature range.
- Fast curing enables quick return to service.
- Exceptional durability reduces maintenance costs over service life.
- Extends the service life of treated structures.

3.Application Scopes

Protection of satellites, rockets and other devices in aerospace industry.

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	68
Impermeability(0.3Mpa/30min)	HG/T 3831-2006	impermeable

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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	11.3
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

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 special primer please refer to HUISINS companies' other brochure.
- ◆ Always apply HUISINS spray polyurea on a small area before large application to check the mix ratio, color and spray effect are correct. For detailed information of application please refer to the latest instruction sheet of *the application instructions of HUISINS spray polyurea series*.

Curing time

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

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

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 ℃ 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.