
LONGYAN HUISINS CHEMICAL INTERNATIONAL LIMITED
TDS (Technical Data Sheet)
P/N: Aliphatic Spray Polyurea Protective Coating

Name: Aliphatic Spray Polyurea Protective Coating PS700H

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: Aliphatic Spray Polyurea Protective Coating

Model No: PS700H

1. Product description

PS700H is a high-performance, two-component, 100% solids, aliphatic pure polyurea elastomer designed to deliver an exceptional combination of durability, flexibility, and long-term color stability. Formulated as a medium-hardness material, it offers superior resistance to impact, abrasion, and weathering, making it an ideal protective solution for demanding applications across various industries.

2. Features

- 1, Excellent UV and color stability.
- 2, High surface hardness, stain resistant, and easy to clean.
- 3, Highly cross-linked formulation providing superior stain and chemical resistance.
- 4, Outstanding abrasion and scratch resistance.
- 5, Exceptional temperature tolerance, making it suitable for automotive engine compartments and extreme climate conditions.

3. Application scope

Specifically designed for UV-resistant, impact-resistant, wear-resistant, and anti-corrosion applications. Examples include pickup truck beds, vehicle running boards, body armor panels, industrial doors, outdoor industrial valves, helmets, and other components requiring long-term protective armor while maintaining consistent appearance over extended periods.

Performance

Item	Part A	Part B
Appearance	Clear liquid	Adjustable color
Specific gravity	1.12	1.05
Solid content (%)	100	100
Mix ratio(by volume)	1	1
Gel time (second)@25°C	12	
Tack-Free Time(second)	55	
Theoretical coverage (dft)	1.07kg/m ² film thickness:1mm	

Physical properties

Item	Test standard	Result
Hardness (Shore A)	ASTM D-2240	95
Elongation at Break(%)	ASTM D-412	190
Tensile strength(Mpa)	ASTM D-412	16
Tear strength (kN/m)	ASTM D-624	90
Impermeability (0.3MPa/30min)	HG/T 3831-2006	Impermeable
Wear resistance(750g/500r)/mg	HG/T 3831-2006	25
Adhesive strength(Mpa) steel base	HG/T 3831-2006	10.5
cathodic disbonding resistance [1.5v,(65±5)°C , 48h]	HG/T 3831-2006	≤15mm
Resistance to QUV Aging (2000 h)	ASTM G154	>90% property retention; no significant change in appearance.

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 guide

Recommend spray machine	Special polyurea spraying equipment
Spray gun	Fusion-air purge or mechanical purge
Static pressure	2300-2500psi
Dynamic pressure	2000-2200psi
Heating temperature for product spraying	65°C-70°C
Pipeline heating temperature	55°C-65°C
Recommend film thickness	1000-3000μm
Recoating interval	≤6h

Application environment

Environment temperature	0°C-45°C
Relative humidity	≤90%
Dew point	≥3°C

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*.

Surface preparation

Metal surface: For optimal adhesion, abrasive blast cleaning to Sa2.5 (ISO 8501-1) is mandatory. All dust, grease, and other contaminants must be removed prior to application.

Electrophoretic coating surfaces can be directly sprayed without primer and sanding.

The surface preparation of other substrates please consult with HUISINS technical engineers.

5.Package

Two-component, A component 220KG / 200L barrel, B component 210KG / 200L barrel.

6.Color

Spray polyurea material standard color is black, 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 application.

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.