

## LONGYAN HUISINS CHEMICAL INTERNATIONAL LIMITED

## TDS (Technical Data Sheet)

**P/N:** Pure Polyurea Coating**Name:** Pure Polyurea Coating PS500A**Customer:** N/A**Customer P/N:** N/A**Customer Desc:** N/A**Drafted By:** Kit ZENG**Approved By:** Sha LIU

## Version History

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

## Product Name: Spray Polyurea Elastomer Anti-corrosion and Waterproof Coating

### Model No: PS500A-Pure

#### 1.Description

Pure Polyurea Coating PS500A is 100% solid content aromatic polyurea elastomer. It has excellent waterproof anticorrosion and abrasion resistance property which has been widely applied in the industrial and commercial filed for the anticorrosion waterproof protection.

#### 2.Features

- \*Solvent free, 100% solids, safe, environmentally friendly and odor free.
- \*Rapid cure, can be sprayed forming on any bent, slope and vertical surfaces without sagging.
- \*Dense coating, seamless, with good flexibility.
- \*High adhesive strength, fast bonding well on steel, concrete, wood, glass fibers and other substrates.
- \*Excellent impact resistance, abrasion resistance
- \*Excellent anticorrosion and chemical resistance to acids, alkali, salts etc.
- \*Excellent waterproof performance
- \*Good shock absorbing performance
- \*Excellent resistance to temperature variation
- \*Fast cure, application site back to service quickly
- \*Excellent durability to reduce maintenance cost for lifelong
- \*Extend the service life of sprayed structure

Application Scopes: Anticorrosion and waterproof protection of construction, chemicals, transportation, metallurgy, electric power, aerospace, marine, shipbuilding and other fields.

#### 3. Products information

Item	Part A	Part B
Appearance	Pale yellow liquid	Adjustable color
Specific gravity (g/m <sup>3</sup> )	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	
Surface dry time (second)	15-40	
Theoretical coverage (dft)	1.08kg/m <sup>2</sup> film thickness:1mm	

#### Physical properties

Item	Test standard	Result
Hardness (Shore A)	ASTM D-2240	92
Elongation rate (%)	ASTM D-412	460
Tensile strength (Mpa)	ASTM D-412	23
Tear strength (kN/m)	ASTM D-624	85
Impermeability (0.3Mpa/30min)	HG/T 3831-2006	Impermeable
Wear resistance (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
Impact resistance (kg.m)	GB/T23446-2009	1.0

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Density (g/cm <sup>3</sup> )	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 <sub>2</sub> SO <sub>4</sub> 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 pre-heat temperature	65°C-70°C
Pipe pre-heat 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

#### 5.Construction method

- 1) Spray equipment: Spray polyurea materials must be constructed using a dedicated (1:1) two-component spray equipment. Such as Graco's H-XP3 and so on.
- 2) Construction environment requirements: In order to achieve the best coating effect, the site requires ventilation, the ambient temperature should not be lower than 10 °C, the substrate temperature is higher than the dew point of 5 °C, and the air humidity is less than 80%.
- 3) Surface treatment of the substrate:
  - a. Leveling the cement surface: leveling the substrate with cement mortar.
  - b. Grinding of the substrate: the substrate requires fine pitting (to be flat), the surface of the substrate is polished, the scar and the floating slurry are removed, and the position of the negative angle of the yin angle is treated with emphasis, and the yin angle is straight and yang. The corner suggests eight-point angle processing.
  - c. Cleaning: The dirt on the surface of the substrate cleaned with oil-free, water-free compressed air will clean up the debris that affects the construction of polyurea.
- 4) Brush primer: brush the EP1304 or HP6303K concrete special primer, evenly brushed, no leakage coating, no defects.
- 5) Scrape putty: Apply putty to seal the trachoma and micropores on the concrete surface.
- 6) Spray polyurea: Spray with special polyurea spraying equipment and polyurea spray gun. Use cross method to repair leak spray and reduce

stress.

7) Spraying polyaspartic polyurea topcoat: Spraying with special polyurea spraying equipment and polyurea spray gun, spraying evenly without defects and leaking spray.

#### 6.Package

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

#### 7.Color

Spray polyurea material standard color is gray, can also provide other colors according to user requirements

#### 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.Storage/Shelf Life

Ideal storage condition is 5-35 ℃ in cool and dry place, avoid direct sunlight. / Nine months