

## LONGYAN HUISINS CHEMICAL INTERNATIONAL LIMITED

### TDS (Technical Data Sheet)

**P/N:** Solvent-free hand-scraped thick-film modified  
polyurea coating

**Customer:** N/A  
**Customer P/N:** N/A  
**Customer Desc:** N/A

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**Approved By:** Sha LIU

### Version History

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

**Product Name :** Solvent-free hand-scraped thick-film modified polyurea coating

**Model No:** ST800D

## 1. Description

ST800D is a two-component aromatic polyurea coating designed for heavy-duty corrosion and waterproofing protection. When used with a compatible primer, it provides excellent adhesion to concrete and steel substrates. Its unique chemical formulation offers outstanding resistance to a wide range of chemicals, while combining high mechanical strength with superior elasticity for enhanced abrasion and tensile performance. The high solid content ensures environmentally friendly application with low VOC emissions and improved safety. This coating can be applied in a thick layer with fast curing, preventing sagging on vertical surfaces. It requires no specialized spray equipment, offering cost-effective and flexible application in various field and shop conditions.

## 2. Features

- High solids, low VOC emissions
- Simple application method, can be applied by trowel; fast curing, suitable for vertical surfaces.
- Excellent physical properties including abrasion resistance, impact resistance, and scratch resistance
- Excellent waterproof performance
- Excellent chemical resistance, can withstand certain concentration of acid, alkali, salt, oil, organic solvents etc.
- Wide temperature requirements, can be used in environment of -50 °C ~ 120°C.

## Application Scope

Buildings, water conservancy, transportation, chemical industry, power energy, asphalt pavement crack repair on highways, cement pavement crack repair, airport runway crack repair, reservoir and hydroelectric dams, coastal embankment reinforcement and crack repair, etc.

## 3. Products information

| Item                 | Results                                |
|----------------------|----------------------------------------|
| Appearance           | Color is adjustable                    |
| Specific gravity     | 1.3                                    |
| Viscosity (cps )@20℃ | 800                                    |
| Solid content (%)    | ≥95                                    |
| Tack-Free Time (hrs) | 1-3                                    |
| Pot life (min)       | 20                                     |
| theoretical coverage | 0.7kg/m <sup>2</sup> (thickness 500um) |

#### 4. Physical properties

| Item                                  | Test standard  | Result |
|---------------------------------------|----------------|--------|
| Hardness (Shore A)                    | ASTM D-2240    | 70     |
| Elongation at Break (%)               | ASTM D-412     | 360    |
| Tensile strength (Mpa)                | ASTM D-412     | 12     |
| Tear strength (KN/m)                  | ASTM D-624     | 55     |
| Abrasion resistance (750G/500r) /mg   | HG/T 3831-2006 | 9      |
| Adhesive strength (Mpa) concrete base | HG/T 3831-2006 | 3      |
| Adhesive strength (Mpa) steel base    | HG/T 3831-2006 | 9      |
| Impact Resistance (kg.m)              | GB/T23446-2009 | 1.0    |
| Density (g/cm <sup>3</sup> )          | GB/T 6750-2007 | 1.2    |

#### 5. 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 30% 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 oil, 30d                          | No rust, no bubbles, no peel off |

(For reference: pay attention to the influence of ventilation, splash and spillage. Independent immersion testing is recommended if requiring detail data.)

#### 6. Application environment

|                         |                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------|
| Environment temperature | -5℃-35℃                                                                                                   |
| Relative humidity       | 35-85%                                                                                                    |
| Dew point               | When applying on the surface of metal materials, the temperature must be at least 3℃ above the dew point. |

#### 7. Application tips

Recommended dft: 500-1000um

Re-coating interval: 4-24h

Coating method: Trowel Application

#### Application note

It can be applied in the low temperature below 10℃. Put the coating drums into the air-conditioning room for over 24 hours when apply in the low temperature environment.

HUISINS recommends to agitate the coating uniform prior to application, pour accurate quantity of material to another vessel and seal well immediately. Don't pour the rest liquid to the original bucket.

The viscosity of product is set up in the factory, thinner shall not be random added by the applicators.

Call the manufacturer for instructions of special thinner if the viscosity changed as the application environment and humidity.

## 8.Curing time

| Substrate temperature | Surface dry time | Foot traffic | Solid dry |
|-----------------------|------------------|--------------|-----------|
| +10℃                  | 3h               | 24h          | 7d        |
| +20℃                  | 2h               | 12h          | 6d        |
| +30℃                  | 1h               | 8h           | 5d        |

## 9.Shelf Life

storage temperature: 5℃~32℃

shelf life: 12 months (sealed)

store in cool and ventilated place, avoid direct sunshine, keep away from heat

package: 5kg/bucket, 20kg/bucket, 25kg/bucket

## 10.Health and Safety

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety related data.

## 11. 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.