Advanced Materials Technical Datasheet



Uralane® 5772 A/B Polyurethane Adhesive

Product Description

Uralane® 5772 A/B polyurethane adhesive is a two-part system which cures at room temperature in 5-7 days or with heat for a shorter cure time. The polyurethane adhesive forms tough, heat-resistant bonds between various metal substrates and other materials especially where different thermal expansion coefficients prevail.

Features

- High shear strength
- High peel strength

Typical Properties*

| Property | Test Method | 5772 A | 5772 B | Mixed System |
|----------------------------|-------------|--------|------------|--------------|
| Appearance | Visual | Amber | Dark amber | Dark amber |
| Density, g/cm ³ | ASTM D792 | 1.05 | 1.25 | 1.20 |
| Viscosity at 25°C, cP | ASTM D2393 | 16,000 | Semi-Paste | Semi-Paste |

^{*}Typical properties are based on Huntsman's test methods. Copies are available upon request.

Processing

Mix Ratio

| Product | Parts by weight | | |
|--------------------------|-----------------|--|--|
| Uralane® 5772 A Resin | 100 | | |
| Uralane® 5772 B Hardener | 23 | | |

Mix both components thoroughly for several minutes to insure uniform blending. Material temperatures should be above 18°C when mixing. Avoid air entrapment while mixing.

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Processing Data

| Parameter | Value | | |
|-------------------------------------|-----------------------------------|--|--|
| Gel time, 100 g at 77°F (25°C), min | 15 - 20 | | |
| Typical cure cycles | Gel at 25°C + 16 hours at 66°C or | | |
| Typical cure cycles | 7 days at 23°C | | |

Typical Physical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

| Property | Test Method | Value |
|--|-------------|---|
| Tensile lap shear, Al-Al, psi (MPa) Unconditioned at -67°F (-55°C) at 77°F (25°C) at 250°F (121°C) After 30 days at 63°C /95% RH at -67°F (-55°C) at 250°F (121°C) | ASTM D1002 | 3,000 (20.7) 2,100 (14.5) 650 (4.5) 1,400 (9.6) 600 (4.1) |
| T-peel, aluminum, pli (N/mm) Unconditioned After 30 days at 63°C /95% RH, at 77°F (25°C) | ASTM D1876 | 50 (8.7) 50 (8.7) |
| Durometer hardness, Shore D Unconditioned After 30 days at 63°C /95% RH | ASTM D2240 | 50 50 |

Tested after Thermal Aging Exposure

| Property | Initial | 100 hours | 500 hours | 1,000 hours |
|---|---|---|---|---|
| Tensile lap shear, Al-Al, psi (MPa) at -67°F (-55°C) at 77°F (25°C) at 250°F (121°C) | 4,100 (28.3) 2,100 (14.5) 800 (5.5) | 4,200 (28.9) 2,600 (17.9) 900 (6.2) | 4,650 (32) 2,600 (17.9) 950 (6.5) | 4,000 (27.5) 2,300 (15.8) 800 (5.5) |
| T-peel, Aluminum, pli (N/mm) at 77°F (25°C) | 55 (9.6) | 130 (22.7) | 120 (21) | 100 (17.5) |

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Storage

Uralane® 5772 A/B should be stored in a dry place, in the original sealed container at temperatures between 2°C and 40°C (36°F and 104°F). Under these storage conditions, and when supplied under Huntsman standard certification, the product has a shelf-life of **6 months** from date of shipment (expiration date may differ based on customer specification). The product should not be exposed to direct sunlight.

These products are moisture sensitive and are packaged under a blanket of dry nitrogen. After opening a container, re-blanket with dry nitrogen and then tightly reseal.

Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

First Aid!

Refer to SDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

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