TECHNICAL DATA SHEET (TDS)

HSR-6280 Water-Based Polyurethane Spray Adhesive

Document	Technical Data Sheet for Water-Based Polyurethane Spray Adhesive
Product Model	HSR-6280
Version	V1.0
Effective Date	October 2026
Applicable Product	One-component / two-component Water-Based Polyurethane Spray Adhesive (WPU Spray Adhesive)

1. PRODUCT DESCRIPTION

HSR-6280 is an eco-friendly water-based polyurethane spray adhesive using water as the dispersion medium. It contains no benzene, formaldehyde, or halogenated hydrocarbons and has very low VOC content. The product provides moderate initial tack, a long open time, uniform spray atomization, and a soft adhesive film that does not become hard. It offers good aging resistance, hydrolysis resistance, and yellowing resistance. After bonding, it helps prevent bubbling and delamination, and is suitable for a wide range of soft and semi-rigid substrates. It is widely used in upholstered furniture, automotive interiors, footwear and luggage, acoustic materials, and decorative soft panels, and is positioned as an eco-friendly alternative to traditional solvent-based spray adhesives.

2. TYPICAL PHYSICAL AND TECHNICAL PROPERTIES (25°C)

The following values are typical averages and are not the sole basis for batch acceptance. Batch-specific values shall be subject to the COA.

Test Item	Technical Specification
Appearance	Milky white / semi-transparent uniform emulsion; no lumps or sediment
Solid Content	45% ± 2%
Viscosity (25°C)	80-200 cps
pH	7.0-9.0
Density	1.02-1.06 g/cm³
Surface Dry Time	5-10 min at 25°C
Open Bonding Time	15-40 min, depending on ambient temperature and humidity
Full Cure Time	24 h at 25°C
Adhesive Film Hardness	Soft type, Shore A 20-40
Service Temperature	-20°C to +80°C
Aging Resistance	Yellowing resistance, high-temperature aging resistance, hydrolysis resistance

3. SUITABLE SUBSTRATES

- Foams: sponge, PU foam, EVA, XPE, EPDM, acoustic foam.
- Fabrics: polyester fabric, knitted fabric, nonwoven fabric, suede fabric, and various home-textile fabrics.

- Leather materials: synthetic leather, PU leather, PVC leather, microfiber leather, and genuine leather.
- Panels: MDF, plywood, PVC-laminated panels, and decorative panels.
- Others: selected ABS parts, felt, sound-insulation felt, and filter materials.

4. MAIN APPLICATIONS

- Upholstered furniture: bonding sponge to fabric/leather in sofas, mattresses, soft wall panels, office chairs, hotel furnishings, and upholstered screens.
- Automotive / rail-transit interiors: seat wrapping, door panels, headliners, armrests, spare-wheel covers, and acoustic material lamination; low odor and low VOC for interior environments.
- Footwear and luggage: shoe linings, insole foam, upper lamination, bags, handbags, and multilayer leather goods; flexible and resistant to cracking.
- Decorative building materials: soft wrapping of door panels, cabinet vacuum-laminated surfaces, and decorative panel covering.
- Acoustic, filtration, and light-industry products: acoustic material lamination, speaker components, fabric toys, home-textile lamination, and cushioning/packaging materials.

5. SPRAY APPLICATION GUIDELINE

1. Substrate Preparation	Keep the bonding surface dry and free of dust, oil, and release agents.
2. Application Conditions	Ambient temperature 15-35°C and relative humidity 40%-75%. Avoid application in rainy, very humid, low-temperature, or condensation conditions.
3. Spray Parameters	Nozzle diameter 1.3-1.8 mm; spray pressure 0.3-0.5 MPa; spray distance 20-30 cm. Atomize evenly without missed areas or excessive buildup.
4. Coating Weight	Double-side spray is recommended. Typical coating weight for soft-upholstery applications: 120-180 g/m², adjustable according to substrate porosity.
5. Bonding Process	After spraying, allow the adhesive to air-dry until surface-dry and non-tacky, then laminate. Apply pressure by roller or by hand to ensure full contact.
6. Curing	Fast initial positioning. Best bonding strength is reached after 24 hours at room temperature. For two-component systems, add curing agent at the specified ratio to improve heat, water, and weather resistance.

6. PRODUCT ADVANTAGES

- Water-based and eco-friendly, with no irritating odor and low VOC; suitable for furniture and automotive-interior environmental requirements.
- Excellent sprayability with fine atomization; helps reduce nozzle blockage and sagging and improves application efficiency.
- Extremely soft adhesive film that does not harden or become brittle and withstands repeated flexing.
- High and stable bonding strength with good resistance to bubbling, delamination, and aging.
- Water-based cleanup; equipment can be cleaned with water for safer and easier operation.

7. STORAGE AND PACKAGING

Packaging	20 kg/drum, 50 kg/drum, 1000 kg/IBC tote; customization available
Storage	Keep sealed in a cool, dry indoor area at 5-35°C. Avoid direct sunlight, freezing, and high-temperature heating.
Shelf Life	6 months in unopened original packaging under standard 25°C conditions. Use as soon as possible after opening.

8. PRECAUTIONS

- Do not mix with strong acids, strong alkalis, or organic solvents.
- If slight thickening occurs in low-temperature winter conditions, stir gently until uniform. Do not add water arbitrarily; dilution, if required, should follow process guidance.
- In high-humidity or low-temperature environments, extend the flash-off time appropriately to prevent internal moisture retention, whitening, or reduced bonding performance.
- Maintain good ventilation during application and avoid prolonged high-concentration exposure in confined spaces.

9. DISCLAIMER

The parameters and information in this Technical Data Sheet are typical reference values intended for product selection, process guidance, and internal evaluation. Because application environment, substrate differences, and process adjustments are beyond the company's control, the company assumes no responsibility for application results arising from such factors. Customers should perform small-scale trials and confirm suitability before mass production.

Manufacturer / Supplier	Shenzhen Hongshengrong Technology Co., Ltd.
Address	Room 202, Building 1, No. 163 Zhenming Road, Gongming Subdistrict, Guangming District, Shenzhen, China
Contact Tel.	0755-23249880