HOT MELT ADHESIVE · SDS PER GHS

Thermoplastic Polyurethane Powder

UT-1290 · UT-1007

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product name	Thermoplastic Polyurethane Powder (UT-1290 / UT-1007)
Product type	Hot melt adhesive, powder
Recommended use	Industrial adhesive for bonding / lamination; not for consumer or medical use
Manufacturer	Shanghai United Industry Co., Ltd Building 2, No. 315, Weichang Road, Jinshan District, Shanghai 201514, China
Contact	info@uniteindus.com

2. HAZARDS IDENTIFICATION

The product, as supplied, is a solid thermoplastic adhesive and is **not classified as hazardous** under GHS (Globally Harmonized System) or applicable transport regulations.

Potential hazards during processing:

- Molten adhesive (typically 120–235 °C) may cause **thermal burns** on skin and eye contact.
- Overheating (>250 °C) may generate fumes/vapours that can irritate eyes and respiratory tract.
- Dust from powder grades may form explosible dust/air mixtures at high concentrations; avoid ignition sources.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterisation	Mixture: Thermoplastic polyurethane (TPU), polyester-based (>99%), with minor processing additives
CAS No. (main polymer)	Not applicable — polyurethane elastomer blend
Hazardous ingredients	None classified as hazardous above reportable limits. Exact percentages are withheld as trade secret.

4. FIRST AID MEASURES

- **Skin contact:** For molten adhesive, cool immediately with plenty of cold water. Do **not** peel solidified adhesive off the skin. Seek medical attention for burns.
- **Eye contact:** Rinse thoroughly with water for at least 15 minutes; seek medical advice.
- **Inhalation (fumes):** Move to fresh air. Seek medical attention if irritation persists.
- **Ingestion:** Not expected to be harmful. Rinse mouth; seek medical advice if unwell.

5. FIRE FIGHTING MEASURES

- **Suitable extinguishing media:** CO_2, dry chemical powder, water spray or foam.
- **Unsuitable media:** Water jet (spreads molten material).
- **Hazards:** Burning produces CO, CO_2 and organic decomposition products.

- **Protective equipment:** Self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

- Solid powder spills: sweep or collect mechanically; reuse if uncontaminated.
- Molten spill: allow to cool and solidify before removal; do not touch while hot.
- Avoid dust generation (powder grades); prevent entry into drains and watercourses.

7. HANDLING AND STORAGE

- Melt only in equipment with accurate temperature control; do not exceed the supplier's recommended processing temperature.
- Keep molten adhesive away from water — foaming/sputtering risk.
- Store in original sealed packaging, dry and ventilated, below 30 °C, away from sunlight and ignition sources.
- Observe shelf life indicated on the Technical Data Sheet (None months).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Engineering controls:** Local exhaust ventilation at the melt zone / applicator.
- **Respiratory protection:** Not required under normal use; use fume extraction when overheating occurs.
- **Hand protection:** Heat-resistant gloves when handling molten adhesive or hot equipment.
- **Eye protection:** Safety glasses with side shields.
- **Hygiene:** Wash hands after handling; no eating or drinking at the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off-white free-flowing powder
Odour	Slight, characteristic polymer odour
Melting / softening range	100–125 °C (UT-1007); 105–130 °C (UT-1290)
Density	1.2 g/cm³
Solubility in water	Insoluble
Solubility in solvents	Insoluble at room temperature; swellable/dispersible when molten
Flash point	Not applicable — not volatile; decomposition only at high temperature
Auto-ignition temperature	> 300 °C (estimated)

10. STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage and processing conditions.
- **Conditions to avoid:** Temperatures above 250 °C; contact with strong oxidisers.
- **Hazardous decomposition products:** CO, CO_2, low-molecular hydrocarbons, acetic acid traces (EVA grades) on overheating.
- **Incompatible materials:** Strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected from the solid product. Fumes from severely overheated adhesive may cause eye and respiratory irritation. Sensitisation: no data indicating skin or respiratory sensitisation.

12. ECOLOGICAL INFORMATION

The product is a solid polymer, insoluble in water and not readily biodegradable. No known significant environmental hazard. Prevent uncontrolled release into soil and waterways.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, regional and national regulations. Clean, uncontaminated cured adhesive may be recycled where facilities exist. Contaminated packaging: dispose as non-hazardous industrial waste.

14. TRANSPORT INFORMATION

UN number	Not applicable
Proper shipping name	Not a dangerous good
Transport hazard class	None
Packing group	None
Regulations	Not regulated under IMDG, IATA-DGR, ADR/RID

15. REGULATORY INFORMATION

Not classified as hazardous according to GHS and applicable national chemical inventories. Ensure compliance with local workplace safety and environmental regulations when processing at elevated temperatures.

16. OTHER INFORMATION

Revision date: 2026-11-04 | Sections revised: 1, 16 (contact details).

This Safety Data Sheet is compiled to the best of our current knowledge and is intended to describe the product in terms of safety requirements. It does not constitute a warranty of product properties. Users are responsible for verifying suitability and compliance in their specific application.

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