TECHNICAL DATA SHEET

HS-2280

1500°C High-Temperature Inorganic Adhesive

Two-part, heat-cured inorganic adhesive for bonding, sealing and potting industrial parts operating at temperatures up to 1500°C.

Product data

Property	Supplied specification
Components / appearance	Part A: blue-grey viscous liquid Part B: light brown-yellow powder
Cured appearance	Light brown hard solid
Continuous service temperature	-40 to +1500 °C
Short-term peak temperature	Up to +1800 °C; validate for the application
Mix ratio by weight, A:B	1:2 label ratio; 1:1.5-2.5 for electric-heating encapsulation
Mixed material use period	Use within 4 hours; discard lumpy or hardened material
Tensile shear strength	≥3.0 MPa after 100 °C for 2 hours
Pressure resistance*	≥5.0 MPa after 100 °C for 2 hours
Packaging	600 g/set (A: 200 g + B: 400 g)
Storage / shelf life	At or below 28 °C; RH at or below 70% 12 months in sealed, unopened original packaging

*Pressure resistance is the term used in the supplied specification; test method and specimen geometry are not specified. Strength data use the stated 100°C / 2-hour test cure. Validate performance with the production cure and actual parts.

Application areas

Refractory and kiln component bonding or repair; high-temperature ceramic assemblies; ceramic lamp joints; temperature measurement component fixing; selected grooves and joints, subject to substrate and joint validation.

1. Surface preparation and mixing

Clean and dry surfaces; remove oil, dust and contaminants. Stir or shake Part B before mixing. For electric-heating encapsulation, mix thoroughly at A:B = 1:1.5-2.5 by weight; the confirmed label ratio is 1:2. Prepare only the quantity needed and use within 4 hours. Do not continue using material that has formed lumps or hardened.

2. Recommended staged cure

Stage	Temperature and hold time
Initial rest after application	Room temperature for 0.5 hour
First heating stage	40 °C for 1.5 hours
Second heating stage	65 °C for 1 hour
Final heating stage	100 °C for 2 hours
Cooling	Allow to cool naturally with the oven

Heat and cool with the oven. Staged curing helps reduce bubbles and cracking. Room-temperature curing at 20°C takes approximately 5-7 days and gives lower strength; it is not recommended. Fully cure before machining, assembly or testing.

3. Limitations, cleaning and moisture control

The 4-hour use period starts after mixing; the 0.5-hour room-temperature rest in the staged cure occurs after application. Confirm substrate, joint, temperature and service conditions with trials before production.

Wipe uncured excess with a clean water-dampened cloth. For repair, open and clean defects, refill and repeat the cure; verify the repaired part. Cured adhesive is hard and brittle. Removal methods require evaluation for the substrate and assembly.

The cured material absorbs moisture, which can reduce electrical insulation. Protect cured assemblies from humidity and store in sealed moisture-protective bags. The source reports insulation resistance above 500 MOhm after heating and cooling to room temperature; test voltage, method and conditioning are not specified. Verify electrical performance in the actual environment.

4. Storage and handling

Store at or below 28°C and RH at or below 70% in a cool, dry, ventilated area, away from sunlight, heat and corrosive gases. Shelf life: 12 months unopened under specified conditions. Request the current SDS for handling and transport guidance.

Prepared from the supplied HS-2280 specification. Application examples are suggested uses, not independently verified case studies. No certification or guaranteed system performance is established by this TDS. Validate suitability before production.