

## High Temperature Adhesive

### ◆ Product Description

High-Temperature Adhesive is a category of specialty adhesives developed specifically for extreme high-temperature environments. Its core advantage lies in maintaining stable adhesion strength, structural integrity, and chemical stability within a wide temperature range of  $-40^{\circ}\text{C}$  to  $1800^{\circ}\text{C}$  (varies by formula), effectively addressing the core problems of traditional adhesives such as adhesive failure, carbonization, aging, and functional degradation under high temperatures.



- Wide-Range Temperature Adaptability & Resistance to Extreme Environments
- High-Temperature Adhesion: Secure, Long-Lasting & Stable Strength
- Excellent Physical & Chemical Properties & Strong Environmental Adaptability
- Integrated Multi-Functions & Precision Adaptation to Scenarios
- Environmentally Friendly, Safe & Compliant: Reliable & Trustworthy for Use

### ◆ Product Structure

- High-Temperature Adhesives are classified into organic types (based on matrices such as silicone and modified epoxy, combined with fillers and auxiliary additives) and inorganic types (composed of inorganic compounds such as phosphates and silicates, some containing modified curing agents). Both types guarantee temperature resistance through core component selection and formula design, with some optimized for performance through special structural modifications, enabling adaptation to various high-temperature scenarios.

### ◆ Typical Product Data and Physical Properties

Temperature Resistance: Long-Term Temperature Resistance ( $^{\circ}\text{C}$ )  $-40\sim 250$   
 Short-Term Peak Temperature Resistance ( $^{\circ}\text{C}/\text{min}$ ) 300/5  
 Adhesive Properties: Shear Adhesive Strength (MPa, Room Temperature)  $\geq 2.5$   
 Shear Adhesive Strength (MPa,  $150^{\circ}\text{C}$ )  $\geq 2.0$   
 Tensile Adhesive Strength (MPa)  $\geq 1.8$   
 Mechanical Properties: tensile Strength (MPa)  $\geq 30$   
 Elongation at Break (%)  $\geq 50$   
 Hardness (Shore D) 50~70  
 Functional Properties: Thermal Conductivity (W/(m·K), Thermal Conductive Type)  $\geq 1.2$   
 Breakdown Voltage (kV/mm, Insulating Type)  $\geq 15$   
 Flame Retardant Rating UL94 V0

Environmental Performance:

Compliance with Hazardous Substance Requirements Compliant with RoHS 2.0/REACH

### Availability:

| Item#          | Packing        | Weight |
|----------------|----------------|--------|
| 1.2.13.04.0070 | 60 rolls/strip | 0.53kg |

### ◆ Typical Applications

- The application scenarios of High-Temperature Adhesives are extensive, covering electronics and new energy (such as component fixation, lithium battery bonding), industrial equipment and pipelines (such as kiln sealing, pipeline joint sealing), high-end manufacturing and special fields (such as aerospace component bonding, medical device fixation), and daily commercial applications (such as household appliance component fixation, outdoor signage installation). It primarily meets the bonding, sealing, and protection needs in high-temperature environments across various fields.

### ◆ Technical and Application Assistance

HORB provides a technical hotline to answer your technical and application related questions.

### ◆ Note:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. HORB data is for reference purposes only.

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