Lead Free Silicone Rubber To Metal Adhesive Chemical One Coat Bonding Agent

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Thinkbond
- Model Number: xxxxx
- Minimum Order Quantity: None
- Price: 1-99 usd
- Packaging Details: 25L, 200L
- Delivery Time: 5-15 working days
- Payment Terms: T/T
- Supply Ability: 20T/week

Product Specification

- Classification: Chemical
- Name: Bonding Agent/ Adhesive
- Brand Name: Thinkbond
- Odor: Solvent
- Place Of Origin: China
- Application: Bonging For Rubber And Metals
- Highlight: **lead free silicone rubber adhesive**, **metal bonding adhesive one coat**, **chemical resistant rubber to metal adhesive**

Product Description

ThinkBond® 24S: The Premier PU to Metal Adhesive for High-Strength Vulcanization Bonding

When industrial applications demand an unparalleled bond between polyurethane (PU) and metal substrates, the choice of adhesive is critical. Introducing ThinkBond® 24S, a high-performance, heat-reactive one-coat adhesive engineered specifically for the vulcanization bonding of elastomers—including PU—to metals such as steel and aluminum. While primarily known for its versatility with elastomers like NR, NBR, CR, and EPDM, ThinkBond® 24S serves as the definitive PU to metal adhesive solution for manufacturers seeking reliability, durability, and environmental compliance.

Product Description

ThinkBond® 24S is a solvent-based, heat-reactive adhesive designed to create a resilient chemical bond between a wide range of elastomers and rigid substrates during the vulcanization process. Whether you are bonding polyurethane to steel or attaching rubber to polyamide textiles, this adhesive ensures a cohesive bond that resists mechanical stress and environmental degradation. It is formulated to function effectively as a one-coat system or in conjunction with a primer for applications exposed to extreme environments.

Key Features & Benefits

Superior Versatility: While excelling as a PU to metal adhesive, it also effectively bonds NR, SBR, NBR, CR, HNBR, ECO, and EPDM to steel, aluminum, and various textiles (cotton, aramid, polyester).

High Temperature Resistance: Designed to withstand the rigorous heat of the vulcanization process without pre-reaction, ensuring consistent bond integrity.

Eco-Conscious Formulation: Contains no reportable levels of lead or other heavy metals, making it a safer choice for industrial environments.

Application Flexibility: Supports brush, spray, and dip application methods, adapting to complex part geometries and varying production scales.

Optimal Film Thickness: Achieves a dry film thickness (DFT) of 15-25 microns in a one-coat application, providing a robust layer that absorbs stress and prevents corrosion at the interface.

Typical Physical Properties

Property	Specification
Appearance	Yellowish to brown liquid
Solid Content	22% - 26%
Density (25)	0.96 - 1.04 g/ml
Viscosity (Brookfield)	150 - 600 cps
Diluent	Xylene / Toluene
Shelf Life	1 year (sealed, 21-27)

Application Guide

To achieve maximum bond strength with this PU to metal adhesive, proper surface preparation is essential. Metal surfaces must be thoroughly cleaned and sandblasted to achieve a surface roughness >15 microns. Aluminum substrates require specific abrasion with alumina. The adhesive must be stirred thoroughly before use. For spray applications, dilution with xylene or toluene (ratio 100:20) is recommended to prevent dry spray. The applied film must be dried for 30-60 minutes at room temperature, or oven-dried at temperatures not exceeding 110 to avoid pre-curing.

Frequently Asked Questions (FAQ)

Q: Can ThinkBond® 24S be used specifically for bonding polyurethane to metal?

A: Yes. ThinkBond® 24S is highly effective as a PU to metal adhesive. It is formulated to bond various elastomers, including polyurethane (PU), with steel, aluminum, and other metal substrates during the vulcanization process.

Q: What is the recommended film thickness for one-coat applications?

A: For one-coat applications, we recommend a dry film thickness (DFT) of 15 to 25 microns. If used over a primer, a thickness of 12 to 20 microns is sufficient.

Q: Is this adhesive suitable for use with textiles?

A: Absolutely. In addition to being a reliable metal adhesive, ThinkBond® 24S bonds effectively with textile fibers such as cotton, polyamide, polyester, and aramid.

Q: How should the adhesive be stored?

A: Store the product in a cool, dry, well-ventilated area, sealed tightly. Keep away from heat sources, open flames, and direct sunlight. Storage temperatures below 10 may affect shelf life.

Q: Is ThinkBond® 24S environmentally safe?

A: Yes, it is formulated without heavy metals such as lead. However, standard safety precautions should be taken, including wearing a mask and ensuring proper ventilation to avoid prolonged inhalation of solvents.

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