

Rubber to Metal Bonding Adhesive | ThinkBond® 11HS for Engineering Plastics, NBR, ACM & PU

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: Bonding For Rubber And Metals
- Highlight: **Rubber to metal adhesive for engineering plastics, NBR bonding adhesive with high strength, ACM and PU rubber metal adhesive**

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Product Description

ThinkBond® 11HS: Versatile Rubber to Metal Bonding Adhesive for Engineering Plastics & Metals

When manufacturing demands a reliable bonding solution across diverse substrates, ThinkBond® 11HS delivers exceptional versatility. This vulcanizing surface treatment primer serves as a high-performance rubber to metal bonding adhesive, capable of adhering most elastomers to metals, fibers, and polar engineering plastics. Whether used as a two-coat primer system or as a one-coat adhesive for select elastomers, ThinkBond® 11HS provides manufacturers with the flexibility and bond strength required for demanding industrial applications.

Product Description

ThinkBond® 11HS is a vulcanizing surface treatment primer designed for use with ThinkBond covercoats to bond most elastomers to a wide range of substrates. As a premier rubber to metal bonding adhesive, it excels on metals including carbon steel, cast iron, stainless steel, aluminum, copper, nickel, and zinc. Beyond metals, it effectively bonds to fibers such as cotton, nylon, polyester, and glass fiber, as well as polar engineering plastics including PPO, PPS, PES, PEEK, PET, and PBT. When application requirements call for simplicity, ThinkBond® 11HS can be used as a one-coat adhesive for bonding NBR, acrylate ACM, and solid polyurethane to substrates. This versatility, combined with its heavy-metal-free formulation, makes it a preferred choice for manufacturers seeking both performance and environmental responsibility.



Key Features & Benefits

- Exceptional Substrate Versatility:** This rubber to metal bonding adhesive effectively bonds to carbon steel, stainless steel, aluminum, copper, nickel, zinc, and various engineering plastics, reducing the need for multiple adhesive products.
- Engineered Plastic Compatibility:** Bonds reliably to polar engineering plastics including PPO, PPS, PES, PEEK, PET, and PBT —materials traditionally challenging for rubber adhesives.
- One-Coat or Primer Flexibility:** Functions as a primer in two-coat systems or as a standalone one-coat adhesive for NBR, ACM, and solid PU, streamlining production processes.
- Robust Bond Strength:** Formulated to create durable vulcanized bonds that withstand mechanical stress and environmental exposure.
- Eco-Conscious Formulation:** Contains no reportable levels of lead or other heavy metals, supporting safer industrial practices.
- Extended Storage Stability:** Low-temperature storage can increase shelf life, providing inventory flexibility.

Typical Physical Properties

Property	Specification
Appearance	Gray liquid
Solid Content	25% – 30%
Density (25)	0.93 – 1.00 g/ml
Viscosity (Brookfield)	80 – 300 cps
Diluent	MIBK / MEK
Shelf Life	1 year (sealed, 21-27)

Application Guidelines

To achieve optimal results with this rubber to metal bonding adhesive, proper surface preparation is essential. Metal surfaces must be thoroughly cleaned and sandblasted to achieve a surface roughness greater than 15 microns. For aluminum substrates, alumina abrasive is recommended for optimal cleaning.

ThinkBond® 11HS must be thoroughly stirred before application. Dilution with MIBK or MEK should be performed slowly with agitation to prevent phase separation. Application methods vary based on requirements:

Brush: Use full strength or dilute 20%–50% with MIBK

Spray: Recommended dilution ratio of 50%–100%

Dip: Recommended dilution ratio of 50%–100%

For film thickness, a dry film thickness of 5–10 microns is recommended when used as a primer, while one-coat applications should target 12–20 microns. After application, the wet film must be dried completely for 30–60 minutes at room temperature, with oven drying not exceeding 110°C to prevent pre-reaction.



Technical support



Making adjustment in the field



Shanghai Lorechem has a professional technical service team, whose members are specialized in polymer materials engineering. They have a wealth of field testing.

Testing in the field



Frequently Asked Questions (FAQ)

Q: What substrates can ThinkBond® 11HS bond to?

A: As a versatile rubber to metal bonding adhesive, it bonds to carbon steel, stainless steel, aluminum, copper, nickel, zinc, various fibers (cotton, nylon, polyester, glass fiber), and polar engineering plastics such as PEEK, PPS, PES, PBT, PET, and PPO.

Q: Can ThinkBond® 11HS be used as a one-coat adhesive?

A: Yes. It can be used as a one-coat adhesive for bonding NBR, acrylate ACM, and solid polyurethane to substrates, simplifying the bonding process for these specific elastomers.

Q: What is the recommended dry film thickness?

A: When used as a primer, 5–10 microns is recommended. For one-coat applications, a dry film thickness of 12–20 microns is suggested for optimal bond strength.

Q: How should the adhesive be diluted?

A: Use MIBK or MEK as diluents. Add slowly with agitation to avoid phase separation. Dilution ratios vary by application method, ranging from 20% to 100%.

Q: What is the shelf life of ThinkBond® 11HS?

A: The closed-can shelf life is one year at 21–27°C. Storage at lower temperatures can extend shelf life.

Q: Is this adhesive environmentally safe?

A: ThinkBond® 11HS is formulated without reportable levels of lead or other heavy metals. However, standard safety precautions should be followed, including proper ventilation and the use of personal protective equipment.



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