



THIXON™ P-7-5H Solvent-Based Adhesive

DESCRIPTION

THIXON P-7-5H is a solvent-based primer for pre-treated metal which can be used with THIXON 547-EF for EPDM bonding in coil-coating applications.

THIXON P-7-5H can also be used as a one-coat adhesive for bonding NBR elastomers.

Product Typical Properties

THIXON P-7-5H	
Appearance	Grey, liquid
Dry solid content (Non-volatile solids by weight)	25-29%
Viscosity, Brookfield (LV #2 spindle at 30 rpm)	300-500 mPa.s (cP)
Density (20°C)	1.01 g/cm ³
Specific gravity (20°C)	0.99-1.03
Weight per gallon	8.43 lbs
Volume solids	18.2% (calculated)
VOC content per gallon	6.0 lbs (calculated)
Dry film density	1.50 g/cm ³ (calculated)
Flash point (Seta)	+27°C/81°F
These properties are typical and are not to be used for specifications purposes.	

Main Features

Composition : THIXON P-7-5H consists of reactive polymers and pigments in methyl isobutyl ketone (MIBK) and cyclohexanone. It is formulated without reportable levels of lead or other toxic heavy metals, chlorinated solvents and ozone-depleting chemicals.

Elastomers (one-coat) : NBR. When used in conjunction with THIXON 547-EF, the following elastomers can be bonded : NR, NBR, SBR, EPDM, etc.

Materials : THIXON P-7-5H adheres to pre-treated galvanized steel, aluminum, pre-treated and abraded stainless steel. It adheres best to abraded stainless steel, but also adheres to cold rolled steel for mild forming applications.

Molding and Curing : THIXON P-7-5H can be used with all common molding and curing methods. Cure temperatures between 120°C and 240°C (250°F and 465°F) are recommended.

Environmental Resistance : Rubber-to-metal bonding systems using THIXON P-7-5H display resistance to severe environmental exposures such as humidity and corrosion. Properly prepared bonds will also resist heat, salt fog, oil, and water exposures.

DIRECTIONS FOR USE

Preliminary Surface Preparation

Properly preparing the metal surface is essential to obtaining consistent, high quality bonds.

A mechanical or chemical pre-treatment should follow degreasing. Common pre-treatments are grit blasting and phosphating. Further details are provided in our "Substrates Preparation Guide", please contact your usual Rohm and Haas commercial representative should you need a copy of this guide.

Mixing and Diluting

Diluents : THIXON P-7-5H is formulated to be used without dilution. If dilution is needed during an extended run, use a blend of 0.6 part MIBK and 0.4 part cyclohexanone.

First, thoroughly mix THIXON P-7-5H with a shear blade (Cowles disk) type agitator. If diluting, slowly add the diluent to the adhesive while mixing constantly.

Continue to mix or recirculate while dispensing THIXON P-7-5H from its application reservoir to keep the dispersed solids from settling to the bottom of the container. This will assure that a homogeneous mixture of the adhesive contents is applied.

Applying the Adhesive

THIXON P-7-5H is typically applied by reverse roll coating on a coil coating line. Set-up depends on customer's line, equipment and needs. Assistance with selecting line parameters to optimize both primer and adhesive performance can be acquired by working with your usual Rohm and Haas commercial representative.

Drying Time

Unlike other rubber-to-metal primers, THIXON P-7-5H is typically applied using reverse roll coating methods and then dried rapidly using an oven set at extreme temperatures.

Peak metal temperatures :

- 225-235°C (437°F-455°F) when used with a cover-coat.
- 200-210°C (392°F-410°F) when used as a one-coat adhesive.

Suggested Dry Film Thickness

Apply THIXON P-7-5H at a dry film thickness of 2.5 to 5 microns (0.1 to 0.2 mil.).

Test

Preferably a test strip should be run upon start-up of run and all adjustments made before beginning the run. Additional test panels can be obtained during the course of an extended run to check the maintenance of quality.

- T-bends : 0.5 maximum.
- MEK double rubs : less than 4.

If the T-bend is higher than indicated, check baking temperatures. If not in the indicated PMT range, then correct as necessary. If the PMT and film thickness are correct and the T-bend is out of range, do not coat further as the T-bend indicates an improper metal pretreatment. Check pre-treatment solution concentration, temperatures, etc. and correct as necessary.

Dry Film Stability

THIXON P-7-5H has excellent dry film stability. Inserts coated with THIXON P-7-5H can be stored for several weeks, if protected from contamination.

Theoretical Coverage

Applied at a dry film thickness of 5 microns (0.2 mil.), THIXON P-7-5H will cover approximately 37 m²/kg (1810 square feet/gallon).

Pre-bake Resistance

Inserts coated with both THIXON P-7-5H and

THIXON 547-EF have displayed pre-bake for up to 5 minutes at 160°C (320°F) without adversely affecting the bond quality depending on the rubber compounds and adhesive selection. Testing must always be done to assure required performance. Dried films of THIXON P-7-5H and THIXON 547-EF show no tendency to sweep during transfer or injection molding.

Cleaning

Cleaning should be done using recommended dilution solvents. Further details are given in our "General Guide to Use", please contact your usual Rohm and Haas commercial representative should you need a copy of this guide.

Storage and Handling

Keep containers tightly closed. Store them in a cool, dry, well-ventilated area away from heat, direct sunlight and sources of ignition. Containers should be supported and grounded before opening, dispensing, mixing, pouring or emptying.

Shelf Life

THIXON P-7-5H has a shelf life of at least 18 months if stored unopened at temperatures below 25°C/77°F. If the material is kept beyond its recommended shelf life, a quality control evaluation should be performed prior to use. This check should include bond testing as well as evaluation of typical physical properties.

Safety Information

Material Safety Data Sheets (MSDS) are available for all Rohm and Haas products. These sheets contain important information that you may need to protect your employees and customers against any known health and safety hazards associated with our products. We recommend that you obtain copies of our MSDS from your local Rohm and Haas technical representative before using our products in your facilities. We also suggest that you contact your suppliers of other materials recommended for use with our products for appropriate health and safety precautions before using them.

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