



MEGUM™ 500 Solvent-Based Adhesive

DESCRIPTION

MEGUM 500 is a general purpose cover-coat adhesive for bonding rubber compounds to metals and other rigid substrates during vulcanization.

The product is especially suitable for bonding both difficult to bond compounds and soft compounds.

MEGUM 500 is typically used in conjunction with a MEGUM or THIXON™ primer.

Product Typical Properties

MEGUM 500	
Appearance	Black, liquid
Dry solid content (Non-volatile solids by weight)	20-23%
Viscosity, Brookfield (LV #2 spindle at 30 rpm)	250-600 mPa.s (cP)
Density (20°C)	0.94-0.98 g/cm ³
Specific gravity (20°C)	0.96 g/cm ³
Weight per gallon	8.05 lbs
Volume solids	14.3% (calculated)
VOC content per gallon	6.3 lbs (calculated)
Dry film density	1.45 g/cm ³ (calculated)
Flash point (Seta)	+26°C/79°F
These properties are typical and are not to be used for specifications purposes.	

Main Features

Composition : MEGUM 500 consists of reactive polymers and pigments in xylene. It is formulated without reportable levels of lead or other toxic heavy metals.

Elastomers : NR, SBR, IR, BR, EPDM, IIR, etc.

Materials : MEGUM or THIXON adhesive primers are used to adhere to metals such as hot and cold rolled steel, stainless steel, aluminium and brass prior to applying MEGUM 500. These same primers can be used to adhere to thermoplastics such as polyamides and polyesters.

Molding and Curing : MEGUM 500 can be used with all common molding and curing methods. Cure temperatures between 130°C and 190°C (265°F and 375°F) are recommended.

Environmental Resistance : MEGUM 500 used in combination with a primer yields bonds that are resistant to high temperatures, boiling water, salt fog and hydraulic fluids.

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 : Use aromatic solvents such as toluene and/or xylene as diluents.

First, thoroughly mix MEGUM 500 with a propeller-type agitator. If diluting, slowly add the diluent to the adhesive while mixing constantly.

Continue to mix MEGUM 500 while spraying or dipping to keep the dispersed solids from settling to the bottom. This will assure that a homogeneous mixture of the adhesive is applied.

Applying the Adhesive

MEGUM 500 can be applied by brushing, dipping, spraying or other application methods. For spray application, the viscosity can be reduced by either dilution and/or heating, e.g. to 40°C/105°F.

Application Methods

Brushing

Dilution ratio : Use undiluted.

Dipping

Dilution ratio : 1 p.b.w. bonding agent + 0.2-0.3 p.b.w. diluent.

Spraying with air

Dilution ratio : 1 p.b.w. bonding agent + 0.3-0.7 p.b.w. diluent.

Viscosity : at 20°C/68°F.

30-90 mPa.s (cP) [Brookfield, LV#2 spindle at 60 rpm].

15-25 seconds [DIN-4-cup].

17-29 seconds [Ford-4-cup].

20-34 seconds [Zahn #2 cup].

Spray gun : Most spray equipment can be used.

Nozzle : e.g. 1.0 mm/0.04 in. or 1.4 mm/0.055 in.

Air pressure : 2-4 bar/30-60 psi.

Drying Time

The drying time is approximately 30 minutes at 20°C/68°F.

Drying at higher temperatures will reduce drying time accordingly, e.g. 5 minutes force drying at 80°C/176°F. Heated circulating air will further accelerate drying.

Do not dry at temperatures above 120°C/250°F.

Suggested Dry Film Thickness

Apply MEGUM 500 at a dry film thickness of 15 to 25 microns (0.6 to 1.0 mil.).

Dry Film Stability

MEGUM 500 has excellent dry film stability. Inserts coated with MEGUM 500 can be stored for several weeks, if protected from humidity and contamination.

Theoretical Coverage

Applied at a dry film thickness of 20 microns (0.8 mil.), MEGUM 500 will cover approximately 7.4 m²/kg (290 square feet/gallon).

Pre-bake Resistance

Depending on the rubber formulation, coated inserts can be pre-baked for up to 5-10 minutes at 160°C/320°F without adversely affecting bond quality.

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.

MEGUM 500 contains moisture sensitive isocyanate compounds; avoid contact with water and humidity.

Shelf Life

MEGUM 500 has a shelf life of at least 6 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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