

PR-421 metal primer

Description

PR-421 is a waterborne epoxy primer to enhance the adhesion characteristics of polyurethane potting and molding compounds to steel and aluminum surfaces. The material cures to a durable coating with excellent resistance to weathering and water. This material acts as an effective barrier against the common causes of corrosion on aluminum alloys or between dissimilar metals.

PR-421 is a three-part, waterborne, epoxy coating. The uncured material is suitable for application by brush or spray in thickness of 2 – 3 wet mils.

The following tests are in accordance with MIL-M-24041 specification test methods.

Application properties (typical)

Color	
Part A	White
Part B	Orange
Part C (Deionized water)	Clear
Mixed	Orange
Mixing ratio	Part A:Part B:Part C
By weight	89:100:40
By volume	144:100:68
Dry time to potting/molding @ 77°F (25°C), 50% RH, mins	30 - 120
Application life, hours 75°F (24°C) to 79°F (26°C)	6
Recommended thickness, dry mils	1 - 2

Performance properties (typical)

Specific gravity	1.25
Nonvolatile content, % (less water)	68.3
Peel strength, pli (N/25 mm), 100% cohesion* NaCl immersion, 7 days @ 158°F (70°C)	
Aluminum	55 (245)
Type 316 Stainless steel	55 (245)
QQ-N-281 Class A (Monel)	60 (267)

*Tested with PR-1592 (MIL-M-24041) polyurethane.

Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

Surface preparation

For optimal adhesion, grit blast or abrade steel and aluminum substrates prior to solvent cleaning. Contaminants such as dirt, grease, and/or processing lubricants must be removed prior to primer application.

A progressive cleaning procedure should be employed using the appropriate solvents and new lint free cloth (reclaimed solvents or tissue paper should not be used). Always pour solvent on the cloth to avoid contaminating the solvent supply. Wash one small area at a time.

It is important that the surface is dried with a second clean cloth prior to the solvent evaporating to prevent the redeposition of contaminants on the substrate.

Immediately after progressive cleaning apply a thin coat of PR-421 primer to metallic substrates by brush and allow to dry for approximately 30 to 120 minutes at standard temperature. If primed surface becomes contaminated, or potting is not accomplished within the 6 hour application life, repeat priming procedure.

Substrate composition can vary greatly. This can affect sealant adhesion. It is recommended that adhesion characteristics to a specific substrate be determined prior to application on production parts or assemblies.

Storage life

The storage life of PR-421 is at least 12 months when stored at temperatures between 40°F (5°C) and 80°F (27°C) in original unopened containers.

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Mixing instructions

PR-421 is supplied in a two-part kit (deionized water not included). Mix according to the ratios indicated in the application properties section. Mix Part A and Part B separately to uniformity. Then thoroughly mix the entire contents of both parts of the kit together taking care to avoid leaving unmixed areas around the sides or bottom of the mixing container. Add 40 parts of deionized water by weight to the Part A/Part B combination and mix thoroughly.

Health precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

For emergency medical information call 1-800-228-5635.

For sales and ordering information call 775-323-7542.

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.