

Primax™ M

1-COMPONENT MULTIPURPOSE PRIMER FOR URETHANES

Primax™ M is a one component primer designed to bond urethane systems to a wide variety of substrates during the urethane curing process. Primax™ M is a stable solution of polymers in a solvent and requires heat to cure. Primax™ M readily bond most inorganic and organic materials including aluminum alloys, magnesium, iron, steel, glass, glass fiber composites, wood, and leather. The cured primer layer is very resistant to moisture and environmental conditions and generally improves the urethane bond strength and peel strength from the surface, especially under challenging environmental conditions.

TYPICAL PROPERTIES	VALUE	TEST METHOD
Visual Appearance	Amber liquid	
Density	0.86 g/cm ³	ASTM E-201
Viscosity, Part A, at 25°C	160 cps	ASTM D-2393
Solids Content	14%	Calculated
Flash Point	10°C	ASTM D-92

ENHANCING ADHESION

Many urethane adhesive, potting materials, and coatings are designed to adhere well to a variety of substrates, but some products and some surfaces require adhesion enhancement to achieve optimal bond strength or to ensure that the bond strength remains satisfactory when the bonds are subject to moisture or other environmental conditions. Primax™ M both increase the bond strengths of urethane materials to many surface and also helps to protect the critical interfaces against moisture and other conditions that can weaken the bond over time.

SURFACE PREPARATION

For best results Primax™ M must thoroughly wet-out and coat the surface to be bonded. The surface must be free of dirt, rust, grease, mold releases, and other contaminants that could affect adhesion. For most applications, general, light surface abrasion is all that is required to provide a good clean surface and to increase the surface area for bonding. Steel wool, a wire brush, sand paper, or abrasive pads are all suitable for light abrasion of most surfaces. Sandblasting and etching are also options for preparing the surface. In any case, after abrasion, the surface should be dusted to remove any loose material and then cleaned and degreased with an aqueous cleaner, naphtha, mineral spirits, methyl ethyl ketone (MEK) or other suitable means of removing oils and other contaminants. A final surface wipe with acetone or IPA may also be helpful. Allow solvents to completely evaporate before applying the primer. Different cleaning techniques may give better results than others and the user should determine the best technique for each specific applications.

For especially difficult-to-bond-to surfaces such as PTFE, polyolefins, and other chemically inert surfaces, it may be necessary to increase the surface reactivity by chemical etchants or oxidizers, or by exposing the surface to UV, corona, plasma or flame sources.

APPLICATION

These products should be applied in a very light, even coat by wiping, dipping or spraying. For spraying applications it may be desirable to dilute the Primax™ M with Ultralane® Thinner #1 or Ultralane® Thinner #25 in a ratio of 100 part Primax™ M to 50 – 200 parts of the thinner. For most application start with the lowest level of thinner and increase the thinner level as needed to achieve an even coat without sputtering or spattering with the spraying equipment that you are using. For best results apply two coats to achieve a total coating thickness of 0.5 – 1.5 mils (0.0005 inches to 0.0015 inches). Apply the first coat, then allow the coating to dry for 30 minutes at room temperature before applying the second coat. Air dry for at least 1 hour after the second coat before heat curing.

CURE CONDITIONS

It is necessary to remove all of the solvent from the primer layer in order to effect curing and achieve the best results. Heating the parts to 70°C (158°F) for at least 30 minutes will accomplish this drying step. This step can be combined with substrate or mold heating steps that are often used prior to applying the liquid urethane system. If desirable heating to 90°C – 100°C for periods of several hours is not detrimental to the primer layer.

SUGGESTED PROCESSING GUIDELINES:

The desired adhesive, castings materials, or coating should be applied after the primer has fully cured as mentioned above. Typically applying within 8 - 24 hours after the primer has cured is most desirable. However, in many application, keeping the primed surface clean will allow application of urethane system to be delayed for longer periods. If the primer is not giving the fully priming effect after longer term storage, applying and an additional layer of primer and allowing it to freshly dry and cure may be necessary to achieve the desired performance.

STORAGE AND SHELF LIFE

Shelf life is indicated on the product label. For best results, *Primax* primers should be stored below 32°C (90°F). Precautions must be taken to prevent moisture from contacting these materials before use. Containers should be kept tightly closed and head or air space minimized. Partially filled containers should be purged with dry air or other gases such as nitrogen to maximize shelf life.

HANDLING PRECAUTIONS:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

PERSONAL HYGIENE:

Primax™ M

FLAMMABLE: AS WITH ALL INDUSTRIAL MATERIAL USE CAUTION WHEN WORKING WITH THESE MATERIALS. Avoid breezing vapors. Keep away from sparks or open flames. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Extending exposure could cause a slight irritation of the nasal passages, eyes, or skin. May cause eye & skin irritation. Wash thoroughly after handling. Use only with adequate ventilation. Do not take internally.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supersedes Buyer's documents. SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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