



ACRYLATHANE® 55 & 85

TECHNICAL DATA

ALIPHATIC POLYURETHANE COATING SYSTEM

THE PRODUCT AND ITS USES

AcrylaThane is a family of high performance aliphatic polyurethane coatings that offer excellent adhesion and impact resistance. They are ideal for manufacturing environments because of fast curing and an extremely tough cured film that resists damage not only during delivery of the coated product but throughout its service life. AcrylaThane coatings are cross-linked with acrylic resins to offer years of excellent color fastness and gloss retention with little or no maintenance. AcrylaThane's superior corrosion and chemical resistance makes it suitable for use in harsh environments involving salt water, dilute acids and alkalis.

AcrylaThane is used to beautify and protect just about any metal product where durability is an important factor, from storage tanks and structural steel to machinery and equipment. These products also work extremely well on concrete and wood. Each is designed to be applied using one continuous "fog coat / full coat" operation, direct-to-metal with no primer. Cure-to-handle time is about six hours.

AcrylaThane 55 and 85 are described in this Technical Data Sheet. AcrylaThane 55 contains about 53 to 55% resin and can be built in one multi-pass coat to about 12 to 15 wet mils (about 6 to 8 dry mils or approximately 150 to 200 microns). AcrylaThane 85 has significantly higher resin content; it can be applied at about 10 to 12 wet mils which, because of its higher "solids content" will yield about the same 6 to 8 dry mils as the 55 version. AcrylaThane 55 is the faster setting product of the two. For highest gloss in applications requiring aircraft grade polymers, a third version of AcrylaThane named 5200, is also available (see separate Technical Data Sheet).

TECHNICAL INFORMATION

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	0°C(32°F) to 50°C (120°F)
Viscosity	Brookfield Viscometer	Paint-Like
Pot Life	@20°C/70°F	3-4 hours (55 version) 1-2 hours (85 version)
Initial Setting Time	@20°C/70°F	45-90 minutes (55 version) 60-120 minutes (85 version)
Curing Time Before Handling	@20°C/70°F	3-4 hours (55 version) 4-6 hours (85 version)
Recoat Time*	@20°C/70°F	Up to 24 hours
Solids Content	ASTM D-1259	53 to 58% (55 version) depending on color 70 to 75% (85 version) depending on color
Volatile Organic Compounds (VOCs)	ASTM D-2369	Less than 420 grams/litre (55 version) Less than 340 grams/litre (85 version)
Theoretical Coverage	N/A	550 m ² /litre/micron (882 ft ² /US gallon/mil) (55-white) 720 m ² /litre/micron (1155ft ² /US gallon/mil) (85-white)
Adhesion to Steel	ASTM D-4541 (SSPC-10)	Greater than 800 psi
Impact Resistance	ASTM D-2794 (20 mils)	Greater than 80 in. lbs
Ultraviolet Resistance	ASTM G-154	Excellent
Colors		Over 20 colors available

* However, recoat window varies depending on ambient and substrate temperatures and coating thickness.

NOTE: All statements, technical information and recommendations contained herein are typical of results obtained under laboratory conditions and are not intended to be used as contract specifications. For specification guidelines please contact Madison Chemical.

APPLICATION INSTRUCTIONS

CONTACT MADISON FOR DETAILED [APPLICATION INSTRUCTION BULLETIN](#) (ALSO AVAILABLE ONLINE)

A. SURFACE PREPARATION

- General** - This section applies to ALL substrates. The surface must be free of moisture, dust, oil and other contaminants. Do not proceed unless substrate temperature is at least 5°F (3°C) above dew point (check weather channel or on-line for current dew point temperature). Humidity over 85% may impair adhesion and/or ruin the finish. On previously painted surfaces, remove loose coating, then test for compatibility and adhesion. If prior coating lifts or appears to be incompatible in any way or if adhesion is poor, completely remove prior coating. When using over a Madison base coat, sealer or primer, apply within the recoat window; otherwise, roughen prior coating with 100 grit sandpaper.
- Metal** - For all galvanized steel surfaces purposes, including severe service, no blasting is required; instead prepare substrate with Madison FerroGrip to create adhesion comparable with near-white blasting. Alternatively, power tool cleaning may also be adequate for atmospheric service; evaluate your needs before proceeding. For non-galvanized metal surfaces the most cost effective method of preparation for light duty service is to apply FerroGrip or roughen surface by sanding, grinding or power wire brushing in order to achieve optimum adhesion between the metal substrate and the coating. If corrosion is present apply Madison CorroPrime (moderate service) or Madison Aluminized Primer (heavy duty) before applying AcrylaThane. Welds and corners require extra coating. Avoid thinning if possible. For other metals in non-immersion conditions, treat as above. For other metals surfaces subject to severe service conditions, abrasive blast clean with an angular medium to a near-white finish. Achieve an anchor pattern depth of 3.0 mils (75 microns) for continuous immersion; or 2.5 mils (65 microns) profile for underground or embedded service. In some cases, a less aggressive blast, combined with FerroGrip, will provide the desired service life. Consult your Madison representative for options. Spot prime rusty areas with Madison Alumizinc "S" Primer.
- Concrete** - Concrete must be fully cured. On floors, use FerroGrip or open pores with abrasive blasting or acid etching to remove laitance. Concrete walls (poured-in-place or concrete block) can be coated as-is but, for a pinhole-free result, a quality cementitious 'rendering' compound such as GemThane PrepCrete should be applied before coating. (See Application Information Bulletin for immersion service)
- Wood** - On most new wood, sanding with 80 grit sandpaper and a square pad vibrating sander will suffice. Do not coat green or damp wood. For previously painted surfaces, see 'General' above. For best results, use 10–20% VR-2 Viscosity Reducer in the first coat of AcrylaThane, then apply subsequent coat(s) full strength. Alternatively, seal wood with MG-201 Penetrating Epoxy before proceeding with topcoat (this is the preferred option where wood will have pedestrian traffic or similar direct contact). For previously painted surfaces, see "General" above. On old wood, painted or not, pressure wash at 1,000 p.s.i. or greater with FerroGrip or industrial degreaser injection, then sand thoroughly and wipe clean with VR-2 Reducer to eliminate saw dust before proceeding.
- Drywall** - On most drywall a light sanding will suffice. Sand between coats. For previously painted surfaces, see General above.

B. APPLICATION OF COATING

- Stir the individual components first. Then, mix pre-measured 'A' component into 'B' component (1:4 ratio by volume). Stir for 5 minutes to assure homogeneity. Pot life is temperature dependent. Add Madison's Accelerator 100 during the winter months for cold cure application.
- Apply using a brush, roller or conventional single component airless spray equipment (for best results, use airless spray).
- For atmospheric service, the typical application for metal is one coat applied direct to metal (no primer) to a dry film thickness of 6-8 mils (150-200 microns). Maximum recommended wet film build per coat is 15 mils (375 microns). On porous substrates such as concrete or wood, a base coat (see above) is recommended.
- A second coat may be applied over the first (e.g. for very wet service conditions), as long as it is applied within the recoat window. Otherwise, it will be necessary to roughen the surface to ensure good intercoat adhesion.

C. CLEAN-UP AND STORAGE

- This material will react with humidity and moisture. Keep containers tightly sealed and store upside down. For clean-up, use Madison VR-2 Viscosity Reducer. Other solvents may react with product, ruining cure or adhesion.
- Store between 10°C(50°F) and 27°C(80°F). DO NOT FREEZE. Use product within 6 months of receiving.

HEALTH AND SAFETY

Product is intended for industrial and professional use only. It contains no monomeric isocyanate but contains industrial solvents and will cause respiratory distress in some people. Flammable; avoid open sparks and flames. Indoors, wear a cartridge mask and provide ample ventilation. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact physician. If splashed on skin, remove immediately with Madison VR-2 Reducer or with rubbing alcohol and then wash with soap and water. If splashed in eyes, wash liberally with clean water and contact physician; temporary irritation of eyes may last several days. Product contains no proven carcinogens or mutagens. However, prudence dictates that applicators use rubber gloves, safety goggles and protective clothing. Resins are inert when cured. MSDS available upon request. Review [Application Instruction Bulletin](#) for further safety information.

LIMITED TWO YEAR WARRANTY

Madison will replace any product which, in service for which it is suitable, fails to meet specifications within two years of sale and which is proven to be defective when applied according to instructions by a Madison Approved Applicator or Certified OEM Applicator. Madison accepts no responsibility or liability for any other loss, claim, damage, injury or expense, direct or consequential, in contract or negligence. This product replacement warranty is in lieu of any other right, warranty, guarantee or condition, statutory or otherwise, expressed or implied, whether as to fitness for a particular purpose or as to merchantable quality or otherwise.

The information contained herein is believed to be accurate as of date of publication. Madison reserves the right to change product specifications without notice.

Note: The following are Trademarks and/or Registered Trademarks of Madison Chemical Industries Inc.:
Madison, GemThane, AcrylaThane, FerroGrip, CorroPrime, AlumiZinc, PrepCrete, VR Reducers and MG-201

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