



# Mini-Craft<sup>®</sup> OF FLORIDA, INC.

## SURFACE CLEAR PATCHING THINNERS

(MCP)MC280 - Surface Clear Patching Thinner - Base Coat

(MCP)MC279 - Surface Clear Patching Thinner - Top Coat

### DESCRIPTION:

These thinners have been developed specifically for patching metalflake. They are to be used with their specific counterpart clear gel coat. Each thinner is a non-filled/thixotropic version of its counterpart clear gel coat, therefore being completely compatible.

The thinners contain no surface agent (which has a tendency to cause hazing when trapped within the metalflake film). Because these thinners are of the same base material as the counterpart clear, the thinner/gel coat mix can be of any ration desired. A suggested starting point though, is 50:50. Advantages of using a thinner in the clear gel coat are:

- \* Same color and clarity as used for the part itself.
- \* Better flow characteristics (less orange peel).
- \* No possibility of entrapping surfacing agent.
- \* Better exposure characteristics.

### TYPICAL PROPERTIES: (at 77°)

These values may or may not be a manufacturing control criteria; they are listed for a reference guide only. Particular batches will not conform exactly to the numbers listed because storage conditions, temperature changes, age, testing equipment (type and procedure) can each have a significant effect on the test results. Patching thinners outside of these readings can perform acceptably. Final suitability of these products is in the end use performance.

Viscosity	-----
Thix Index	None
Non-Volatile Material	50.8%
Weight/Gallon	8.7 lbs.
Flash Point	88° F
Catalyst	THERMACURE <sup>®</sup> JTS
Gel Time	8 - 12 min. @ 2.0%

# Mini-Craft<sup>®</sup> OF FLORIDA, INC.

900 INDUSTRIAL DRIVE \* WILDWOOD, FLORIDA 34785

PHONE: (352) 748-5200 \* 800-282-8244 \* FAX: (352) 748-5338

E-Mail: sales@minicraft.com \* Web: www.minicraft.com

(ADV)MC301

## **RECOMMENDED PROCEDURE:**

Dilute the appropriate clear gel coat with the counterpart thinner. Suggested starting point is 50:50, although this ratio can be altered to suit your individual needs.

Add the appropriate amount of metalflake to a portion of your mix. Catalyze, then spray this metalflake mix onto the area to be patched.

Then spray catalyzed clear mix on top of the metalflake coat. For surface cure, MC279 can be sprayed on top of the clear coat. MC279 is very thin (as styrene) and will run if applied too thick. Correct thickness of the MC279 is a heavy dust coat. The MC279 contains a surfacing agent and fast cure additives which will help the top clear coat cure tack-free and give a faster cure. Sanding time will be 60 - 90 minutes dependent upon ambient temperature.

PVA can be used on top of the clear coat (rather than the MC279) as a barrier to give full surface cure. Patches using the PVA can be sanded in about 2 hours.

## **CURE:**

It is recommended that gel time be checked in the customer's plant as it may change with age, temperature, humidity, and catalyst. All data referencing gel or cure was run using 9.0% active oxygen MEKP. Best results can be obtained using recommended catalysts. These include Witco HiPoint-90, Lupersol DHD-9, Norac MEKP-925, and Lupersol DDM-9.

The recommended catalyst range is 1.5% to 2.5%. Ideal catalyst level is 2.0% at 77°F. Do not exceed 2.5%, nor fall below 1.5% catalyst for proper cure.

A typical patch will be ready to sand in approximately 1-2 hours under ideal conditions. Factors that will affect sand time include: age of materials; gel and cure of the gel coat used; temperature of air, part and material; humidity; air movement; and catalyst, both amount and type.

Do not make patches when temperature conditions are below 60°F, as curing may be adversely affected.

## **PRECAUTIONS:**

Always shake or mix before using. This assures a uniform mixture that will perform the same, from the first patch to last.

Secure the lid after each use. An open container will lose styrene and pick up contaminations.

**Catalyzed masses get very hot as they cure. We therefore recommend excess catalyzed patching materials be placed in a bucket of water.**

Using a heat source, such as heat gun or infrared lights, to speed cure takes special care:

1. **Use the heat source only where it will not be a fire hazard. Electrical appliances are an ignition source around flammable materials including acetone and styrene containing products.**
2. The spray patch must be gelled and partially cured; wait approximately 15-30 minutes. **Ungelled patches are a fire hazard.** In addition, the heat source will start gel and cure from surface down. This can produce unacceptable results.
3. Heat will speed up cure, but it must be done right for best results. The patch needs to be heated slowly and evenly.
  - a. If heated too fast, only the surface will be cured. This can result in unacceptable patches.
  - b. If the temperature is too high, the color of the patch may be unacceptable. Generally, surface temperature should be slightly warm to the touch. This is about 120°F and enough to speed the cure.
4. Use of heat can cause additional surface distortion and fiber pattern near the patched area.

### **STORAGE:**

Uncatalyzed, these products have a usage life of 90 days from date of manufacture when stored at 73°F or below in closed, factory-sealed, opaque containers and out of direct sunlight. The usage life is cut in half for every 20°F over 73°F

### **SHIPPING:**

These products are normally shipped in unlined one gallon steel containers. Lined five gallon steel containers are available on request.

**POLYESTER SAFETY INFORMATION  
(Revised 7/25/97)**

All sales of products manufactured by Mini-Craft of Florida, Inc. and described herein are made solely on condition that our customers comply with applicable health and safety laws, regulations and orders relating to the handling of our products in the workplace. Before using, read the following information and both the product label and Material Safety Data Sheet pertaining to each product. Most polyester products contain styrene. Styrene can cause eye, skin and respiratory tract irritation. Avoid contact with eyes, skin and clothing. Impermeable gloves, safety eyewear and protective clothing should be worn during use to avoid skin and eye contact. Wash thoroughly after use.

Styrene is a solvent and may be harmful if inhaled. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Extended exposure to styrene at concentrations above the recommended exposure limits may cause central nervous system depression causing dizziness, headaches or nausea and if overexposure is continued indefinitely, loss of consciousness, liver and kidney damage.

Do not breath or ingest vapor, spray mists and dusts caused by applying, sanding, grinding and sawing polyester products. Wear an appropriate NIOSH/MSHA approved properly fitted, respirator during application and use of these products until vapors, mists and dusts are exhausted, unless air monitoring demonstrates vapors, mists and dusts are below applicable exposure limits. Follow respirator manufacturer's directions for respirator use.

The International Agency For Research on Cancer (IARC) has reclassified styrene as Group 2B "possibly carcinogenic to humans". This new classification is not based on new health data relating to either humans or animals, but on a change in the IARC classification system. The Styrene Information and Research Center does not agree with the reclassification and has published the following statement. "Recently published studies tracing 50,000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as apposed to the average among all workers), and no increase in mortality related to styrene."

Styrene is classified by OSHA and the Department of Transportation as a flammable liquid. Flammable polyester products should be kept away from heat, sparks, and flame. Lighting and other electrical systems in the work place should be vapor-proof and protected from breakage.

Vapors from styrene may cause flash fire. Styrene vapors are heavier than air and may concentrate in the lower levels of molds and the work area. General clean air dilution or local exhaust ventilation should be provided in volume and pattern to keep vapors well below the lower explosion limit and all air contaminants (vapor, mists and dusts) below the current permissible exposure limits in the mixing, application, curing and repair areas.

If the label or Material Safety Data Sheet indicates lead or lead chromate is present, do not use on toys, furniture, or surfaces that might be chewed by children. Wash hands thoroughly after using and before smoking or eating. Long-term overexposure by inhalation or ingestion of mists and dusts from products containing lead compounds and lead chromate can cause harmful effects to the urinary, blood, reproductive and nervous systems and may create risk of cancer. Use a respirator as explained in Paragraph 4 of the Information Sheet.

Some polyester products may contain additional hazardous ingredients. To determine the hazardous ingredients present, their applicable exposure limits and other safety information, read the Material Safety Data Sheet for each product (identified by product number) before using. If unavailable, these can be obtained, free of charge, from your Mini-Craft representative or from: Mini-Craft of Florida, Inc. - 900 Industrial Drive, Wildwood, Florida 34785 \* (352) 748-5200, (800)282-8244.

**FIRST AID:** In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If affected by inhalation of vapors or spray mist, remove to fresh air. If swallowed, get medical attention.

Polyester products have at least two components that must be mixed before use. Any mixture of components will have hazards of all components. Before opening the packages. Read all warning labels. Observe all precautions.

Keep polyester containers closed when not in use. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Emptied containers may retain hazardous residue. Do not cut, puncture or weld on or near these containers. Follow container label warnings until containers are thoroughly cleaned or destroyed.

**FOR INDUSTRIAL USE AND PROFESSIONAL APPLICATION ONLY. KEEP OUT OF REACH OF CHILDREN.**

**DISCLAIMER AND LIMITATION OF LIABILITY  
(04/84)**

To the best of our knowledge, the information contained herein is accurate. THE WARRANTY DESCRIBED HEREIN SHALL BE IN LIEU OF ANY OTHER WARRANTY. EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Seller shall be for the replacement of the products or refund of the purchase price in the event that a defective condition of the products should be found to exist. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY. OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. The sole purpose of this exclusive remedy shall be to provide Buyer with replacement of the products or refund of the purchase price of the products if any defect in materials or workmanship is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Seller is willing and able to replace the defective products or refund the purchase price. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the Product Code(s), description and date of purchase) within thirty (30) days of the discovery of such defect. Final determination of the suitability of the material for the use contemplated, the manner of use and whether the suggested use infringes any patents is the sole responsibility of the buyer.