Polymer Composites Incorporated

1871 South Lake Place Ontario California 91761
Tel. (909) 673 –1625 Fax (909) 673 1625
www.polymercompositesinc.com

Technical Data Sheet
MAX MCR
Medium Setup Time
Casting Resin

Description

MAX MCR is an unfilled medium working time casting resin that offers a good balance of working time and cure time. It cures to a hard but tough compound that is suitable for casting small to medium parts (up to 1 pound) without excessive exotherm. It has a 30 minute working time when mixed up to 400 grams. It is low in viscosity and offers a very high gloss finish. It has a 2 to 1 mix ratio and is easily poured in place. It is suitable for silicone, polyurethane, steel, and wood molds.

General Usage

MAX MCR can be used as casting or tooling resin that requires good physical strength and dimensional stability over a wide temperature range. It can also be utilized as a general-purpose adhesive, potting compound and as an impregnating resin for carbon and glass fabrics.

MIXING INSTRUCTIONS

Dispense 100 parts of Part A and 50 parts of Part B and mix thoroughly until a homogonous consistency is achieved. Mix for 1-minute by scrapping the bottom and side of the container. To insure a complete and thorough mixing, transfer the mixed resin into another container and continue to mix for another minute. Use or apply the material within 30 minutes. Do not allow a large volume of mixed material to collect in a confined mass. High exothermic temperature may develop causing uncontrollable reaction and cause skin burns.

For mix metering application, ensure that a 2:1 flow rate of Part A and Part B respectively is achieved. A 24 element static mixer provides excellent mix results. Attach the static mixer and dispense and discard approximately 1-ounce material before using the mixed resin. Dispense the material in one corner of the component casing and allow the material to completely flow through out. This technique will reduce voids and air entrapment.

Polymer Composites Incorporated

1871 South Lake Place Ontario California 91761
Tel. (909) 673 –1625 Fax (909) 673 1625
www.polymercompositesinc.com

For casting or tooling applications:

Prepare mold by cleaning and applying a good quality wax mold release or PVA parting film. If using PVA parting film, allow the PVA to dry completely and make sure that the mold is secured on a level plane. Measure out the proper amounts Part A and Part B based on a 2 to1 by weight or volume mix ratio in a clean container. Gently mix until a uniform consistency is achieved (2 minutes). Do not mix aggressively to avoid excessive air entrapment. Transfer the mixture into another clean container and continue mixing for another minute. This will guarantee a thorough mixture. Slowly pour the mixture in the prepared mold unaided to minimize air entrapment. To remove stubborn air bubbles from the surface, use a hot air gun or a propane torch and pass it very quickly over the surface.

For Encapsulating Electronic Parts

Premix the Part A and Part B into a container and then pour the mixed component into another clean container and mix for another minute. This will insure a thoroughly mixed resin is achieved. Pre arrange the wire leads to the desired position and secure. Pour the mixed MAX 15M into the component housing to be encapsulated insuring complete and level coverage. Pour or dispense only from one corner of the component casing and allow the material to completely flow and fill through out the casing. This technique will reduce voids and air entrapment.

General Curing

Allow to cure at room temperature; depending on the ambient temperature cures times can vary from 24 to 36 hours. If available, use a Durometer to determine the cured hardness; a reading of 65 D will be sufficient for demolding or handling. To check handling properties attempt to indent the casting with using your fingernail, if it does not indent then it is ready for demolding or can be handled. For a faster thorough cure process, allow the casting to set-up for 2 hours at room temperature then post cure in an oven for 2 hours at 200^{o}F. Allow it to cool.

Polymer Composites Incorporated

1871 South Lake Place Ontario California 91761
Tel. (909) 673 –1625 Fax (909) 673 1625
www.polymercompositesinc.com

Technical Data Sheet

MAX MCR

Medium Setup Time
Casting Resin

Physical and Mechanical Data

Viscosity Part A	5,500 cPs
Viscosity Part B	250 cPs
Mixed Viscosity	3,950 cPs
Mix Ratio By Weight:	100 Parts A to 50 Parts B (2:1)
Mix Ratio By Volume:	100 Parts A to 50 Parts B (2:1)
Mixed Density	1.10 g/cc
Working Time:	30 minutes (400 gram mass)
Peak Exotherm:	150°F max (400 gram mass)
Shore Hardness:	75- 80 Shore D
Shrinkage:	<0.20 %
Compressive Strength:	16,800 psi
Tensile Strength:	9,900 psi
Tensile Elongation:	2%
Heat Distortion Temperature:	200°F

ELECTRICAL PROPERTIES

Volume Resistivity	4.7 X 10^{13} Ohms-CM
Dielectric Strength-60 Cycles	510 V/Mil
Dielectric Constant	4.0 (10 kHz)
Dissipation Factor	.014 (10 kHz)

PACKAGING AND STORAGE

MAX MCR A/B is available in use size kits, 5 gallon and 55-gallon kits; special packaging requests are also available. Stir MAX MCR A/B in their respective shipping container to insure uniform dispersion of filler before dispensing. Replace lid and seal tightly and store in a cool dry place. DO NOT store above 30ºC for prolonged period. MAX MCR A/B is warranted for 6 months from the date of shipment**.**

SAFETY NOTE

This product is for industrial use only. Please review all precautions before using this product. As with all products of the same nature, avoid prolonged inhalation and repeated skin contact. Always wear safety goggles and impervious rubber gloves when handling this material. Large mass curing of this product is not recommended for it may produce noxious fumes.
The information contained herein is based on data believed to be accurate at the time of publication. Data and parameters cited have been obtained by PCI using materials under controlled conditions. Data of this type should not be used for specification for fabrication and design. It is the user's responsibility to determine this products fitness for use. PCI warrants only that this product will only meet the cited parameters within the established conditions. There is no warranty of merchantability, fitness of use, nor any other express implied warranty. The user's exclusive remedy and the manufacturer's liability are limited to refund of the purchase price or replacement of the product within the agreed warranty period.

Polymer Composites, Inc. will not be liable for incidental or consequential damages of any kind.

The user should thoroughly test any proposed use of this product and independently conclude satisfactory performance in the application. Likewise, if the manner in which this product is used requires government approval or clearance, the user must obtain said approval. Determination of the suitability of any kind of information or product for the use contemplated by the user, the manner of use and whether there is any infringement of patent is the sole liability of the user.