



Technical Data Sheet

CrystalCoat® MP-101

Multi-Purpose Abrasion Resistant Coating

DESCRIPTION

CrystalCoat® MP-101 is a 1.43 refractive index, polysiloxane based thermal cure coating designed for dip coating applications.

FEATURES

- Primer-Free Adhesion to Acrylic (PMMA)
- Abrasion Resistance
- Chemical Resistance
- Optical Clarity
- Outdoor Durability

STORAGE AND USE

The recommended storage temperature for MP-101 is 4°C (40°F). When stored at this temperature in the original closed container, it is recommended to start using MP-101 within 3 months of the date received.

For extended periods (3-6 months) of storage MP-101 should be stored at -18°C (0°F).

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	31.0 - 33.0 %
Viscosity @ 25°C	< 10.0 cP
Density @ 25°C	1.00 - 1.02 g/ml
Solvents: Water, Methanol, Isopropanol	

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	3.0 - 5.0 µm
Refractive Index	1.43
Taber Abrasion (Δ % Haze)	100 Revolutions: <3 500 Revolutions: <7
Adhesion	100%
Chemical Resistance	Acetone No attack 1% NaOH No attack 1% HCl No attack Windex No attack

OUTDOOR DURABILITY ON ACRYLIC (PMMA)

LOCATION	ADHESION	LIGHT TRANSMISSION	TABER ABRASION
INITIAL	100%	>90%	<2.5 @ 100 <6.0 @ 500
ARIZONA 3yr exposure	100%	>90%	<2.5 @ 100 <6.0 @ 500
FLORIDA 3yr exposure	100%	>90%	<2.5 @ 100 <6.0 @ 500



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RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 25 - 45% RH
Air Flow	Filtered, Laminar
Coating Temperature	18 - 20°C
Coating Filtration	5 - 10µm absolute
Dry Time/Temperature	30 mins @ 20 - 25°C
Extraction speed	4.2 mm/s (10 in/min)
Cure Conditions	4hrs @ 82°C
1/8 - 1/2 inch thick acrylic sheet:	>6hrs @ 82°C
1/2 inch thick acrylic sheet:	

EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of MP-101 in order to avoid any possible contamination problems. The cleaning process should include multiple solvent rinses (utilizing a solvent compatible with the material in prior use with the equipment) followed by a thorough isopropanol rinse. IPA should also be used for cleaning equipment after the use of MP-101.

Equipment Materials: All equipment surfaces that are exposed to MP-101 should be constructed of stainless steel, polyethylene, polypropylene or Teflon®. Other materials should be tested for compatibility with MP-101 prior to use.

PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating, parts should be clean and free of any possible surface residues including adhesives that may have been left by masking. Adhesive masked acrylic sheet should be wiped down thoroughly after removal of the masking using a soft rag wetted with a solution of aliphatic hydrocarbons (e.g., hexanes). Then the sheets should be wiped down with isopropanol & blown off with filtered ionized air.

SOLUTION MANAGEMENT

For optimum performance MP-101 should be maintained in % solids range 31 - 33%. Higher or lower solids can cause appearance problems or lead to a coating deposition that is either too thick or too thin, respectively. The % solids should be measured on a regular basis and adjusted as needed by the addition of a 70/30 mixture of methanol and isopropanol.

HEALTH AND SAFETY INFORMATION

Before using this product, read and understand the Safety Data Sheet, SDS, which provides information on health, physical, and environmental hazards, handling precautions and first aid recommendations. For a copy of an SDS, contact a sales or customer service representative.

WARRANTY AND LIABILITY LIMITATIONS

Information contained herein is accurate to the best of our knowledge. The coating solution properties and cured coating properties listed herein represent typical values for MP-101 and are not meant as specifications. SDC Technologies, Inc. insists that users conduct their own tests for applicability and fitness for any purpose. Statements concerning use of products or formulations described herein shall not be construed as a warranty or license to infringe any patent or trademark, and no liability for infringement arising out of such use is assumed. Please refer to SDC Technologies' Standard Terms and Conditions or to your Purchase Agreement with SDC for the warranty coverage of SDC's product.

PRODUCT SHIPPING AND AVAILABILITY

Typical lead-time for shipment of MP-101 is four (4) weeks from confirmation of a purchase order. SDC provides several shipping options. Please contact an SDC representative to determine which option best fits your needs.

SDC TECHNOLOGIES CONTACT INFORMATION

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