

## CrystalCoat® MP-7110

### Multi-Purpose Abrasion Resistant Coating

#### DESCRIPTION

CrystalCoat® MP-7110 is a 1.49 refractive index, Polysiloxane, sol-gel based thermal cure coating designed for dip and spin coating applications.

#### FEATURES

- Abrasion Resistance
- Chemical Resistance
- Optical Clarity
- A/R Compatible

#### STORAGE CONDITIONS

The recommended storage temperature for MP-7110 is 4°C (40°F). When stored at this temperature in the original closed container, it is recommended to start use of MP-7110 within three (3) months of the date received. For extended periods of storage (3 – 6 months), MP-7110 should be stored in a freezer at -18°C (0°F).

#### SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	21 - 25 %
Viscosity @ 25°C	< 10 cP
Density @ 25°C	1.028 - 1.029 g/ml
Solvents: Water, Methanol, Ethanol, PM Glycol Ether	

#### CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness Polycarbonate & Nylon CR-39®	3.5 - 4.5 µm 2.0 - 3.0 µm
Refractive Index	1.49
Bayer Ratio	≥ 4
Adhesion	100%

#### RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 40 - 60% RH
Air Flow	Filtered, Laminar
Coating Temperature	16 - 18°C
Coating Filtration	1 - 5 µm absolute
Extraction Speed Polycarbonate & Nylon CR-39	5 mm/sec (12 in/min) 1.7 mm/sec (4 in/min)
Dry Time/Temperature	5 - 10 min w/Infra-red
Cure Conditions Polycarbonate CR-39 & Nylon	3hrs @ 129°C 2 - 4hrs @ 110°C



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## SDC TECHNOLOGIES CONTACT INFORMATION

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CR-39® is a registered trademark of PPG.

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## EQUIPMENT PREPARATION

**Equipment Cleaning:** Coating equipment should be cleaned prior to use of MP-7110 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 PM Glycol Ether rinse. PM Glycol Ether should also be used for cleaning equipment after the use of MP-7110.

**Equipment Materials:** All equipment surfaces that are exposed to MP-7110 should be constructed of stainless steel, polyethylene, polypropylene or Teflon®. Other materials should be tested for compatibility with MP-7110 prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with MP-7110 or other coatings that contain glycol ethers.

## PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with MP-7110, parts should be clean and free of any surface residues. Substrate should be cleaned in a 3-10% aqueous solution of sodium or potassium hydroxide at 25 - 50°C for 1 - 10 minutes. This cleaning should be followed by city water rinsing, then DI water rinsing and drying. Lenses should be completely clean, dry, and cooled before application of any coating or primer.

The application of MP-7110 on polycarbonate and nylon requires the use of a primer. PR-7130 is ideally suited for use with MP-7110. For further information about primers, please contact SDC. For information regarding application of MP-7110 to other substrates, please contact SDC.

## SOLUTION MANAGEMENT

For optimum performance, MP-7110 coating solution should be maintained in a % solids range of 21 - 25%. 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 an 80/20 mixture of Ethanol & PM Glycol ether (SM-7120). Denatured ethanol formulations that contain methanol, isopropanol and <1% water may be used.

## HEALTH & 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 & 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-7110 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 & AVAILABILITY

Typical lead-time for shipment of MP-7110 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. All orders are shipped F.O.B. Additional shipment charges including customs clearance and fees (if applicable) are the responsibility of the customer.

ISO 9001:2015 and ISO 14001:2015 Certified

