



# Technical Data Sheet

## CrystalCoat® MP-1154D

### Multi-Purpose Abrasion Resistant Coating

#### DESCRIPTION

CrystalCoat® MP-1154D is a 1.49 refractive index abrasion resistant hardcoat.

#### FEATURES

- Abrasion resistance
- 1.49 RI ideally suited for cast resin substrates
- Compatible with many substrates
- AR compatible

#### STORAGE AND USE

Recommended storage temperature for MP-1154D is 4°C (40°F). When stored at this temperature it is recommended to start to use MP-1154D within three (3) months of the date received.

For extended periods (3-6 months) of storage MP-1154D should be stored at -18°C (0°F).

#### SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	21 - 24 %
Viscosity @ 25°C	≤ 12.0 cP
Density @ 25°C	1.017 - 1.020 g/ml
Solvents: Water, Methanol, Ethanol, PM Glycol Ether	

#### CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	2.0 - 5.0 µm
Refractive Index	1.49
Adhesion	100 %
Bayer Ratio (on CR-39® lens)	≥ 5.0

#### RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 35 - 50% RH
Air Flow	Filtered, Laminar (Class 100)
Coating Temperature	16 - 18°C
Coating Filtration	1 - 5 µm absolute
Extraction Speed	3 - 5 mm/s (8 - 12 in/min)
Dry Time	3 - 5 mins with Infra-red
Cure Conditions	
- Cast Resins	3 hrs @ 110°C
- Polycarbonate	3 hrs @ 129°C



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## SDC TECHNOLOGIES CONTACT INFORMATION

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## EQUIPMENT PREPARATION

**Equipment Cleaning:** Coating equipment should be cleaned prior to use of MP-1154D 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-1154D.

**Equipment Materials:** All equipment surfaces that are exposed to MP-1154D should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with MP-1154D prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with MP-1154D or other primers or coatings that contain glycol ethers.

## PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with MP-1154D, 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-1154D on polycarbonate requires the use of a primer. For further information about primers, please contact SDC. For information regarding application of MP-1154D to other substrates, please contact SDC.

## SOLUTION MANAGEMENT

For optimum performance, MP-1154D should be maintained in a solids range of 21 - 24%. Higher or lower solids may 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 SM-1183 or an 80/20 mixture of ethanol & PM Glycol ether. Denatured ethanol formulations that contain methanol, isopropanol and <1% water may be used.

## 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-1154D 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-1154D 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.