



Technical Data Sheet

CrystalCoat™ IM-9700

1.67 Refractive Index Abrasion Resistant Coating

DESCRIPTION

CrystalCoat™ IM-9700 is a 1.67 refractive index abrasion resistant hardcoat.

FEATURES

- Abrasion Resistance
- Primer-free adhesion to MR-174™
- 1.67 RI ideally suited for 1.67 RI cast resin substrates
- Excellent adhesion on various high index substrates including MR-8™, MR-7™, MR-10™, MR-174™
- Methanol-free
- AR compatible
- Excellent QUV performance

STORAGE AND USE

The recommended storage temperature for IM-9700 is 4°C (40°F). When stored at this temperature in the original closed container, it is recommended to start use of IM-9700 within 3 months of the date received. For extended periods of storage (3 - 6 months), IM-9700 should be stored in a freezer at -18°C (0°F).

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	23.0 - 26.0 %
Viscosity @ 25°C	≤ 10.0 cP
Density @ 25°C	1.020 - 1.110 g/mL
Solvents: Water, Ethanol, PM Glycol Ether	

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	2.5 - 3.0 μm
Refractive Index	1.67 ± 0.01
Adhesion	100 %
Bayer Ratio (on HIRI substrates)	2.0 - 3.5

RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 35 - 50% RH
Air Flow	Filtered, Laminar (Class 100)
Coating Temperature	12 - 18°C
Coating Filtration	1 - 5 μm absolute
Extraction Speed	2 - 3 mm/sec
Dry Time	10 mins with Infra-red or 10 - 15 mins with oven @ 70 - 80°C
Cure Conditions	3 - 4hrs @ 110 - 120°C



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SDC TECHNOLOGIES CONTACT INFORMATION

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Technologies

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Teflon® is a registered trademark of E. I. du Pont de Nemours & Co.

MR-8™, MR-7™, MR-10™ & MR-174™ are trademarks of Mitsui Chemicals

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EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of IM-9700 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 IM-9700.

Equipment Materials: All equipment surfaces that are exposed to IM-9700 should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with IM-9700 prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with IM-9700 or other primers or coatings that contain glycol ethers.

PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with IM-9700, parts should be clean and free of any surface residues. Substrate should be cleaned in a 5 - 10% aqueous solution of sodium or potassium hydroxide at 50 - 60°C for 5 - 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 IM-9700 on polycarbonate requires the use of a primer. For help in selecting a primer, please contact SDC.

For information regarding application of IM-9700 to other substrates, please contact SDC.

SOLUTION MANAGEMENT

For optimum performance, IM-9700 should be maintained in a solids range of 23 - 26%. 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 & 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 IM-9700 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 IM-9700 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 ex works/F.O.B. Additional shipment charges including customs clearance and fees (if applicable) are the responsibility of the customer.