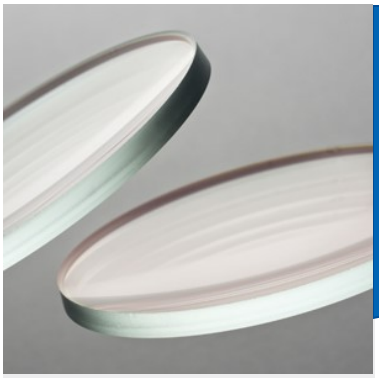

Technical Data Sheet

CrystalCoat® IM-9981

1.60 Refractive Index Abrasion Resistant Coating

DESCRIPTION

CrystalCoat® IM-9981 is a 1.60 refractive index abrasion resistant hardcoat developed for dip coat application.

FEATURES

- Abrasion Resistance
- Refractive index of 1.60 ideally suited for 1.60 cast resin substrates.
- Excellent adhesion on various high index substrates including MR-8™, MR-7™ and MR-10™.
- Primer required for polycarbonate & MR-174™
- AR compatible

STORAGE AND USE

Recommended storage temperature for IM-9981 is 4°C (40°F). When stored at this condition in the original unopened container it is recommended to start to use IM-9981 within three (3) months of the date received. For extended periods (3 - 6 months) IM-9981 should be stored at -18°C (0°F).

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	19 - 22 %
Viscosity @ 25°C	< 8.0 cP
Density @ 25°C	0.98 - 1.01 g/ml
Solvents: Water, Methanol, Ethanol , Isopropanol, PM Glycol Ether	

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	2.3 - 3.0 µm
Refractive Index	1.60
Bayer Ratio (measured on CR-39®)	≥4
Adhesion	100 %

RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 40 - 50% RH
Air Flow	Filtered, Laminar (Class 100)
Coating Temperature	16 - 18°C
Coating Filtration	1 - 5 µm absolute
Extraction Speed	2.5 - 4.2 mm/s
Dry Time/Temperature	10 - 12 min with Infra-red
Cure Conditions (Cast Resin)	3 hrs @ 120°C

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EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of IM-9981 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 methanol rinse. Methanol should also be used for cleaning equipment after the use of IM-9981.

Equipment Materials: All equipment surfaces that are exposed to IM-9981 should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with IM-9981 prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with IM-9981 or other primers or coatings that contain glycol ethers.

PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with IM-9981, 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-9981 on MR-174™ & polycarbonate requires the use of a primer. For help in selecting a primer, please contact SDC. For information regarding application of IM-9981 to other substrates, please contact SDC.

SOLUTION MANAGEMENT

For optimum performance, IM-9981 should be maintained in a solids range of 19 - 22%. 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-455 [15/15/55/10/5 mixture of Methanol/Ethanol/Isopropanol/DI Water/PM Glycol Ether].

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 IM-9981 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-9981 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

Corporate Headquarters - USA
45 Parker, Suite 100
Irvine, California 92618 USA
800-272-7681 (Toll-Free USA)
+1-714-939-8300
technicalsupport.ca@sdctech.com

Europe Office
Unit 7, Avondale Industrial Estate
Pontrhydyrun, Cwmbran
NP44 1UG, Great Britain
+44-1633-627030
technicalsupport.eu@sdctech.com

China Office
No. 1585 Gumei Road
Xuhui District
Shanghai 200233
China
+86-21-61517768
customercare.cn@sdctech.com

Singapore Office
27 Tuas South Street 1
Singapore 638035
+65-6210-6355
customercare.ap@sdctech.com

sdc Technologies

sdctech.com

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