



CrystalCoat™ TC-3000

Tintable Abrasion Resistant Coating

DESCRIPTION

CrystalCoat™ TC-3000 is a 1.49 refractive index tintable abrasion resistant hardcoat.

FEATURES

- Refractive index of 1.49 ideally suited for 1.5 ADC cast resin substrates.
- Excellent adhesion also on Trivex and various middle index substrates.
- Fast tinting
- AR compatible

STORAGE AND USE

The recommended storage temperature for TC-3000 is 4°C (40°F). When stored at this temperature in the original closed container, it is recommended to start use of TC-3000 within 3 months of the date received.

For extended periods of storage (3 - 6 months), TC-3000 should be stored in a freezer at -18°C (0°F).

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	19 - 22 %
Viscosity @ 25°C	≤12 cP
Density	1.011 g/ml
Solvents: Water, Methanol, Ethanol, PM Glycol Ether	

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	2.0 - 3.5 µm
Refractive Index	1.49
Bayer Ratio	≥2.5
Adhesion	100 %
Tint Properties (BPI Black @ 94-96°C) on ADC cast resins	
Light Transmission after 30mins	<30 %
Post Tint Adhesion	100 %

RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 35 - 60 % RH
Air Flow	Filtered, Laminar (Class 100)
Coating Temperature	16 - 18°C
Coating Filtration	1 - 5 µm absolute
Extraction Speed	1.5 - 2.5 mm/s
Dry Time/Temperature	5 min infrared heater or 15 - 20 min @ 20 - 25°C
Cure Conditions	3hrs @ 110°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 TC-3000 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 TC-3000.

Equipment Materials: All equipment surfaces that are exposed to TC-3000 should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with TC-3000 prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with TC-3000 or other primers or coatings that contain glycol ethers.

PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with TC-3000, 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 TC-3000 on polycarbonate requires the use of a primer. For further information about primers, please contact SDC. For information regarding application of TC-3000 to other substrates, please contact SDC.

SOLUTION MANAGEMENT

For optimum performance, TC-3000 coating solution should be maintained in % solids range of 19 - 22%. 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 SM-1183 - 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 TC-3000 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 TC-3000 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.