

Technical Data Sheet

CrystalCoat® UV CS-NT5 Premium

DESCRIPTION

CrystalCoat® UV CS-NT5 Premium is a UV curable hard-coat for ophthalmic lenses or other plastic parts.

FEATURES

- 100% Solids (Solvent-Free)
- Abrasion and Chemical Resistant
- Designed for Polycarbonate, ADC (CR-39®, RAV 7™), Trivex®, Mid-Index Acrylic, MR-8™, MR-7™, MR-10™ and MR-174™
- AR (Anti-Reflective) Compatible
- Non-Tintable
- Spin Application

STORAGE AND USE

Store UV CS-NT5 Premium in closed, properly labelled containers. Do not store in colorless glass containers or other containers that transmit UV light. It is recommended to store UV CS-NT5 Premium at ambient temperatures less than 75°F/24°C in the original closed container, for up to 3 months from the date received.

For extended periods, up to 6 months, it is recommended to store UV CS-NT5 Premium at 4°C.

UV-Cure Spin Coating

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
% Solids	100 %
Viscosity @ 25°C	34 - 45 cP

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	5.0 - 6.5 µm
Steel Wool Hardness	300 g
Bayer Ratio	1.8 - 2.5
Adhesion (15 Min Boiling Water)	100 %

RECOMMENDED OPERATING GUIDELINES

PROCESS	TYPICAL VALUES
Wash	Soap and water. No etching required.
Application Spin Speed	800 rpm for 2 seconds
Spin Out Speed	1700 rpm for 17 seconds
Cure*	17 s (2.8 - 3.2 J/cm ²)
Coating Filtration	5.0 µm absolute

* UV-cure dosage measured with Quantum Technologies Quant 300S radiometer.



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UV-Cure Spin Coating

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CrystalCoat® is a registered trademark of SDC Technologies, Inc.

CR-39® and Trivex® are registered trademarks of PPG.

MR-Series: MR-8™, MR-7™, MR-10™ & MR-174™ and RAV™ are trademarks of Mitsui Chemicals, Inc.

Teflon® is a registered trademark of The Chemours Company FC, LLC.

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EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of UV CS-NT5 Premium 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 rinse with acetone or 1-Methoxy-2-propanol (PM). Acetone or PM should also be used for cleaning equipment after the use of UV CS-NT5 Premium. It is important to be sure all solvent has been completely removed/dried from coating bowl, tubing, and pump before adding coating.

Equipment Materials: All equipment surfaces that are exposed to UV CS-NT5 Premium should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with UV CS-NT5 Premium prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances.

APPLICATION ENVIRONMENT

UV CS-NT5 Premium should be applied in a clean temperature and humidity controlled environment. Recommended conditions for application are 20 – 25°C (68 - 77°F) and 30 – 50% relative humidity. Coating machine should be equipped with hepa air filter. It is recommended to place coating machine in a clean environment and in separate area from potential contamination sources.

LENS CLEANING

Lenses to be coated with UV CS-NT5 Premium should first be cleaned with isopropanol, then cleaned by inline cleaning system in the coating machine being used. Lenses should be clean and dry before application of UV CS-NT5 Premium.

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 UV CS-NT5 Premium 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 UV CS-NT5 Premium 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.

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