Technical Data Sheet

CrystalCoat® UV TC-3920 Premium

UV-Cure Ophthalmic Backside Tintable Hard Coat

DESCRIPTION

CrystalCoat® UV TC-3920 Premium is a UV curable tintable hard coat for back-side application to ophthalmic lenses.

FEATURES

- 100% Solids (Solvent-Free)
- Primer-free adhesion to multiple substrates including Polycarbonate, ADC (CR-39®, RAV 7™), Trivex®, Mid-Index Acrylic, MR-8-™, MR-7™, MR-10™, MR-174™
- Abrasion Resistant
- Tintable
- A/R compatible
- Compatible with Ultra Optics MR III and Mini II coating machines

STORAGE AND USE

The recommended storage temperature for UV TC-3920 Premium is 20 - 25°C (68 - 77°F). It is recommended to use UV TC-3920 Premium within 12 months of the date of manufacture.

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Viscosity @ 25°C	30 - 50 cP

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	5.0 - 7.0 µm
Refractive Index	1.50
Bayer Ratio (as tested on polycarbonate)	1.5 - 1.7
Adhesion	100 %
Tint Properties (as tested on polycarbonate with factory front side non-tintable hardcoat) Light Transmission after 15 minutes Post Tint Adhesion	≤ 30% 100%

RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Wash Spin Speed	1900 - 2200 RPM
Application Spin Speed	400 RPM
Spin Off Speed	1800 RPM
Coating Filtration	5 µm absolute
UV-Cure - Cycle Time	25 seconds* (1.1-1.4 j/cm2)
Number of Lenses Coated per Bottle	2000 - 2500 (approximate)

* This is cure time with MR III an Mini II lamps when used within the manufacturers recommended life span of 1000 hrs.

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EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of UV TC-3920 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 TC-3920 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 TC-3920 Premium should be constructed of stainless-steel, polypropylene or Teflon®. Other materials should be tested for compatibility with UV TC-3920 Premium prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances.

APPLICATION ENVIRONMENT

UV TC-3920 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 - 55% relative humidity. Coating machine should be equipped with hepa air filter. It is recommended to place coating machine in a clean (class 10,000 or better) environment and in separate area from edging or polishing equipment.

LENS CLEANING

Lenses to be coated with UV TC-3920 Premium should first be cleaned with isopropanol, then cleaned by the inline cleaning system in the coating machine being used. Lenses should be clean and dry before application of UV TC-3920 Premium.

SOLUTION MANAGEMENT

To ensure a long pot life of the coating, it is recommended to cover the coating bowl when lenses are not being coated.

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 TC-3920 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's 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 TC-3920 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.

ISO 9001:2015 and ISO 14001:2015 Certified

SDC TECHNOLOGIES CONTACT INFORMATION

Corporate Headquarters—USA
800-272-7681 (Toll-Free USA)
+1-714-939-8300
technicalsupport.ca@sdctech.com

Europe Office
+44-1633-627030
technicalsupport.eu@sdctech.com

China Office
+86-21-61517768
customercare.cn@sdctech.com

Singapore Office
+65-6210-6355
customercare.ap@sdctech.com

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sdctech.com

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

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