



# Technical Data Sheet

## CrystalCoat™ UV TC-3920

### UV-Cure Ophthalmic Backside Tintable Hard Coat

#### DESCRIPTION

CrystalCoat™ UV TC-3920 is a UV curable tintable hard coat for backside 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 is 20 - 25°C (68 - 77°F). It is recommended to use CrystalCoat UV TC-3920 within 12 months of the date of manufacture.

#### SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Viscosity @ 25°C	35 - 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)	1.4 - 1.7
Adhesion	100 %
Tint Properties (as tested on polycarbonate with factory front side non-tintable hardcoat)	
Light Transmission after 15 minutes	≤ 30%
Post Tint Adhesion	100%

#### RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Wash Spin Speed	1900 - 2200 RPM
Application Spin Speed	400 RPM
Spin Off Speed	1600 - 1800 RPM
Coating Filtration	5 µm absolute
UV Cure - Cycle Time	25 seconds* (1.1-1.4 j/cm <sup>2</sup> )
Number of Lenses Coated per Bottle	2000 - 2500 (approximate)

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



# CrystalCoat™ UV TC-3920

UV-Cure Tintable Hardcoat

## CONTACT INFORMATION

**SDC Technologies—Americas  
Corporate Headquarters—N.A.**  
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  
PR China  
+86-21-61517768  
customercares.cn@sdctech.com

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



**sdctech.com**

CrystalCoat™ is a trademark of SDC Technologies, Inc.

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

MR-Series: MR-8™, MR-7™, MR-10™ & MR-174™ are trademarks, RAV 7® is a registered trademark of Mitsui Chemicals, Inc.

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

## EQUIPMENT PREPARATION

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

## APPLICATION ENVIRONMENT

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

## 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 & 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 UV TC-3920 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 & AVAILABILITY

Typical lead-time for shipment of UV TC-3920 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.

©2019 SDC Technologies, Inc. all rights reserved. SDC Technologies is a wholly-owned subsidiary of Mitsui Chemicals, Inc.

