



Technical Data Sheet

CrystalCoat® UV SHC-190D

UV-Curable Dip Coating

DESCRIPTION

CrystalCoat® UV SHC-190D is a UV curable hardcoat for ophthalmic lenses or other plastic parts.

FEATURES

- Primer-free adhesion to Polycarbonate and PMMA
- Abrasion Resistant
- Non Tintable
- AR compatible
- Dip application

STORAGE AND USE

UV SHC-190D is flammable and should be stored away from potential ignition sources. Store CrystalCoat UV SHC-190D in closed, properly labeled containers. Do not store in containers that transmit UV light. Do not pad containers or pressurized vessels using nitrogen. Use of nitrogen may cause premature gelling. Avoid sunlight and other sources of UV light. Store UV SHC-190D at ambient temperatures less than 25°C (77°F). It is recommended to use UV SHC-190D within 12 months of the date of manufacture.

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Viscosity @ 25°C	17 - 19 cP
% Solids	44—46

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	4.5- 5.0 µm
Refractive Index	1.50
Steel Wool hardness	8-9 (0-10 scale)
Bayer	1.5 — 2.0
Adhesion	100 %

RECOMMENDED OPERATING GUIDELINES

PROCESS	TYPICAL VALUES
Wash	Wash in neutral solution. No etching required.
Soak Time	15 seconds
Draw Speed	5" (127 mm) per minute
Solvent Flash	10 min ambient air or 1 min IR
Cure	(~1.5—2.0 joules/cm ²) — 2 feet per min with Fusion F300 (H+ bulb) or 5 feet per minute with Fusion Light Hammer. Cure speed may be increased with an inert (nitrogen) environment.*
Coating Filtration	1.2 µm absolute

* UV-cure energy of lamp systems may vary. These parameters are meant as a guideline.



CrystalCoat® UV SHC-190D

UV-Cure Ophthalmic Backside Coating

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EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of UV SHC-190D 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 isopropanol. Acetone or isopropanol should also be used for cleaning equipment after the use of UV SHC-190D. 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 SHC-190D should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with UV SHC-190D prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances.

APPLICATION ENVIRONMENT

UV SHC-190D should be applied in a clean temperature and humidity controlled environment. Recommended conditions for application are 20 – 25°C (68 - 77°F) and 30 – 60% 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 a separate area from potential contamination sources.

LENS CLEANING

Lenses to be coated with UV SHC-190D 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 SHC-190D.

SOLUTION MANAGEMENT

To ensure a long pot life of the coating, it is recommended to cover the coating tank 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 SHC-190D 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 SHC-190D 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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