

## CrystalChrome® Ultra HC

### Abrasion Resistant Coating

#### DESCRIPTION

CrystalChrome® Ultra HC is a 1.49 refractive index abrasion resistant hardcoat.

#### FEATURES

- Abrasion resistance
- AR compatible

#### STORAGE AND USE

The recommended storage temperature for CrystalChrome Ultra HC is 4°C (40°F). When stored at this temperature in the original closed container, it is recommended to start use of CrystalChrome Ultra HC within 3 months of the date received. For extended periods of storage (3 - 6 months), CrystalChrome® Ultra HC should be stored in a freezer at -18°C (0°F).

#### SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	29.5 - 31.5%
Viscosity @ 25°C	≤12 cP
Density	1.01 - 1.03 g/ml
Solvents: Water, Methanol, Ethanol, PM Glycol Ether	

#### CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	6.0 - 8.0 µm
Refractive Index	1.49
Bayer Ratio (ADC)	3
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	3.0 - 5.0 mm/s
Dry Time/Temperature	5 - 10 min @ 80°C
Cure Conditions	4hrs @ 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 CrystalChrome Ultra HC 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 CrystalChrome Ultra HC.

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

## PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with CrystalChrome Ultra HC, 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.

CrystalChrome Ultra HC is designed for use with CrystalChrome Ultra Photochromic coating system. Refer to the relevant CrystalChrome Ultra TDS's for recommended substrate preparation prior to coating with CrystalChrome Ultra HC.

## SOLUTION MANAGEMENT

For optimum performance, CrystalChrome Ultra HC coating solution should be maintained in % solids range of 29.5 - 31.5%. 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-1010 - a 6/62/32 mixture of DI water, 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 CrystalChrome Ultra HC 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 CrystalChrome Ultra HC 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.