



Technical Data Sheet

CrystalCoat® C-415

1.60 Refractive Index Abrasion Resistant Coating

DESCRIPTION

CrystalCoat® C-415 is a 1.60 refractive index abrasion resistant hardcoat.

FEATURES

- Abrasion Resistance
- Refractive index of 1.60
- Excellent adhesion on various high index substrates including MR-8™, MR-7™, MR-10™
- AR compatible

STORAGE AND USE

Recommended storage temperature for C-415 is 4°C (40°F). When stored at this condition in the original unopened container it is recommended to start to use C-415 within three (3) months of the date received. For extended periods (3-6 months) of storage C-415 should be stored at -18°C (0°F).

SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
Solids	29 - 31 %
Viscosity @ 25°C	≤ 8.0 cP
Density @ 25°C	0.99 - 1.07 g/ml
Solvents: Water, Methanol, PM Glycol Ether	

CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	2.0 - 3.5 μm
Refractive Index	1.60
Steel Wool Abrasion Resistance	Excellent
Bayer	≥3
Adhesion	100 %

RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 40 - 60% RH
Air Flow	Filtered, Laminar (Class 100)
Coating Temperature	16 - 18°C
Coating Filtration	1 - 5 μm absolute
Extraction Speed	2.5 - 4.2 mm/s (6 - 10 in/min)
Dry Time/Temperature	10 - 30 min @ 20 - 25°C 10 min with Infra-red
Cure Conditions	1.5 hrs @ 120°C



CrystalCoat® C-415

1.60 Refractive Index Abrasion Resistant Coating

SDC TECHNOLOGIES CONTACT INFORMATION

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

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

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

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



sdctech.com

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

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

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

©2025 SDC Technologies, Inc. All rights reserved. SDC Technologies is a wholly-owned subsidiary of Mitsui Chemicals, Inc.

20230710_C415

EQUIPMENT PREPARATION

Equipment Cleaning: Coating equipment should be cleaned prior to use of C-415 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 methanol rinse. Methanol should also be used for cleaning equipment after the use of C-415.

Equipment Materials: All equipment surfaces that are exposed to C-415 should be constructed of stainless steel, polypropylene or Teflon®. Other materials should be tested for compatibility with C-415 prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with C-415 or other primers or coatings that contain glycol ethers.

PRETREATMENT AND CLEANING OF SUBSTRATE

Prior to coating with C-415, parts should be clean and free of any surface residues. Substrate should be cleaned in a 5 - 10% aqueous solution of sodium or potassium hydroxide at 50 - 60°C for 5 - 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.

The application of C-415 on MR-174™ & polycarbonate requires the use of a primer. For help in selecting a primer, please contact SDC.

For information regarding application of C-415 to other substrates, please contact SDC.

SOLUTION MANAGEMENT

For optimum performance, C-415 should be maintained in a solids range of 29 - 31%. Higher or lower solids may 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 an 80/20 mix of Methanol and PM Glycol Ether (SM-345).

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 C-415 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 C-415 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