



## FSICT AF-6114 Abrasion Resistant Anti-Fog Coating

### DESCRIPTION

FSICT AF-6114 is a polysiloxane based thermal cure coating that combines water washable anti-fog performance with abrasion and chemical resistance. A blend of polysiloxane and urethane technologies AF-6114 provides a coating with a smooth surface feel and excellent anti-fog properties. AF-6114 can be applied using dip, flow, and spin coating techniques.

### FEATURES

- Abrasion and Chemical Resistance
- Water Washable Anti-Fog Properties
- Compatible with Mirror and AR coatings
- Optical Clarity
- Passes EN-166:2001 for:  
Anti-Fog (N-mark)  
Falling Sand Abrasion (K-mark)  
& UV Resistance

### STORAGE AND USE

The recommended storage temperature for AF-6114 is 4°C (40°F). When stored at this temperature in the original closed container, it is recommended to start use of AF-6114 within 3 months of the date received.

For extended periods of storage (3 - 6 months), AF-6114 should be stored in a freezer at -18°C (0°F).

Parts coated with AF-6114 should be stored in a cool, dry place.

### SOLUTION PROPERTIES

PROPERTY	TYPICAL VALUES
% Solids	35 - 39 %
Viscosity @ 25°C	16 - 42 cP
Density @ 25°C	0.99 - 1.10 g/ml
Solvents: Water, Methanol, Ethanol, n-Butanol, PM Glycol Ether, Toluene	

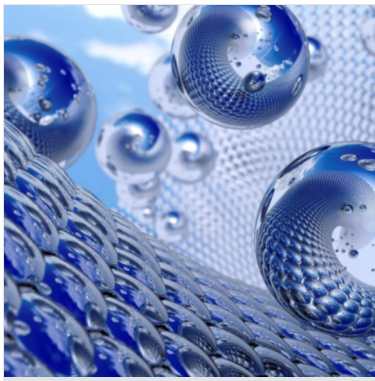
### CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness*	10.0 - 12.0 µm
Refractive Index	1.48
Adhesion	100%
Anti-Fog Performance EN-166:2001 (N-mark)	Pass
Resistance to Surface Damage by Fine Particles EN-166:2001 (K-mark)	Pass
Resistance to UV Radiation EN-166:2001	Pass

\*8-10 µm cured coating thickness can pass N-mark, but 10-12 µm is required to pass K-mark and UV Resistance testing.

### RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 35 - 65 % RH (Class 100)
Air Flow	Filtered, Laminar
Coating Temperature	16 - 18°C
Coating Filtration	5.0 - 10 µm absolute
Extraction Speed	4.5 - 5.0 mm/s
Dry Time/Temperature	30 mins @ 20 - 25°C, or 10 mins @ 100°C
Cure Conditions	2 hrs @ 125°C - PC 30 mins @ 150°C - Glass



# FSICT AF-6114

Abrasion Resistant Anti-Fog Coating

## Contact Information

### FSI Coating Technologies

#### Corporate Office - N.A.

45 Parker, Suite 100  
Irvine, California 92618 USA  
Tel: +1-949-540-1140  
Fax: +1-949-540-1150  
technicalsupport@fsicti.com

### SDC Technologies - Americas

#### Corporate Headquarters

45 Parker, Suite 100  
Irvine, CA 92618 USA  
800-272-7681 (Toll Free USA)  
Tel: +1-714-939-8300  
technicalsupport.ca@sdctech.com

### SDC Technologies - Europe

Unit 7, Avondale Industrial Estate  
Pontrhydryn Cwmbran  
NP44 1UG, Great Britain  
Tel: +44-1633-627030  
technicalsupport.eu@sdctech.com

### SDC Technologies - China

No. 1585 Gumei Road  
Xuhui District  
Shanghai 200233  
PR China  
Tel: +86-21-61517768  
customecare.cn@sdctech.com

### SDC Technologies Asia Pacific Pte. Ltd.

27 Tuas South Street 1  
Singapore 638035  
Tel: +65-6210-6355  
customer-care.ap@sdctech.com

Coating Technologies

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## EQUIPMENT PREPARATION

**Equipment Cleaning:** Coating equipment should be cleaned prior to using AF-6114 to avoid any possible contamination. Coating contamination can result in problems with adhesion, poor Anti-Fog performance or general appearance. 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 rinse. PM glycol ether should also be used for cleaning equipment after the use of AF-6114.

**Equipment Materials:** All equipment surfaces that are exposed to AF-6114 should be constructed of stainless-steel, polypropylene or PTFE. Other materials should be tested for compatibility with AF-6114 prior to use. Materials made with polyvinyl chloride (PVC) should not be used under any circumstances with AF-6114 or any other coatings that contain glycol ethers.

## PRETREATMENT AND CLEANING OF SUBSTRATE

Parts to be coated with AF-6114 should be clean and free of any surface residues. Injection molded polycarbonate parts should be cleaned with a neutral detergent solution to remove any residues left on the parts from the molding process, and then rinsed thoroughly with de-ionized water.

The application of AF-6114 to polycarbonate or glass requires the use of a primer. For further details of compatible primers please contact your FSICT representative.

## SOLUTION MANAGEMENT

For optimum performance, AF-6114 should be maintained at a solids range of 37 - 40%. Higher or lower % solids can cause appearance problems or lead to a coating deposition that is either too thick or thin. The % solids should be measured on a regular basis and adjusted as needed by the addition of SM-720 or a 10/77/5/8 by weight mixture of DI water, methanol, n-butanol and PM glycol ether.

## 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 AF-6114 and are not meant specifications. FSICT 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 FSICT Standard Terms and Conditions or to your Purchase Agreement with FSICT for the warranty coverage of FSICT's product.

## PRODUCT SHIPPING AND AVAILABILITY

Typical lead-time for shipment of AF-6114 is four (4) weeks from confirmation of a purchase order. FSICT provides several shipping options. Please contact an FSICT representative to determine which option best fits your needs.