

## Visgard® Elite

### Abrasion Resistant Anti-Fog Coating

#### DESCRIPTION

Visgard® Elite is a urethane based thermal cure coating. It combines water sheeting Anti-Fog performance with abrasion and chemical resistance. It can be applied via dip, flow and spin coating techniques and has been specifically developed for use with polycarbonate substrates.

#### FEATURES

- Primer Free Adhesion on Polycarbonate
- Abrasion and Chemical Resistance
- Water Washable Anti-Fog Properties
- Optical Clarity
- One-part system, does not require premixing
- Passes EN-166:2001 for: Anti-Fog (N-mark), Falling Sand Abrasion (K-mark) & UV Resistance
- Compatible with LDPE, HDPE and PP packaging.

#### STORAGE AND USE

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

Parts coated with Visgard Elite should be stored in a cool, dry place. In a humid environment the coating may develop a wipeable haze which can be removed by wiping with a soft dry cloth.

The bags should be sealed to exclude moisture. Do not package in an area where humidity is > 70%.

#### SOLUTION PROPERTIES

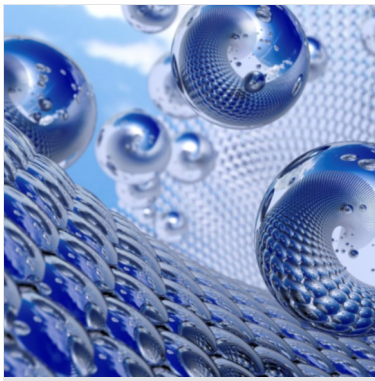
PROPERTY	TYPICAL VALUES
% Solids	25 - 29 %
Viscosity @ 25°C	100 - 160 cP
Density @ 25°C	1.00 - 1.10 g/ml
Solvents: PM Glycol Ether, Diacetone Alcohol	

#### CURED COATING PROPERTIES

PROPERTY	TYPICAL VALUES
Coating Thickness	7.5 - 9.0 µm
Refractive Index	1.50
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

#### RECOMMENDED OPERATING GUIDELINES

PROPERTY	TYPICAL VALUES
Environmental Conditions	20 - 25°C, 45 - 65 % RH (Class 100)
Air Flow	Filtered, Laminar
Coating Temperature	20 - 25°C
Coating Filtration	1.0 - 5.0 µm absolute
Extraction Speed	0.5 - 0.9 mm/s
Dry Time/Temperature	1 min @ 20 - 25°C
Pre-Cure Conditions	10 mins @ 85°C
Cure Conditions (PC)	1.5 hrs @ 125°C



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## 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  
China  
Tel: +86-21-61517768  
customer-care.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

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## EQUIPMENT PREPARATION

**Equipment Cleaning:** Coating equipment should be cleaned prior to using Visgard Elite 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 Visgard Elite.

**Equipment Materials:** Silicone hard coatings are incompatible with Visgard Elite and will impair anti-fog performance even at low concentrations. Be sure all equipment is thoroughly clean and free from other coating residues before evaluating Visgard Elite in production systems. A peristaltic pump is recommended for initial tests because there is no actual contact of Visgard Elite with the pump chamber or mechanical parts. Visgard Elite is incompatible with PVC tubing due to plasticizer extraction. Use only LDPE, PTFE, PU or stainless-steel tubing. Circulating PM glycol ether through the pump, hoses and filter for 8-12 hours is recommended for removing possible contaminants before start-up or change over.

## PRETREATMENT AND CLEANING OF SUBSTRATE

Parts to be coated with Visgard Elite 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.

## SOLUTION MANAGEMENT

For optimum performance, Visgard Elite should be maintained at a range of 100-160 cps. Higher or lower viscosity (cps) can cause appearance problems or lead to a coating deposition that is either too thick or thin. The viscosity (cps) should be measured on a regular basis and adjusted as needed by the addition of PM glycol ether. PM Glycol ether is also suitable for use as a dilution solvent if required for application purposes.

## 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 Visgard Elite and are not meant as 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 Visgard Elite 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.

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Technologies

  
Mitsui Chemicals  
Group