

R-2180

Ice phobic coating

DESCRIPTION

- Two-part silicone elastomer dispersed in xylene
- Two medium viscosity parts blend easily in a convenient 1:1 ratio (Part A: B)

APPLICATION

- For dip casting and heat-curing of thin elastomeric films
- For use as a coating to minimize ice adhesion

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance*	Transparent to translucent.	ASTM D2090	002
Viscosity*	3,075 cP (3,075 mPas)	ASTM D1084, D2196	001
Non-Volatile Content*	20%	ASTM D2288	004
Work Time	>72 hours	-	-
Cured: 30 minutes minimum at ambient temperature and humidity, 45 minutes at 75°C (167°F), and 135 minutes at 150°C (302°F) (The given ramped cure schedule is suggested to remove solvent prior to elevated temperature cure)			
Refractive Index*	1.41	D1747, D1218	018
Durometer, Type A*	40	D2240	006
Tensile Strength*	1,700 psi (11.7 MPa)	D412	007
Elongation*	1,050%	D412	007
Tear Strength*	300 ppi (52.9 kN/m)	D624	009
Stress at 100% Strain*	150 psi (1.03 MPa)	D412	007

*Properties tested on a lot-to-lot basis. Do not use the properties shown in this technical profile as a basis for preparing specifications. Please [contact](#) NuSil Technology for assistance and recommendations in establishing particular specifications.

¹ EM 1110-2-1612, Engineering and Design-Ice Engineering, U.S. Army Corps of Engineers, Department of the Army, September 2006, Chapter 20

INSTRUCTIONS FOR USE

Mixing

Thoroughly stir individual components prior to addition to ensure homogeneity. Mix in a 1:1 ratio by weight or volume. Exercise care to prevent solvent loss during deairing. Accomplish additional dilution for thin film applications by adding appropriate solvent.

Please note the Part A may shear thicken when pre-mixed. This is an expected behavior and an inherent property of the dispersion. Once the Part A and Part B are homogenized, allow the blended material to rest and/or de-air prior to further processing, which will allow the dispersion to return to a non-thickened state.

Warning: Consult the MSDS for R-2180 prior to use as its solvent carrier is hazardous.

Vacuum Deaeration

Remove air entrapped during mixing by common vacuum deaeration procedure, observing all applicable safety precautions. Slowly apply full vacuum to a container rated for use and at least four times the volume of material being deaerated. Hold vacuum until bulk deaeration is complete.

Substrate Considerations

Cures in contact with most materials. Exceptions include: sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

ROHS AND REACH COMPLIANCE

Please [contact](#) NuSil Technology's Regulatory Compliance department with any questions or for further assistance.

SPECIFICATIONS

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WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC (hereinafter "NuSil Technology") is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides a specific written warranty of fitness for a particular use, NuSil Technology's sole

Packaging

2 Pint Kit (910 g)
2 Gallon Kit (7.28 kg)
10 Gallon Kit (36.4 kg)
2 Drum Kit (360 kg)

Warranty

12 Months

warranty is that the product will meet NuSil Technology's then current specification. NuSil Technology specifically disclaims all other expressed or implied warranties, including, but not limited to, warranties of merchantability and fitness for use. The exclusive remedy and NuSil Technology's sole liability for breach of warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. NuSil Technology expressly disclaims any liability for incidental or consequential damages.

WARNINGS ABOUT PRODUCT SAFETY

NuSil Technology believes, to the best of its knowledge, that the information and data contained herein are accurate and reliable. The user is responsible to determine the material's suitability and safety of use. NuSil Technology cannot know each application's specific requirements and hereby notifies the user that it has not tested or determined this material's suitability or safety for use in any application. The user is responsible to adequately test and determine the safety and suitability for their application and NuSil Technology makes no warranty concerning fitness for any use or purpose. NuSil Technology has completed no testing to establish safety of use in any medical application.

NuSil Technology has tested this material only to determine if the product meets the applicable specifications. (Please [contact](#) NuSil Technology for assistance and recommendations when establishing specifications.) When considering the use of NuSil Technology products in a particular application, review the latest Material Safety Data Sheet and [contact](#) NuSil Technology with any questions about product safety information.

Do not use any chemical in a food, drug, cosmetic, or medical application or process until having determined the safety and legality of the use. The user is responsible to meet the requirements of the U.S. Food and Drug Administration (FDA) and any other regulatory agencies. Before handling any other materials mentioned in the text, the user is advised to obtain available product safety information and take the necessary steps to ensure safety of use.

PATENT / INTELLECTUAL PROPERTY WARNING

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