CF1-3800

Thermally conductive fluorosilicone elastomer

DESCRIPTION

- A two-part, thixotropic compound
- 15:1 Mix Ratio (Part A:B)
- Provides thermal conductivity when cured
- Cures at room or temperature or rapidly with heat

APPLICATION

- Provides heat transfer between electrical/electronic components and heat sinks
- For use as a sealant, adhesive or molding material requiring solvent resistance
- Use to adhere covers on housings or where grooves or other configurations require a non-flowable material
- For applications requiring an operating temperature range of -65°C to 225°C (-85°F to 437°F)

PROPERTIES

Typical Properties	Average Result	Metric Conv.	Standard	NT-TM
Uncured:				
Appearance, Part A	White	-	ASTM D2090	002
Appearance, Part B	Translucent	-	ASTM D2090	002
Consistency	Paste	-	-	-
Work Time	90 min	-	-	008
Cured: 30 minutes at 150°C (302°F)				
Specific Gravity	1.53	-	ASTM D792	003
Durometer, Type A	50	-	ASTM D2240	006
Tensile Strength	125 psi	0.86 MPa	ASTM D412	007
Elongation	50%	-	ASTM D412	007
Thermal Conductivity	30 x 10^{-4} cal/cm-sec°C	1.25 W/m-K	ASTM E1530	101

The test data shown for this material is the average value for typical properties. All of these properties may not be tested on a lot to lot basis and cannot be used to draft specifications. Please contact NuSil for assistance and recommendations in establishing limits for product specifications.

INSTRUCTIONS FOR USE

Mixing

Mix CF1-3800 Part A and Part B in a 15:1 mix ratio by weight. Ensure that the conductive filler is homogenous throughout the mixture.

Substrate Considerations

CF1-3800 will cure in contact with most materials common to electronic assemblies. Exceptions include: butyl and chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents. Units being encapsulated or potted should be clean and free of surface contaminants. Containers and dispensers being used with CF1-3800 should also be clean and dry. Cure inhibition can usually be prevented by washing all containers with clean solvent or volatilizing the contaminants by heating.

Vacuum Deaeration

Remove air entrapped during mixing by common vacuum deaeration procedure, observing all safety precautions. Slowly apply vacuum to a container both rated for use and at least four times the volume of material being deaerated. Hold vacuum until the presence of air is no longer evident.

Adjustable Cure Schedule

Product cures at room temperature and a wide range of elevated temperatures and cure times to accommodate different production needs. Contact NuSil for details.

SPECIFICATIONS

Do not use the typical properties shown in this technical profile as a basis for preparing specifications. Please contact NuSil for assistance and recommendations in establishing limits for product specifications.

WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil provides a specific written warranty of fitness for a particular use, NuSil's sole warranty is that the product will meet NuSil's then current specification. NuSil 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'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 expressly disclaims any liability for incidental or consequential damages.

Packaging	Warranty
100 Gram Kit (0.102 kg) 500 Gram Kit (0.503 kg)	12 Months

WARNINGS ABOUT PRODUCT SAFETY

NuSil 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 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 makes no warranty concerning fitness for any use or purpose. NuSil has completed no testing to establish safety of use in any medical application.

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

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