

LOCTITE HYSOL GR 360A-F8

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PRODUCT DESCRIPTION

LOCTITE HYSOL GR 360A-F8 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Product Benefits	• Green product • Stable at high temperatures • Flame retardant • Good adhesion • High moldability • Low cost of ownership
Filler Size Max, μm	75
Filler Size Ave, μm	16
Filler Weight, %	79
Filler Type	Fused Silica
Typical Package Application	Power discrete, High voltage rectifier, Axial Package, Bridge Package, TO, SIP, DIP and SMX
Application	Molding compound
Flammability	94 V-0

LOCTITE HYSOL GR 360A-F8 epoxy molding compound delivers outstanding performance and ease of use. This material is designed to achieve JEDEC Level 3 requirements, at 260°C reflow temperature.

LOCTITE HYSOL GR 360A-F8 meets UL 94 V-0 Flammability at 3.175mm thickness.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Gel Time @ 175 °C, seconds	35
Spiral Flow, @ 177°C, cm	64
Shelf Life:	
@ 5°C, months	6

TYPICAL PROCESS DATA

Handling

Preheat Temperature :	
Conventional mold, °C	80 to 100
Automold, seconds	0 to 5
Molding Temperature, °C	175 to 195
Molding Pressure, Kg/cm²	40 to 100
Transfer Time:	
Conventional mold, seconds	10 to 20
Automold, seconds	4 to 10
Curing Time, :	
Conventional mold:	
@ 175°C, seconds	60 to 90
Automold:	
@ 175°C, seconds	50 to 79
Post Cure @ 175°C, hours	4 to 6

LOCTITE HYSOL GR 360A-F8 has been formulated to provide the best possible moldability and as wide a molding latitude as possible. Although molding and curing conditions will vary from situation to situation, recommended starting ranges are shown above.

TYPICAL PROPERTIES OF CURED MATERIAL

All measurements taken at 25 °C unless otherwise noted. All physical, electrical and analytical measurements taken on specimens cured for 2 minutes @ 175 °C with post cure of 6 hours at 175 °C, unless otherwise specified.

Physical Properties:

Coefficient of Thermal Expansion , ppm/°C:	
Below Tg	16
Above Tg	60
Glass Transition Temperature, °C	165
Specific Gravity	1.86
Molded shrinkage, as molded, %	0.33
Flexural Strength Kg/mm² :	
@ 25 °C	15
Flexural Modulus Kg/mm² :	
@ 25 °C	1,750
Thermal Conductivity, W/(m-K)	0.9
Moisture Absorption, %:	
168 hours @ 85°C/85% RH	0.42
Pull Force Adhesion, , N/mm² :	
Cu	1.7
Ni/Pd on Cu	0.3
Ni/Pd/Au	1
Ag on Cu	1.4
Alloy 42	1.5

Electrical Properties:

Volume Resistivity, ohms-cm, 500 volts:	
@ 25°C	10×10 ¹⁵
@ 100°C	1×10 ¹⁵

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Powder Storage - Powder or preforms should be stored at 5°C or below, in closed containers. After removal from cold storage, the material **MUST** be allowed to come to room temperature, in the sealed container, to avoid moisture contamination. The suggested waiting time for a standard 15 kg carton box is 24 hours.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation and its affiliates ("Henkel") specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel products. Henkel specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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Reference 0.1