Technical Data Sheet

LOCTITE HYSOL GR 21F-02

July 2012

PRODUCT DESCRIPTION

LOCTITE HYSOL GR 21F-02 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Product Benefits	• Green product • High moldability
Filler Weight, %	72
Typical Package Application	Bridge Package and Axial Package
Application	Molding compound
Flammability	94 V-0

LOCTITE HYSOL GR 21F-02 epoxy molding compound delivers outstanding performance and ease of use. LOCTITE HYSOL GR 21F-02 is ECN base green molding compound suitable for medium voltage applications.

LOCTITE HYSOL GR 21F-02 meets UL 94 V-0 Flammability at 6.35mm thickness.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Gel Time @ 175 °C, seconds	16
Spiral Flow, @ 175°C, cm	55.88
Shelf Life:	
@ 5ºC, days	365
Hot Hardness,Shore-D@ 175°C, 90 seconds	85

TYPICAL PROCESS DATA

Handling

Preheat Temperature , °C	77 to 94
Molding Temperature, °C	160 to 190
Transfer Pressure, psi	500 to 1,500
Transfer Time:	
Conventional mold, seconds	15 to 25
Automold, seconds	12 to 20
Curing Time, :	
Conventional mold:	
@ 175°C, seconds	70 to 90
Automold:	
@ 175ºC, seconds	50 to 70
Post Cure @ 175°C, hours	2 to 6

LOCTITE HYSOL GR 21F-02 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 other wise specified.

Physical Properties:

Coefficient of Thermal Expansion , ppm/°C:	
Below Tg	19
Above Tg	62
Glass Transition Temperature, °C	180
Specific Gravity	1.78
Molded shrinkage, as molded, %	0.21
Flexural StrengthKg/mm² :	
@ 25 °C	12
Flexural ModulusKg/mm² :	
@ 25 °C	1,400
Thermal Conductivity , W/(m-K)	0.65
Water Extract Data, 90 min water boil:	
Conductivity, micro mhos	2.0
pH of extract	6.0
Extractable Ionic Content, ppm:	
Chloride (Cl-)	2
Sodium (Na+)	1

Electrical Properties:

Volume Resistivity, ohms-cm, 500 volts:	
@ 21ºC	10×10^{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 5ºC 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
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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