Technical Data Sheet

EO1858

PRODUCT DESCRIPTION

EO1858 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Application	Potting and Encapsulating

EO1858 is a one component, epoxy compound that cures at 125ºC. EO1858 provides excellent environmental and thermal protection to encapsulated parts. This product is especially suited for use in protecting sensors used in harsh environments such as automotive applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Typical Properties of Liquid Material

Viscosity, Brookfield - RVT, 25 °C, cps:	
Spindle 7, speed 20 rpm	50,000
Specific Gravity	1.65
Filler Content, %	62
Gel Time @ 121ºC, minutes	12
Pot Life @ 25 °C, days	10
Shelf Life @ -40 °C, days	210
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Potting:

2 hours @ 140 °C or
3 hours @ 125 °C

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Glass Transition Temperature (Tg) °C	140
Coefficient of Linear Thermal Expansion:	
Alpha 1 (µm/mºC)	24
Flexural Strength, psi	12,000
Flexural Modulus	1,140,000
Tensile Strength, psi	10,000
Tensile Modulus, psi	700,000
Shore Hardness , Durometer D	90
Moisture Absorption, 120 hrs PCT @ 15 psi, %	0.78
Elongation, %	1.96
Thermal Conductivity, cal/cm-sec-ºC	1.29×10^{4}

Electrical Properties:

Dielectric Constant / Dissipation Factor @ 25ºC:	
1-kHz	$4.31 / 4.94\times10^{-3}$
10-kHz	$4.0 / 4.56\times10^{-2}$
100-kHz	$3.77 / 3.49\times10^{-2}$
Dielectric Constant / Dissipation Factor @ 100ºC:	
1-kHz	$4.27 / 5.05\times10^{-3}$
10-kHz	$3.98 / 4.11\times10^{-2}$
100-kHz	$3.78 / 3.0\times10^{-2}$

GENERAL INFORMATION

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

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.

DIRECTIONS FOR USE

1. This product should not be exposed to ambient air for greater than 1 hour prior to cure. Excessive exposure to the moisture in the atmosphere will degrade the cured properties of the material, resulting in impaired thermal and environmental resistance.
2. This product contains fillers that may settle upon prolonged storage. Thoroughly remix before use if there is any indication of filler settle.
3. Lower storage temperatures will reduce filler settle and can extend shelf life. At 4ºC shelf life exceeds 6 months .
4. Store in sealed containers, do not expose uncired material to moisture. If containers are opened, blanket with dry nitrogen before resealing.

Storage

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

Optimal Storage: -40 °C

Material removed from containers may be contaminated during use. Do not return product to the original container. Longain 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.