Technical Data Sheet

LOCTITE STYCAST EE4215 KIT

February 2014

PRODUCT DESCRIPTION

LOCTITE STYCAST EE4215 KIT provides the following product characteristics:

Technology	Epoxy
Appearance (cured)	Black
Components	Two component - requires mixing
Mix Ratio, by volume - Part A: Part B	100 : 24
Mix Ratio, by weight - Part A: Part B	100 : 15
Product Benefits	• Improved thermal conductivity • Heat resistant • Thermal shock resistant
Cure	Heat cure
Application	Potting and Encapsulating

LOCTITE STYCAST EE4215 KIT is a filled system recommended for potting applications where rigid or flexible wire leads protrude directly from the encapsulation and where high impact strength is required. This system eliminates microscopic cracking on flexing of leads. It adheres extremely well to lead materials, such as vinyl or neoprene.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties LOCTITE STYCAST EE4215

Color	Black
Filler Content, %	50
Density, @ 25 °C, g/cm³	1.6
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 6, speed 10 rpm	80,000

Part B Properties HD3561

Color , maximum	Gardner 3
Density, @ 25 °C, g/cm³	1.0
Viscosity, Brookfield - RVF, 25 °C, cP:	
Spindle 1, speed 20 rpm	20

Mixed Properties

Viscosity @ 25 °C, cP	2,000
Pot Life, 200 gm mass , @ 25 °C, minutes	80
Peak Exotherm Temperature, 200 gram mass, ºC	115

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

3 hours @ 60°C

Alternative Cure Schedule

24 hours @ 22°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL AS MIXED

Physical Properties

Coefficient of Thermal Expansion, ppm/ºC:	
Pre Tg (Alpha 1)	53
Post Tg (Alpha 2)	119
Coefficient of Thermal Conductivity, W/(m-K)	0.461
Shore Hardness , Durometer D	83
Density, @ 25 °C, g/cm³	1.5
Linear Shrinkage, %	0.5
Heat Deflection Temperature @ 1.8 N/mm² , °C	85
Izod Impact Strength, N/mm of notch	0.08
24 Hour Water Moisture Absorption, %	0.21
Specific Gravity @ 25 °C	1.5
Tensile Elongation, %	2.2

Electrical Properties

Dielectric Strength, 10 mil thickness, volts/mil	1,500
Arc Resistance, seconds	138
Volume Resistivity, ohm-cm :	
@ 25°C	4×10^{14}
@ 80°C	2×10^{10}
Dielectric Constant / Dissipation Factor @ 25ºC:	
100 Hz	4.51 / 0.01
1 kHz	4.5 / 0.086
10 kHz	4.41 / 0.017
100 kHz	4.21 / 0.027
Dielectric Constant / Dissipation Factor @ 80ºC:	
100 Hz	6.92 / 0.021
1 kHz	6.1 / 0.007
10 kHz	5.58 / 0.046
100 kHz	5.27 / 0.03

TYPICAL CURED PERFORMANCE AS MIXED

All measurements are taken at 25ºC, unless otherwise noted.

Miscellaneous

Tensile Strength	N/mm² (psi)	58 (8,500)
Compressive Strength	N/mm² (psi)	155 (22,500)
Compressive Yield Strength	N/mm² (psi)	104 (15,200)
Flexural Strength	N/mm² (psi)	106 (15,500)

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.

Note: Before using this product please purge approximately 30 ml. of material prior to application. Discard purged material in accordance with the Material Safety Data Sheet. A video instruction is available upon request.

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

Liquid Storage - Liquids should be stored at 25°C or below, in closed containers. If stored below 25°C, the material MUST be allowed to come to room temperature, in the sealed container, to avoid moisture contamination.

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 = N/mm²
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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