Technical Data Sheet

LOCTITE STYCAST EE 4215/HD 3404

June 2018

PRODUCT DESCRIPTION

LOCTITE STYCAST EE 4215/HD 3404 provides the following product characteristics:

Technology	Epoxy
Appearance (cured)	Black
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	100 : 9
Mixing Ratio, by weight Component A: Component B	100 : 5.5
Cure	Heat cure
Application	Potting and Encapsulating

LOCTITE STYCAST EE 4215/HD 3404 is an undiluted, silica filled epoxy casting compound, which exhibits improved thermal properties, lower shrinkage and lower expansion characteristics. The undiluted resin exhibits a higher heat distortion, lower moisture absorption, lower shrinkage and lower expansion characteristics than obtainable with a diluted resin.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Color	Black
Filler Content, %	48 to 52
Density, @ 25 °C, g/cm³	1.5 to 1.65
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 6, speed 4 rpm	60,000 to 100,000

Part B Properties

Color , maximum	Gardner 2
Filler Content, %	0
Density, @ 25 °C, g/cm³	0.97 to 0.99
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 1, speed 2 rpm	18 to 34

Mixed Properties

Pot Life @ 25 °C, minutes:	
200 g mass	20
Peak Exotherm Temperature, °C:	
200 g mass	100
Gel Time @ 25 °C, minutes	25
Viscosity @ 25 °C, mPa·s (cP)	10,500
Viscosity @ 40 °C, mPa·s (cP)	4,000

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

2 hours @ 60 °C (Recommended cure)

24 hours @ 22°C (Alternate cure)

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

Coefficient of Thermal Expansion ASTM D7012, K^{-1}:		
Pre Tg (Alpha 1)		47×10^{-6}
Post Tg (Alpha 2)		136×10^{-6}
Coefficient of Thermal Conductivity, ASTM C177, W/(m-K)		0.549
Shore Hardness, ISO 868, Durometer D		87
Density, @ 25 °C, g/cm³		1.66
Linear Shrinkage, ASTM D792, %		0.38
Filler Content, %		48
Heat Deflection Temperature @ 1.8 N/mm² , °C		100
Izod Impact Strength, N/mm of notch		0.04
Water Absorption, ISO 62, %:		
24 hours in water @ 25 °C		0.07
Guide to Operating Class, IEEE °C		105
Elongation , ISO 527-2,%		1.2
Tensile Strength, ISO 527-2	N/mm² (psi)	62.1 (9,000)
Compressive Strength, ISO 604	N/mm² (psi)	117.2 (17,000)
Flexural Strength, ISO 178	N/mm² (psi)	90.3 (13,100)

Electrical Properties:

Dielectric Breakdown Strength IEC 60243-1, kV/mm	59.8
Arc Resistance, ASTM D495, seconds	183
Volume Resistivity, IEC 60093, Ω·cm:	
@ 25 °C	8×10^{15}
@ 105 °C	1×10^{14}
Dielectric Constant / Dissipation Factor, IEC 60250:	
@ 25 °C:	
100 Hz	4.1 / 0.007
1 kHz	4.0 / 0.011
100 kHz	3.8 / 0.02
@ 105 °C:	
100 Hz	4.6 / 0.016
1 kHz	4.5 / 0.009
100 kHz	3.4 / 0.014

GENERAL INFORMATION

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

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
LOCTITE STYCAST EE 4215 may crystallize during prolonged storage, if stored below 10ºC. If crystallization does occur, warm the contents of the shipping container to 50 to 60ºC until all crystals have dissolved. Shipping container must be loosely covered during the warming stage to prevent any pressure build-up.

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

Optimal Storage: 8°C to 28°C. Storage below 8°C or greater than 28°C can adversely affect product properties.

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
psi x 145 = N/mm²
MPa = N/mm²
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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Note:
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