

Resinlab® EP1285HD-14 Highly Filled, Medium Viscosity Casting Resin

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin , Epoxy, Cast, Metal Filled

Material Notes:

Resinlab™ EP1285 (Formerly Lab Product W021901 series) is a highly filled, medium viscosity black casting resin designed for applications requiring a high degree of thermal conductivity and a low CTE combined with a moderate free flowing viscosity. They give excellent resistance to acids, bases, water, and most organic compounds. The high filler content also enhances resistance to thermal cycle stresses. The choice of hardener allows the user to choose a variety of reactivity's, viscosities, thermal ranges and environmental resistance capabilities. The resin contains a high loading of abrasive aluminum oxide filler, which can introduce wear considerations for wetted components of meter-mix and dispensing equipment. Warming the assembly prior to filling will aid in flow and air release. Additional vacuum degassing may be desired for some applications.

Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Resinlab-EP1285HD-14-Highly-Filled-Medium-Viscosity-Casting-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.13 g/cc	2.13 g/cc	
Water Absorption	0.11 %	0.11 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	17000 cP	17000 cP	Mixed, RVT, #6, 2.5 rpm; TM R050-12
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	92	92	TM R050-19
Tensile Strength at Break	41.4 MPa	6000 psi	TM R050-36
Tensile Strength, Ultimate	41.4 MPa	6000 psi	TM R050-36
Tensile Strength, Yield	20.7 MPa	3000 psi	TM R050-36
Elongation at Break	1.0 - 2.0 %	1.0 - 2.0 %	TM R050-36
Tensile Modulus	6.21 GPa	900 ksi	TM R050-36
Compressive Yield Strength	62.1 MPa	9000 psi	TM R050-38
Compressive Strength	75.8 MPa	11000 psi	Break; TM R050-38
	86.2 MPa	12500 psi	Ultimate; TM R050-38
Compressive Modulus	4.48 GPa	650 ksi	TM R050-38
Adhesive Bond Strength	12.4 MPa	1800 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe

Thermal Properties	Metric	English	Comments
CTE, linear	39.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	21.7 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	below Tg
	@Temperature $\leq 55.0^{\circ}\text{C}$	@Temperature $\leq 131^{\circ}\text{F}$	
	100 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	above Tg
	@Temperature $\geq 55.0^{\circ}\text{C}$	@Temperature $\geq 131^{\circ}\text{F}$	
Thermal Conductivity	1.00 W/m-K	6.94 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	120 °C	248 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg	55.0 °C	131 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	
Dielectric Constant	5.3	5.3	
Dielectric Strength	15.0 kV/mm	380 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	120 - 240 min	2.00 - 4.00 hour	
	@Temperature 45.0 °C	@Temperature 113 °F	
	480 - 960 min	8.00 - 16.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	30 - 45 min	30 - 45 min	Mass: 100g; TM R050-17

Descriptive Properties	Value	Comments
Color	Black	
Mix Ratio	13.4:1	Weight
	5.7:1	Volume

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China