

Hexcel® Redux® 830 Two-Part Epoxy Syntactic Paste Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

Redux® 830 is a low density, self-extinguishing, syntactic, room temperature curing, two-part, epoxy paste adhesive. Redux® 830 is supplied as a 1.5 working kit. Features: Low density; Self-extinguishing; Excellent compressive strength up to 100°C/212°F; Easy to mix by hand; Non-slump; Room temperature or warm curing; Gap filling; Service temperature up to 100°C/212°F; Easily sandable after 4 hours at 22°C/72°F; Less than 0.5% (w/w) volatiles emitted during cure. Applications: Potting; Edge filler in honeycomb sandwich constructions.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-Redux-830-Two-Part-Epoxy-Syntactic-Paste-Adhesive.php

Physical Properties	Metric	English	Comments
Density	0.460 g/cc	0.0166 lb/in ³	Part B, Uncured; ASTM D1875-69
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	0.620 g/cc	0.0224 lb/in ³	Cure Cycle: 5 hours at 50°C; ASTM D792
	@Temperature 50.0 °C	@Temperature 122 °F	
	0.650 g/cc	0.0235 lb/in ³	Cure Cycle: 5 days at 22°C; ASTM D792
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	0.720 g/cc	0.0260 lb/in ³	Part A, Uncured; ASTM D1875-69
	@Temperature 25.0 °C	@Temperature 77.0 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	74	74	Dry, Cure Cycle: 5 hours at 50°C
	@Temperature -5.56 °C	@Temperature 22.0 °F	
	75	75	Dry, Cure Cycle: 5 days at 22°C
	@Temperature -5.56 °C	@Temperature 22.0 °F	
Compressive Yield Strength	10.0 MPa	1450 psi	Dry, Cure cycle: 5 hours at 50°C; ASTM D695
	@Temperature 100 °C	@Temperature 212 °F	
	16.0 MPa	2320 psi	Dry, Cure cycle: 5 days at 22°C; ASTM D695
	@Temperature 100 °C	@Temperature 212 °F	
	18.0 MPa	2610 psi	Dry, Cure cycle: 5 days at 22°C; ASTM D695
	@Temperature 60.0 °C	@Temperature 140 °F	
	19.0 MPa	2760 psi	Dry, Cure cycle: 5 days at 22°C; ASTM D695
	@Temperature 80.0 °C	@Temperature 176 °F	

Mechanical Properties	Metric	English	Comments
	19.0 MPa	2760 psi	Dry, Cure cycle: 5 hours at 50°C; ASTM D695
	@Temperature 80.0 °C	@Temperature 176 °F	
	28.0 MPa	4060 psi	Dry, Cure cycle: 5 hours at 50°C; ASTM D695
	@Temperature 60.0 °C	@Temperature 140 °F	
	38.0 MPa	5510 psi	Dry, Cure cycle: 5 hours at 50°C; ASTM D695
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	44.0 MPa	6380 psi	Dry,Cure cycle: 5 days at 22°C; ASTM D695
	@Temperature 22.0 °C	@Temperature 71.6 °F	
Compressive Modulus	1.50 GPa	218 ksi	Dry, Cure cycle: 5 hours at 50°C; ASTM D695
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	1.90 GPa	276 ksi	Dry, Cure cycle: 5 days at 22°C; ASTM D695
	@Temperature 22.0 °C	@Temperature 71.6 °F	
Shear Strength	9.00 MPa	1310 psi	Tensile Lap Shear, Dry, Cure cycle: 5 days at 22°C; EN2243-1
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	10.0 MPa	1450 psi	Tensile Lap Shear, Dry, Cure cycle: 5 hours at 50°C; EN2243-1
	@Temperature 22.0 °C	@Temperature 71.6 °F	

Processing Properties	Metric	English	Comments
Pot Life	70 min	70 min	Mixed, 100g; ASTM 2471 water bath
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Gel Time	15.0 - 20.0 min	15.0 - 20.0 min	
	@Temperature 50.0 °C	@Temperature 122 °F	
	70.0 - 90.0 min	70.0 - 90.0 min	
	@Temperature 22.0 °C	@Temperature 71.6 °F	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature 5.00 - 27.0 °C	@Temperature 41.0 - 80.6 °F	

Descriptive Properties	Value	Comments
Burn Length (mm)	13	BSS7230 Method F4; Flammability Horizontal Direction, 15 Second Ignition, Cure cycle: 5 hours at 50°C
	19	BSS7230 Method F4; Flammability Horizontal Direction, 15 Second Ignition, Cure cycle: 5 days at 22°C

BSS7230 Method F2; Flammability Vertical Direction, 12 Second Ignition, Cure cycle: 5 hours at

Descriptive Properties	57 Value	50°C Comments
	64	BSS7230 Method F2; Flammability Vertical Direction, 12 Second Ignition, Cure cycle: 5 days at 22°C
Color	Cream	Part B
	Pink	Part A
	Purple	Mixed
Extinguishing Time (sec)	0.7	BSS7230 Method F4; Flammability Horizontal Direction, 15 Second Ignition, Cure cycle: 5 hours at 50°C
	0.7	BSS7230 Method F2; Flammability Vertical Direction, 12 Second Ignition, Cure cycle: 5 days at 22°C
	0.8	BSS7230 Method F2; Flammability Vertical Direction, 12 Second Ignition, Cure cycle: 5 hours at 50°C
	1.1	BSS7230 Method F4; Flammability Horizontal Direction, 15 Second Ignition, Cure cycle: 5 days at 22°C
Slump Properties (mm)	1	25°C; BMS5-28
	4	52°C; BMS5-28

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