

3M Scotch-Weld™ TE031 Black Polyurethane Reactive Adhesive

Category : Polymer , Adhesive

Material Notes:

3M™ Scotch-Weld™ Polyurethane Reactive Adhesives are a family of one-component, moisture curing, urethane adhesives. These adhesives are applied warm and bond a wide variety of substrates such as wood, fiber reinforced plastic (FRP) and many other plastics to themselves, to metal and glass. Extrudable grade adhesive with fast set time ideal for bonding a wide variety of plastics including polystyrene and polyacrylic. Information provided by 3M

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-Scotch-Weld-TE031-Black-Polyurethane-Reactive-Adhesive.php

Physical Properties	Metric	English	Comments
Density	>= 1.04 g/cc	>= 0.0376 lb/in ³	
Brookfield Viscosity	14000 cP	14000 cP	Thermosel using spindle #27

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	48	48	
Tensile Strength at Break	24.8 MPa	3600 psi	ASTM D638 Die C
Elongation at Break	750 %	750 %	ASTM D638 Die C
Tensile Modulus	0.0248 GPa	3.60 ksi	ASMT D638 Die C
Shear Strength	4.00 MPa	580 psi	Overlap, Polystyrene, Substrate Failure
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.48 MPa	650 psi	Overlap, Maple
	@Temperature 82.0 °C	@Temperature 180 °F	
	5.45 MPa	790 psi	Overlap, FRP
	@Temperature 82.0 °C	@Temperature 180 °F	
	8.48 MPa	1230 psi	Overlap, Polyacrylic, Substrate Failure
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.24 MPa	1340 psi	Overlap, ABS, Substrate Failure
@Temperature 23.0 °C	@Temperature 73.4 °F		
10.3 MPa	1500 psi	Overlap, Maple	
@Temperature 23.0 °C	@Temperature 73.4 °F		
10.8 MPa	1570 psi	Overlap, Polycarbonate	

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
	12.9 MPa	1870 psi	Overlap, PVC, Substrate Failure
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	18.6 MPa	2700 psi	Overlap, FRP
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Peel Strength	0.175 kN/m	1.00 pli	180°, Aluminum
	0.526 kN/m	3.00 pli	180°, Glass
	9.99 kN/m	57.0 pli	180°, Polyacrylic
	11.9 kN/m	68.0 pli	180°, Polystyrene
	12.3 kN/m	70.0 pli	180°, ABS
	13.7 kN/m	78.0 pli	180°, FRP, Cotton duck failed during testing
	14.7 kN/m	84.0 pli	180°, PVC, Cotton duck failed during testing
	16.7 kN/m	95.0 pli	180°, Polycarbonate, Cotton duck failed during testing

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	121 °C	250 °F	

Processing Properties	Metric	English	Comments
Cure Time	0.500 min	0.00833 hour	Set Time

Descriptive Properties	Value	Comments
Appearance	Black	

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