

Resinlab® UR1049 MDI Based Rigid Polyurethane Foam System

Category : Polymer , Thermoset , Polyurethane, TS , Thermoset Polyurethane Foam, Unreinforced

Material Notes:

Resinlab™ UR 1049 is a, two component, water blown, 4 lb per cubic foot, MDI based rigid polyurethane foam system. It is designed to cure completely at room temperature. Being of a closed cell structure, UR 1049 provides excellent environmental protection while having tenacious adhesion to various metals, plastics and other common assembly materials. UR 1049 has very good resistance to water, acids and bases and most organic compounds due to its thermoset nature and high percentage of closed cells. It provides excellent thermal insulation properties and can withstand 121°C operation as a transient condition. This product was formulated to a convenient mixing ratio of 1 to 1 by volume. It is well suited to automated meter mix operations. UR 1049 is a DOT non-hazardous material and contains no TDI, MOCA, or other reportable substances. Part B is moisture sensitive and must be kept away from atmospheric moisture during storage. After opening a sealed container, thoroughly purge the remaining air space with dry nitrogen (or equivalent) before closing the container. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-UR1049-MDI-Based-Rigid-Polyurethane-Foam-System.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.02 g/cc	1.02 g/cc	Part A
	1.16 g/cc	1.16 g/cc	Mixed
	1.23 g/cc	1.23 g/cc	Part B
Density	0.0641 g/cc	0.00231 lb/in ³	Free Rise Density
Viscosity	250 cP	250 cP	Part B
	600 cP	600 cP	Mixed
	1000 cP	1000 cP	Part A

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	13.8 MPa	2000 psi	
Tensile Modulus	0.0124 GPa	1.80 ksi	
Flexural Strength	14.5 MPa	2100 psi	
Flexural Modulus	0.0165 GPa	2.40 ksi	
Compressive Strength	13.8 MPa	2000 psi	
Compressive Modulus	0.0107 GPa	1.55 ksi	
Poissons Ratio	0.70 - 0.75	0.70 - 0.75	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	93.0 °C	199 °F	Continuous
	121 °C	250 °F	Peak

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.00e+10 ohm-cm	3.00e+10 ohm-cm	
Dielectric Constant	1.6	1.6	
	@Frequency 100 Hz, Temperature 25.0 °C	@Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	13.8 kV/mm	350 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	5.00 - 20.0 min	0.0833 - 0.333 hour	
	1440 - 4320 min	24.0 - 72.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Gel Time	1.25 min	1.25 min	

Descriptive Properties	Value	Comments
Color	Cream	
Cream Time (seconds)	15	
Humidity Resistance (%)	4.2	30 days at 25°C and 95RH
Mix Ratio	1:1	Volume
	85:100	Weight
Rise Time (seconds)	90-120	
Water Absorption (lb/ft3)	0.66	30 days at 20°C

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