

Northstar Polymers FFM-1 Firm-Grade Flexible Open-Cell Foam

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

Material Notes:

This foam formulation is particularly designed to make flexible but firm open-cell foam by either hand-mixing or machine casting. This material may be suitable for products that require some load bearing property but need to be flexible. The firmness of this material is similar to that of microcellular foams, but it is lighter than microcellular foams. This material may also be suitable for some bumper or vibration dampening parts. The components are liquid at room temperature. It has relatively long pot life (40 – 45 seconds) for a flexible foam material, so it is easier to handle by a manual hand-mixing method. This material can be open-cast into a slab for farther fabrication or molded in a compression mold. The free-rise density of the foam is 8 pounds per cubic foot, and the cell structure is open-cell. The isocyanate component for this formulation is MDI, which is generally considered safer than TDI. This formulation does not use auxiliary blowing agent such as Freon, HCFC, CFC, or flammable hydrocarbon materials. Only normal handling for typical industrial chemicals is required. Relatively safe and easy handling and the physical properties of this foam satisfy the requirements for a variety of custom applications. Information provided by Northstar Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Northstar-Polymers-FFM-1-Firm-Grade-Flexible-Open-Cell-Foam.php

Physical Properties	Metric	English	Comments
Density	0.136 g/cc	0.00492 lb/in ³	Free Rise Density

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	35 - 40	35 - 40	
Tensile Strength	0.414 MPa	60.0 psi	
Elongation at Break	40 %	40 %	
Rebound	22 %	22 %	Bashore Rebound
Tear Strength	0.877 kN/m	5.00 pli	Split
	4.73 kN/m	27.0 pli	Die-C

Processing Properties	Metric	English	Comments
Processing Temperature	21.1 - 32.2 °C	70.0 - 90.0 °F	Prepolymer Temperature
	21.1 - 32.2 °C	70.0 - 90.0 °F	Curing Agent Temperature
Mold Temperature	37.8 - 43.3 °C	100 - 110 °F	
Cure Time	30.0 - 40.2 min	0.500 - 0.670 hour	De-mold Time
	@Temperature 43.3 °C	@Temperature 110 °F	
	1440 min	24.0 hour	

Processing Properties	Metric @ Temperature 25.0 °C	English @ Temperature 77.0 °F	Complete Cure Cycle Comments
Pot Life	0.670 min	0.670 min	

Descriptive Properties	Value	Comments
Curing Agent	PLE-016	
Mixing Time	20-25	for manual hand-mix
Prepolymer	MSA-018	
Weight Ratio	1:0.86	Prepolymer to Curing Agent Ratio

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