

## Northstar Polymers MCG-1 000 Scale Microcellular Gel Elastomer

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

### Material Notes:

MCG-1 is formulated for making extremely soft products. MCG-1 has unique structure for this class of material. The cured product will be slightly foamed and give a very soft touch, yet faster responding time than the other polyurethane gel of similar hardness range. MCG-1 has its solid hardness range below Shore OO 1 hardness, or in Shore 000 scale range. This allows a manufacturer to use the molded part at 000 scale without plastic film or coated fabric. Whereas typical polyurethane gel materials have solid range between Shore OO 10 to OO 40 hardness, and if the mixing ratio is modified to obtain a softer range product, the material starts to sag like thick liquid, MCG-1 can service even lower hardness range without being liquid. Another property that is unique to this gel is that since it contains some bubbles inside, it has a property to contract down from the original volume when a deflection force is applied. Regular gel materials do not contract within the same space and need expansion space to deflect, thus typically they are not appropriate for upholstery application. MCG-1 contracts up to a certain point without needing expansion space, thus it can be used as upholstery and bedding applications conveying its softness. The cured part can be directly covered with Spandex type fabric; this allows the part to directly convey the softness of the gel. Suggested applications include: Cushioning and padding parts for sporting goods and medical devices Upholstery application Human-fat simulating products (for doll skins, external breast augmentation etc.) Shock absorbing products Seating products This polyurethane gel material is formulated in such a way that the user can control/choose the hardness/deflection properties of the product. Following is reference for the hardness to the corresponding mixing ratio. Information provided by Northstar Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Northstar-Polymers-MCG-1-000-Scale-Microcellular-Gel-Elastomer.php](http://www.lookpolymers.com/polymer_Northstar-Polymers-MCG-1-000-Scale-Microcellular-Gel-Elastomer.php)

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	21.1 - 32.2 °C	70.0 - 90.0 °F	
Cure Time	15.0 min	0.250 hour	De-mold Time
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	1440 min	24.0 hour	Complete Cure Cycle
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	2.00 - 2.50 min	2.00 - 2.50 min	

Descriptive Properties	Value	Comments
Curing Agent	PAA-033	
Prepolymer	MPA-026	
Weight Ratio	1:8.5	Prepolymer to Curing Agent Ratio

## Contact Songhan Plastic Technology Co.,Ltd.

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