

## Northstar Polymers MPS-F08A Hand-Mixable Flexible Foam

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

### Material Notes:

This foam formulation is designed to make molded flexible foam parts/sheets/dies/blocks by hand-mixing or machine casting by the meter dispensing equipment. The components are stable and liquid at room temperature and ambient pressure. It requires minimum tooling for a small production or short runs. The mixing ratio is simple 1:2 by volume. These properties are ideal in small scale productions for custom foam applications such as custom seating, padding, and cushioning. Generally this medium density foam yields firmer foam comparing to lower density foams. For softer, less firm foam quality, a 6 pound-per-cubic foot formula MPS-F06B is recommended. Or for firmer grade, use firm-flexible foam FFM-1. The free-rise density of the foam is 7.5 pounds per cubic foot, and the cell structure is open-cell. This is an MDI base water-blown polyester/polyether hybrid system, and it does not use flammable or ozone-layer-depleting auxiliary blowing agents

Examples for Applications: Molded Upholstery Parts Custom Seating, Padding, and Cushioning Parts Custom Packaging of Impact/Vibration-Sensitive Items Prototyping Information provided by Northstar Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Northstar-Polymers-MPS-F08A-Hand-Mixable-Flexible-Foam.php](http://www.lookpolymers.com/polymer_Northstar-Polymers-MPS-F08A-Hand-Mixable-Flexible-Foam.php)

| Physical Properties | Metric     | English                    | Comments                    |
|---------------------|------------|----------------------------|-----------------------------|
| Density             | 0.120 g/cc | 0.00434 lb/in <sup>3</sup> | Free Rise Density           |
|                     | 0.128 g/cc | 0.00463 lb/in <sup>3</sup> | Typical Compression Density |

| Mechanical Properties | Metric         | English        | Comments              |
|-----------------------|----------------|----------------|-----------------------|
| Hardness, Shore OO    | 25 - 35        | 25 - 35        |                       |
| Tensile Strength      | 0.331 MPa      | 48.0 psi       |                       |
| Elongation at Break   | 130 %          | 130 %          |                       |
| Compressive Strength  | 0.0241 MPa     | 3.50 psi       |                       |
|                       | @Strain 25.0 % | @Strain 25.0 % |                       |
|                       | 0.0634 MPa     | 9.20 psi       |                       |
|                       | @Strain 50.0 % | @Strain 50.0 % |                       |
| Rebound               | 30 %           | 30 %           | Bashore Rebound       |
| Tear Strength         | 0.596 kN/m     | 3.40 pli       | Split Tear Resistance |

| 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 - 54.4 °C | 100 - 130 °F   |                          |

| Processing Properties | Metric                                  | English                                  | Comments            |
|-----------------------|---|--|---------------------|
| Cure Time             | 18.0 ~ 40.2 min<br>@Temperature 43.3 °C | 0.30 ~ 0.670 hour<br>@Temperature 110 °F | De-mold Time        |
|                       | 60.0 min<br>@Temperature 82.2 °C        | 1.00 hour<br>@Temperature 180 °F         | Complete Cure Cycle |
|                       | 1440 min<br>@Temperature 25.0 °C        | 24.0 hour<br>@Temperature 77.0 °F        | Complete Cure Cycle |
| Pot Life              | 0.500 min                               | 0.500 min                                |                     |

| Descriptive Properties | Value   | Comments                         |
|------------------------|---------|----------------------------------|
| Curing Agent           | PPC-031 |                                  |
| Prepolymer             | MSA-018 |                                  |
| Weight Ratio           | 1:1.7   | Prepolymer to Curing Agent Ratio |

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