

# For use in AL & spray metal molds

## BAYDUR® 730 IBS

Product Information

### Structural Foam RIM System

System Code: U731

#### Description

Baydur 730 IBS is a rigid polyurethane structural foam system used in the reaction injection molding (RIM) process. This system incorporates a specially engineered interactive blowing system (IBS) and is supplied as two reactive liquid components. Component A is a modified polymeric diphenylmethane diisocyanate (PMDI) prepolymer blend, and Component B is a formulated polyol system containing no CFC- or HCFC-blowing additives. *Note: Component B phase-separates upon standing and must be mixed thoroughly via mechanical means prior to use.*

The Baydur 730 IBS system was designed for general-purpose applications and is used in the construction, agricultural, consumer products, industrial, and specialty automotive markets. The applications typically take advantage of the material's strength, as well as its excellent surface finish, large-part capability, and good flowability. As with any product, use of the Baydur 730 IBS system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

#### Typical Physical Properties\* of System

| Property                                     | ASTM Test Method<br>(Other) | Density                   |                            |                            |                            |
|--|-----------------------------|---------------------------|----------------------------|----------------------------|----------------------------|
|  |                             | 25 pcf                    | 35 pcf                     | 40 pcf                     | 48 pcf                     |
| <b>0.250-in Thickness</b>                    |                             |                           |                            |                            |                            |
| Specific Gravity                             | D 792                       | 0.40                      | 0.56                       | 0.64                       | 48                         |
| Shore Hardness                               | D 2240                      | 50 D                      | 60 D                       | 65 D                       | 75 D                       |
| Mold Shrinkage                               | (Bayer)                     | 0.70–0.90%                | 0.70–0.90%                 | 0.70–0.90%                 | 0.70–0.90%                 |
| Tensile Strength at Break                    | D 638                       | 1,200 lb/in <sup>2</sup>  | 2,100 lb/in <sup>2</sup>   | 2,700 lb/in <sup>2</sup>   | 3,400 lb/in <sup>2</sup>   |
| Tensile Elongation at Break                  | D 638                       | 10%                       | 10%                        | 10%                        | 10%                        |
| Flexural Modulus                             | D 790                       | 58,000 lb/in <sup>2</sup> | 110,000 lb/in <sup>2</sup> | 140,000 lb/in <sup>2</sup> | 179,000 lb/in <sup>2</sup> |
| Flexural Strength                            | D 790                       | 2,000 lb/in <sup>2</sup>  | 4,000 lb/in <sup>2</sup>   | 5,000 lb/in <sup>2</sup>   | 7,000 lb/in <sup>2</sup>   |
| Charpy Impact                                | (Bayer)                     | 5.8 ft-lb/in <sup>2</sup> | 10 ft-lb/in <sup>2</sup>   | 13 ft-lb/in <sup>2</sup>   | 16 ft-lb/in <sup>2</sup>   |
| Deflection Temperature Under Load:<br>66 psi | D 648                       | 70°C (149°F)              | 85°C (158°F)               | 94°C (176°F)               | 100°C (203°F)              |
| <b>0.500-in Thickness</b>                    |                             |                           |                            |                            |                            |
| Specific Gravity                             | D 792                       | 0.40                      | 0.56                       | 0.64                       | 0.77                       |
| Shore Hardness                               | D 2240                      | 55 D                      | 65 D                       | 70 D                       | 75 D                       |
| Mold Shrinkage                               | (Bayer)                     | 0.70–0.90%                | 0.70–0.90%                 | 0.70–0.90%                 | 0.70–0.90%                 |
| Tensile Strength at Break                    | D 638                       | 1,300 lb/in <sup>2</sup>  | 1,900 lb/in <sup>2</sup>   | 2,500 lb/in <sup>2</sup>   | 3,500 lb/in <sup>2</sup>   |
| Tensile Elongation at Break                  | D 638                       | 12%                       | 12%                        | 12%                        | 12%                        |
| Flexural Modulus                             | D 790                       | 52,000 lb/in <sup>2</sup> | 100,000 lb/in <sup>2</sup> | 130,000 lb/in <sup>2</sup> | 170,000 lb/in <sup>2</sup> |
| Flexural Strength                            | D 790                       | 2,500 lb/in <sup>2</sup>  | 4,000 lb/in <sup>2</sup>   | 5,500 lb/in <sup>2</sup>   | 7,200 lb/in <sup>2</sup>   |
| Charpy Impact                                | (Bayer)                     | 5.5 ft-lb/in <sup>2</sup> | 8 ft-lb/in <sup>2</sup>    | 10 ft-lb/in <sup>2</sup>   | 12.5 ft-lb/in <sup>2</sup> |
| Deflection Temperature Under Load:<br>66 psi | D 648                       | 70°C (158)°F              | 80°C (176)°F               | 90°C (194)°F               | 100°C (212)°F              |

\* These items are provided as general information only. They are approximate values and are not part of the product specifications.