# Baydur® 661 IBS (30 pcf)

Polyurethane (MDI)

Covestro - PUR

## Message:

Baydur 661 IBS is a gray-pigmented, 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 polymeric diphenylmethane diisocyanate (PMDI), and Component B is a formulated polyol system containing no CFC- or HCFC-blowing additives. Note: Component B should be agitated thoroughly prior to delivery of drum contents to day tank due to possible pigment settling.
The Baydur 661 IBS system is used in transportation, industrial, and recreational markets. The applications typically take advantage of the material's strength, excellent surface finish, and large-part capability. As with any product, use of the Baydur 661 IBS system in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

| General Information | | | |
|---|---|---|---|
| Features | Good strength<br>Excellent appearance | | |
| Uses | Structural Foam<br>Industrial application | | |
| Appearance | Grey | | |
| Processing Method | Reaction Injection Molding (RIM) | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 0.479 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow (6.35 mm) | 0.30 - 0.50 | % | ASTM D955 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness | | | ASTM D2240 |
| Shaw D, 6.35mm | 56 | | ASTM D2240 |
| Shaw D, 12.7mm | 64 | | ASTM D2240 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength | | | ASTM D638 |
| Fracture, 6.35mm | 13.8 | MPa | ASTM D638 |
| Fracture, 12.7mm | 12.4 | MPa | ASTM D638 |
| Tensile Elongation | | | ASTM D638 |
| Fracture, 6.35mm | 7.0 | % | ASTM D638 |
| Fracture, 12.7mm | 7.0 | % | ASTM D638 |
| Flexural Modulus | | | ASTM D790 |
| 6.35 mm | 717 | MPa | ASTM D790 |
| 12.7 mm | 689 | MPa | ASTM D790 |
| Flexural Strength | | | ASTM D790 |
| 6.35 mm | 24.1 | MPa | ASTM D790 |
| 12.7 mm | 26.2 | MPa | ASTM D790 |
| Compressive Strength | | | ASTM D695 |

| | | | |
|---|---|---|---|
| 6.35 mm | 18.6 | MPa | ASTM D695 |
| 12.7 mm | 14.5 | MPa | ASTM D695 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Unnotched Impact Strength | | | Internal method |
| -- [1] | 8.8 | $kJ/m^2$ | Internal method |
| -- [2] | 9.5 | $kJ/m^2$ | Internal method |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, unannealed, 6.35mm | 80.0 | °C | ASTM D648 |
| 0.45 MPa, unannealed, 12.7mm | 90.0 | °C | ASTM D648 |
| **Thermoset** | **Nominal Value** | | |
| Thermoset Components | | | |
| Component a | Mixing ratio by weight: 120 | | |
| Component B | Mixing ratio by weight: 100 | | |

**Additional Information**

Part A
Type: Isocyanate
Appearance: Dark brown liquid
Specific Gravity @ 25°C: 1.24
Viscosity @25°C: 200 cps
Flash Point PMCC: 199°C
NCO: 31.5 wt%
Part B
Type: Polyol
Appearance: Medium gray liquid
Specific Gravity @ 25°C: 1.11
Viscosity @25°C: 1800 cps
Flash Point PMCC: 117°C
Water: 0.35 wt%
Material Temperatures: 32 to 35°CMold Temperature: 55 to 66°CHand Mix Reactivity at 25°C
Cream Time: 16 to 26 sec
Gel Time: 30 to 40 sec
Tack Free Time: 50 to 60 sec
Free-Rise Density: 13 to 15 $lb/ft^3$
Polyol Nucleation Specific Gravity: 0.85 to 0.95 0Recommended Shot Time: 5 to 6 secTypical cure Time, 0.500 in Thickness: 5 sec

| NOTE | |
|---|---|
| 1. | 0.5 |
| 2. | 0.25 in |



Recommended distributors for this material

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