

# MAGNUM™ 3616

## ABS Resin

### Overview

#### Overview:

MAGNUM™ 3616 is a high-heat ABS. Its high impact properties make it suitable for main interior automotive applications requiring ductility at ambient temperature and is used in head-impact areas, e.g. for mid-consoles.

#### Benefits:

- Lot to lot consistency allowing for optimal machine parameters settings from the start
- Self-coloring enabling improvement of costs by using less pigments and lowering your logistic costs
- Low VOC allowing a better interior air quality facing increasing regulatory and OEMs constraints.
- Heat stability during wide range of processing temperatures: enhanced part design freedom

#### Applications:

- Main interior automotive applications
- Mid-consoles
- Door panels
- Door handles
- Pillars

#### Automotive Specifications

- BMW GS 93016
- GM GMW15572P-ABS-T2 Color: Natural
- VAG VW-TL 527 A
- FORD WSS-M4D906-B2
- MERCEDES BENZ DBL 5404.79
- VAG VW-TL 527 B

| Physical                                  | Nominal Value (English)   | Nominal Value (SI)     | Test Method  |
|-------------------------------------------|---------------------------|------------------------|--------------|
| Density                                   | 1.05 g/cm <sup>3</sup>    | 1.05 g/cm <sup>3</sup> | ISO 1183     |
| Apparent (Bulk) Density                   | 0.65 g/cm <sup>3</sup>    | 0.65 g/cm <sup>3</sup> | ISO 60       |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 5.5 g/10 min              | 5.5 g/10 min           | ISO 1133     |
| Molding Shrinkage                         | 4.0E-3 to 7.0E-3 in/in    | 0.40 to 0.70 %         | ISO 294-4    |
| VOC Content                               | 20.0 µg/g                 | 20.0 µg/g              | VDA 277      |
| Mechanical                                | Nominal Value (English)   | Nominal Value (SI)     | Test Method  |
| Tensile Modulus                           | 290000 psi                | 2000 MPa               | ISO 527-1/1  |
| Tensile Stress (Yield)                    | 5510 psi                  | 38.0 MPa               | ISO 527-2/50 |
| Tensile Strain                            |                           |                        | ISO 527-2/50 |
| Yield                                     | 2.8 %                     | 2.8 %                  |              |
| Break                                     | 50 %                      | 50 %                   |              |
| Flexural Modulus <sup>1</sup>             | 290000 psi                | 2000 MPa               | ISO 178      |
| Flexural Stress <sup>1</sup>              | 8990 psi                  | 62.0 MPa               | ISO 178      |
| Impact                                    | Nominal Value (English)   | Nominal Value (SI)     | Test Method  |
| Charpy Notched Impact Strength            |                           |                        | ISO 179/1eA  |
| 73°F (23°C), Injection Molded             | 8.6 ft·lb/in <sup>2</sup> | 18 kJ/m <sup>2</sup>   |              |
| Thermal                                   | Nominal Value (English)   | Nominal Value (SI)     | Test Method  |
| Deflection Temperature Under Load         |                           |                        | ISO 75-2/A   |
| 264 psi (1.8 MPa), Unannealed             | 174 °F                    | 79.0 °C                |              |
| Vicat Softening Temperature               | 225 °F                    | 107 °C                 | ISO 306/B50  |

#### Additional Information

Mass balance versions (bio-based (BIO) or chemically recycled (CR)) of this product are chemically and physically indistinguishable to the standard fossil grade. This technical data sheet applies to all versions. Letters of sameness are available upon request.

| Injection          | Nominal Value (English) | Nominal Value (SI) |
|--------------------|-------------------------|--------------------|
| Drying Temperature | 176 to 194 °F           | 80 to 90 °C        |
| Drying Time        | 2.0 to 4.0 hr           | 2.0 to 4.0 hr      |

#### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> 0.079 in/min (2.0 mm/min)

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