

## Technical Information



# MAGNUM™ 3416SC LE ABS Resin

## Overview

### Overview:

MAGNUM™ 3416SC LE is developed as Low odor high-heat MASS ABS for the automotive industry. MAGNUM™ 3416SC LE resin pellets as well as the parts made by it have less odor, even in a wide process window. It is universally suitable for all interior and exterior applications.

### Benefits:

- Low odor of the resin pellets and parts made by it
- 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 and exterior automotive applications
- Mid-consoles
- Door panels
- Door handles
- Pillars

| 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)         |                           |                        | ISO 1133     |
| 220°C/10.0 kg                     | 6.5 g/10 min              | 6.5 g/10 min           |              |
| 230°C/3.8 kg                      | 2.3 g/10 min              | 2.3 g/10 min           |              |
| Molding Shrinkage                 | 4.0E-3 to 7.0E-3 in/in    | 0.40 to 0.70 %         | ISO 294-4    |
| Mechanical                        | Nominal Value (English)   | Nominal Value (SI)     | Test Method  |
| Tensile Modulus                   | 305000 psi                | 2100 MPa               | ISO 527-1/1  |
| Tensile Stress (Yield)            | 6240 psi                  | 43.0 MPa               | ISO 527-2/50 |
| Tensile Strain                    |                           |                        | ISO 527-2/50 |
| Yield                             | 3.0 %                     | 3.0 %                  |              |
| Break                             | 30 %                      | 30 %                   |              |
| Flexural Modulus <sup>1</sup>     | 305000 psi                | 2100 MPa               | ISO 178      |
| Flexural Stress <sup>1</sup>      | 9720 psi                  | 67.0 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     | 6.7 ft·lb/in <sup>2</sup> | 14 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     | 181 °F                    | 83.0 °C                |              |
| Vicat Softening Temperature       | 226 °F                    | 108 °C                 | ISO 306/B50  |
| Flammability                      | Nominal Value (English)   | Nominal Value (SI)     | Test Method  |
| Flame Rating <sup>2</sup>         |                           |                        | UL 94        |
| 0.06 in (1.5 mm)                  | HB                        | HB                     |              |
| 0.12 in (3.0 mm)                  | HB                        | HB                     |              |
| Carbon Emission <sup>2</sup>      | 20.0 µg/g                 | 20.0 µg/g              | VDA 277      |

| 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)

<sup>2</sup> This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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