

# Menzolit® SMC 0390

Thermoset Polyester

Menzolit Ltd (UK)

## Message:

Menzolit® SMC 0390 is a sheet moulding compound based on unsaturated polyester resin. The product is glass fibre reinforced and contains mineral fillers. In case of fire the product doesn't melt, neither does it form droplets nor is smoke generation excessive. The material is compression moulded in heated steel moulds. It is recommended to work with chrome plated tools. The product contains no halogens.

Menzolit® SMC 0390 is a standard low profile SMC. Because of its low shrinkage, the material shows good surface quality as well as very low warpage. The product is suitable for applications if a better surface quality is necessary that can not be achieved with low shrink material. Because of the low shrinkage, tool design is more difficult and the user should take care for proper part demoulding. Typical applications are furniture, telephone boothies, business machines and housings or covers that call for improved surface quality and dimensional stability. Because of this painting may be desired. Paint adhesion of appropriate paint systems is very good. Chromeplating of punch and cavity surfaces is recommended.

| General Information                  |                                    |       |             |
|--------------------------------------|------------------------------------|-------|-------------|
| UL YellowCard                        | E120779-100101996                  |       |             |
| Filler / Reinforcement               | Glass\Mineral,30% Filler by Weight |       |             |
| Features                             | Flame Retardant                    |       |             |
|                                      | Good Adhesion                      |       |             |
|                                      | Good Dimensional Stability         |       |             |
|                                      | Good Surface Finish                |       |             |
|                                      | Halogen Free                       |       |             |
|                                      | High Heat Resistance               |       |             |
|                                      | Low Shrinkage                      |       |             |
|                                      | Low Smoke Emission                 |       |             |
|                                      | Low Warpage                        |       |             |
| Uses                                 | Business Equipment                 |       |             |
|                                      | Furniture                          |       |             |
|                                      | Housings                           |       |             |
| Appearance                           | Colors Available                   |       |             |
| Forms                                | SMC - Sheet Molding Compound       |       |             |
| Processing Method                    | Compression Molding                |       |             |
| Part Marking Code (ISO 11469)        | >UP-(MD+GF)72<                     |       |             |
| Physical                             | Nominal Value                      | Unit  | Test Method |
| Density                              | 1.90                               | g/cm³ | ISO 1183    |
| Molding Shrinkage                    |                                    |       |             |
| -- <sup>1</sup>                      | 0.0                                | %     | DIN 53464   |
| --                                   | 0.020                              | %     | ISO 2577    |
| Water Absorption (Saturation, 23°C)  | < 0.50                             | %     | ISO 62      |
| Mechanical                           | Nominal Value                      | Unit  | Test Method |
| Tensile Modulus (Compression Molded) | 12000                              | MPa   | ISO 527-2   |

|   |                        |                   |                 |
|---|------------------------|-------------------|-----------------|
| Tensile Stress (Yield, Compression Molded)          | 86.0                   | MPa               | ISO 527-2       |
| Tensile Strain (Break, Compression Molded)          | 1.5                    | %                 | ISO 527-2       |
| Flexural Modulus (Compression Molded)               | 10000                  | MPa               | ISO 178         |
| Flexural Stress (Compression Molded)                | 182                    | MPa               | ISO 178         |
| Compressive Stress                                  | 90.0                   | MPa               | ISO 14126       |
| Poisson's Ratio                                     | 0.30                   |                   | Internal Method |
| Matrix Crazing Strain                               | 0.40                   | %                 | Internal Method |
| Impact  | Nominal Value          | Unit              | Test Method     |
| Charpy Notched Impact Strength (Compression Molded) | 82                     | kJ/m <sup>2</sup> | ISO 179         |
| Thermal   | Nominal Value          | Unit              | Test Method     |
| Heat Deflection Temperature (1.8 MPa, Unannealed)   | > 200                  | °C                | ISO 75-2/A      |
| Continuous Use Temperature                          | 165                    | °C                | Internal Method |
| Glass Transition Temperature                        | 170                    | °C                | DSC             |
| CLTE - Flow   | 1.0E-5                 | cm/cm/°C          | ISO 11359-2     |
| Flammability  | Nominal Value          |                   | Test Method     |
| Flame Rating (3.00 mm)                              | HB                     |                   | UL 94           |
| Injection   | Nominal Value          | Unit              |                 |
| Mold Temperature                                    | 135 to 150             | °C                |                 |
| Injection Pressure                                  | 8.00 to 10.0           | MPa               |                 |
| NOTE  |                        |                   |                 |
| 1.  | Post Molding Shrinkage |                   |                 |

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#### Recommended distributors for this material

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