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## ELIX ABS HH P2MC

High heat resistance ABS plating grade

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### ***Major Benefits***

- . Enhanced heat resistance
- . Better dimensional under heat
- . Excellent balance of heat resistance, impact strength and flowability

### ***Chemical composition***

Acrylonitrile-butadiene-styrene (ABS) copolymer modified with poly(styrene-co-maleimide) (SMI).

### ***Physical form***

White to slightly yellowish pellets.

### ***Handling information***

Please see the Material Safety Data Sheet for relevant health & safety information.

**Typical properties**

| Property  | Test Condition | Unit                    | Standard       | Value   |
|---|----------------|-------------------------|----------------|---------|
| <b>Rheological properties</b>                   |                |                         |                |         |
| Melt volume-flow rate                           | 220°C, 10Kg    | cm <sup>3</sup> /10 min | ISO 1133       | 22      |
| Molding shrinkage, parallel                     | 60x60x2 mm     | %                       | ISO 294-4      | 0.6-0.7 |
| Molding shrinkage, normal                       | 60x60x2 mm     | %                       | ISO 294-4      | 0.6-0.7 |
| <b>Mechanical properties (23°C /50% H.R.)</b>   |                |                         |                |         |
| Yield stress                                    | 50 mm/min      | MPa                     | ISO 527-1,2    | 43      |
| Elongation at break                             | 50 mm/min      | %                       | ISO 527-1,2    | 27      |
| Tensile modulus                                 | 1 mm/min       | MPa                     | ISO 527-1,2    | 2210    |
| Flexural modulus                                | 2 mm/min       | MPa                     | ISO 178        | 2270    |
| Flexural strength                               | 2 mm/min       | MPa                     | ISO 178        | 70      |
| Izod notched impact strength                    | 23 °C          | KJ/m <sup>2</sup>       | ISO 180-1A     | 21      |
| Izod notched impact strength                    | -30 °C         | KJ/m <sup>2</sup>       | ISO 180-1A     | 12      |
| Ball indentation hardness                       |                | N/mm <sup>2</sup>       | ISO 2039-1     | 95      |
| <b>Thermal properties</b>                       |                |                         |                |         |
| Vicat softening temperature                     | B50, 50°C/h    | °C                      | ISO 306        | 103     |
| Deflection temperature under load               | 1.80 MPa       | °C                      | ISO 75-1,2     | 100     |
| Deflection temperature under load               | 0.45           | °C                      | ISO 75-1,2     | 104     |
| CLTE, parallel                                  | 23 to 55°C     | 10 <sup>-4</sup> /K     | ISO 11359 -1,2 | 0.9     |
| Burning behavior UL 94                          | 1.6 mm         | Class                   | UL 94          | HB      |
| Burning rate (US-FMVSS)                         | 200x105x2mm    | mm/min                  | ISO 3795       | < 55    |
| <b>Other properties (23°C)</b>                  |                |                         |                |         |
| Density   | 25°C           | Kg/m <sup>3</sup>       | ISO 1183-1     | 1.04    |
| <b>Processing conditions for test specimens</b> |                |                         |                |         |
| Injection molding-melt temperature              | 240            | °C                      | ISO 294        |         |
| Injection molding-mold temperature              | 70             | °C                      | ISO 294        |         |
| Injection molding-injection velocity            | 240            | mm/s                    | ISO 294        |         |
|   |                |                         |                |         |
|   |                |                         |                |         |
|   |                |                         |                |         |
|   |                |                         |                |         |
|   |                |                         |                |         |

Note : control measurements in other places may issue different results due to influences of machinery, equipment, test method or storage conditions.

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### ***Disclaimer for sales products***

#### Disclaimer for sales products

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#### Test values

Unless specified to the contrary, the values given have been established on standardised test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the colouring.

#### Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

ELIX Polymers, S.L. - E-43006 Tarragona

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[info@elix-polymers.com](mailto:info@elix-polymers.com)