

# XIRAN® SG230

Styrene Maleic Anhydride

Polyscope Polymers BV

## Message:

XIRAN® SG230 are SMA (styrene maleic anhydride) based injection molding compounds with:

high thermal stability

high dimensional stability

excellent surface adhesion properties

XIRAN® SG230 is available in a standard black (B), natural (N) and an extra deep black version (EB-B)

Application areas

XIRAN® SG230 is a 15% glass filled injection molding compound designed for applications with high stiffness-strength. These products are very suitable for painted and foamed parts, high temperature resistance and precision parts with high shot to shot consistency.

| General Information                       |                                   |                   |                 |
|---|-----------------------------------|-------------------|-----------------|
| Filler / Reinforcement                    | Glass Fiber, 15% Filler by Weight |                   |                 |
| Features                                  | Filled                            |                   |                 |
|   | Foamable                          |                   |                 |
|   | Good Adhesion                     |                   |                 |
|   | Good Dimensional Stability        |                   |                 |
|   | Good Thermal Stability            |                   |                 |
|   | High Stiffness                    |                   |                 |
|   | High Strength                     |                   |                 |
|   | Paintable                         |                   |                 |
| Uses                                      | Foam                              |                   |                 |
|   | High Temperature Applications     |                   |                 |
| Appearance                                | Black                             |                   |                 |
|   | Natural Color                     |                   |                 |
| Forms                                     | Granules                          |                   |                 |
| Processing Method                         | Compounding                       |                   |                 |
|   | Injection Molding                 |                   |                 |
| Physical                                  | Nominal Value                     | Unit              | Test Method     |
| Density                                   | 1.17                              | g/cm <sup>3</sup> | ISO 1183        |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 3.0                               | g/10 min          | ISO 1133        |
| Spiral Flow <sup>1</sup>                  | 35.0                              | cm                | Internal Method |
| Molding Shrinkage <sup>2</sup>            |                                   |                   | Internal Method |
| Across Flow                               | 0.61                              | %                 |                 |
| Flow                                      | 0.25                              | %                 |                 |

| Water Absorption (Equilibrium, 23°C, 50% RH) | 0.20   | %                 | ASTM D570   |
|--|--|-------------------|-------------|
| Mechanical                                   | Nominal Value  | Unit              | Test Method |
| Tensile Modulus                              | 5300   | MPa               | ISO 527-2   |
| Tensile Stress (Break)                       | 75.0   | MPa               | ISO 527-2   |
| Tensile Strain (Break)                       | 2.5  | %                 | ISO 527-2   |
| Flexural Modulus                             | 5400   | MPa               | ISO 178     |
| Flexural Stress                              | 120  | MPa               | ISO 178     |
| Impact                                       | Nominal Value  | Unit              | Test Method |
| Charpy Notched Impact Strength               |  |                   | ISO 179/1eA |
| -40°C  | 8.0  | kJ/m <sup>2</sup> |             |
| 23°C   | 9.0  | kJ/m <sup>2</sup> |             |
| Charpy Unnotched Impact Strength             |  |                   | ISO 179/1eU |
| -40°C  | 32   | kJ/m <sup>2</sup> |             |
| 23°C   | 28   | kJ/m <sup>2</sup> |             |
| Notched Izod Impact Strength                 |  |                   | ISO 180/A   |
| -40°C  | 8.0  | kJ/m <sup>2</sup> |             |
| 23°C   | 9.0  | kJ/m <sup>2</sup> |             |
| Thermal                                      | Nominal Value  | Unit              | Test Method |
| Heat Deflection Temperature                  |  |                   |             |
| 0.45 MPa, Unannealed                         | 125  | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed                          | 120  | °C                | ISO 75-2/A  |
| Vicat Softening Temperature                  | 122  | °C                | ISO 306/B   |
| CLTE   |  |                   | ASTM D696   |
| Flow : -30 to 80°C                           | 4.2E-5   | cm/cm/°C          |             |
| Transverse : -30 to 80°C                     | 5.5E-5   | cm/cm/°C          |             |
| Flammability                                 | Nominal Value  |                   | Test Method |
| Flame Rating                                 | HB   |                   | UL 94       |
| Injection                                    | Nominal Value  | Unit              |             |
| Drying Temperature                           | 80.0 to 90.0   | °C                |             |
| Drying Time                                  | 2.0 to 3.0   | hr                |             |
| Rear Temperature                             | 230 to 250   | °C                |             |
| Middle Temperature                           | 230 to 250   | °C                |             |
| Front Temperature                            | 230 to 250   | °C                |             |
| Nozzle Temperature                           | 245 to 275   | °C                |             |
| Processing (Melt) Temp                       | < 285  | °C                |             |
| NOTE   |  |                   |             |
| 1.   | 2 mm   |                   |             |
| 2.   | Measured according to the Autodesk Mold flow Plastics Labs using a tag mold. |                   |             |

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