

# XAREC™ S123

Syndiotactic Polystyrene

Idemitsu Kosan Co., Ltd.

## Message:

XAREC™ S123 is a Syndiotactic Polystyrene (SPS) product filled with 17% glass fiber. It can be processed by injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Primary characteristic: flame rated.

| General Information                                       |                                   |                   |                 |
|-----------------------------------------------------------|-----------------------------------|-------------------|-----------------|
| Filler / Reinforcement                                    | Glass Fiber, 17% Filler by Weight |                   |                 |
| UL File Number                                            | E48268                            |                   |                 |
| Processing Method                                         | Injection Molding                 |                   |                 |
| Physical                                                  | Nominal Value                     | Unit              | Test Method     |
| Density                                                   | 1.14                              | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage                                         |                                   |                   | Internal Method |
| Across Flow                                               | 0.30 to 0.80                      | %                 |                 |
| Flow                                                      | 0.30 to 0.60                      | %                 |                 |
| Water Absorption <sup>1</sup> (Equilibrium, 23°C, 50% RH) | 0.010                             | %                 | ISO 62          |
| Mechanical                                                | Nominal Value                     | Unit              | Test Method     |
| Tensile Modulus                                           | 6200                              | MPa               | ISO 527-2       |
| Tensile Stress (Break)                                    | 85.0                              | MPa               | ISO 527-2       |
| Tensile Strain (Break)                                    | 2.5                               | %                 | ISO 527-2       |
| Flexural Modulus                                          | 5900                              | MPa               | ISO 178         |
| Flexural Stress                                           | 135                               | MPa               | ISO 178         |
| Impact                                                    | Nominal Value                     | Unit              | Test Method     |
| Charpy Notched Impact Strength (23°C)                     | 11                                | kJ/m <sup>2</sup> | ISO 179         |
| Charpy Unnotched Impact Strength (23°C)                   | 40                                | kJ/m <sup>2</sup> | ISO 179         |
| Notched Izod Impact Strength (23°C)                       | 11                                | kJ/m <sup>2</sup> | ISO 180         |
| Unnotched Izod Impact Strength (23°C)                     | 31                                | kJ/m <sup>2</sup> | ISO 180         |
| Thermal                                                   | Nominal Value                     | Unit              | Test Method     |
| Heat Deflection Temperature                               |                                   |                   |                 |
| 0.45 MPa, Unannealed <sup>2</sup>                         | 265                               | °C                | ISO 75-2/B      |
| 1.8 MPa, Unannealed <sup>3</sup>                          | 210                               | °C                | ISO 75-2/A      |
| 1.8 MPa, Unannealed <sup>4</sup>                          | 180                               | °C                | ISO 75-2/A      |
| CLTE                                                      |                                   |                   | TMA             |
| Flow : -30 to 30°C                                        | 2.5E-5                            | cm/cm/°C          |                 |
| Transverse : -30 to 30°C                                  | 5.7E-5                            | cm/cm/°C          |                 |
| Flammability                                              | Nominal Value                     | Test Method       |                 |
| Flame Rating                                              | HB                                | UL 94             |                 |
| Injection                                                 | Nominal Value                     | Unit              |                 |
| Drying Temperature                                        | 120                               | °C                |                 |

|                        |              |    |
|------------------------|--------------|----|
| Drying Time            | 3.0 to 5.0   | hr |
| Processing (Melt) Temp | 280 to 310   | °C |
| Mold Temperature       | 50.0 to 80.0 | °C |

| NOTE |                         |  |
|------|-------------------------|--|
| 1.   | 24h                     |  |
| 2.   | Mold temperature: 150°C |  |
| 3.   | Mold temperature: 150°C |  |
| 4.   | Mold temperature: 80°C  |  |

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