

## XYRON™ X1712

Asahi Kasei Corporation - Polyphenylene Ether + PS

### General Information

#### Product Description

Modified PPE  
40% Filler reinforced Flame retardant V-0  
Stiffness High, Warpage Ultra-Low

#### General

|                                          |                                                 |
|------------------------------------------|-------------------------------------------------|
| Filler / Reinforcement                   | • Glass Flake, 40% Filler by Weight             |
| Additive                                 | • Flame Retardant                               |
| Features AKEP website                    | • Flame Retardant • Halogen Free • Warpage, Low |
| Processing Method                        | • Injection Molding                             |
| Part Marking Code (ISO11469) (ISO 11469) | • >PPE+PS-GS40FR(40)<                           |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                           | Nominal Value | Unit              | Test Method     |
|----------------------------------------------------|---------------|-------------------|-----------------|
| Density                                            | 1.45          | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage <sup>2</sup> (2.00 mm)           | 0.14 to 0.22  | %                 | Internal Method |
| Water Absorption (24 hr, 23°C)                     | 0.060         | %                 | ISO 62          |
| Mechanical                                         | Nominal Value | Unit              | Test Method     |
| Tensile Stress (Yield, 23°C)                       | 68.0          | MPa               | ISO 527         |
| Tensile Strain (Break, 23°C)                       | 1.0           | %                 | ISO 527         |
| Flexural Modulus (23°C)                            | 9200          | MPa               | ISO 178         |
| Flexural Stress (23°C)                             | 118           | MPa               | ISO 178         |
| Impact                                             | Nominal Value | Unit              | Test Method     |
| Charpy Notched Impact Strength <sup>3</sup> (23°C) | 4.0           | kJ/m <sup>2</sup> | ISO 179         |



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| Thermal                                                  | Nominal Value | Unit     | Test Method |
|----------------------------------------------------------|---------------|----------|-------------|
| Deflection Temperature Under Load<br>1.8 MPa, Unannealed | 109           | °C       | ISO 75-2/A  |
| CLTE                                                     |               |          | ISO 11359-2 |
| Flow : -30 to 65°C                                       | 2.6E-5        | cm/cm/°C |             |
| Transverse : -30 to 65°C                                 | 4.4E-5        | cm/cm/°C |             |
| Heat Deflection Temperature - (1.8MPa, Unannealed)       | 110           | °C       | ASTM D648   |
| Electrical                                               | Nominal Value | Unit     | Test Method |
| Surface Resistivity                                      | 1.0E+16       | ohms     | IEC 60093   |
| Volume Resistivity (23°C)                                | 1.0E+16       | ohms·cm  | IEC 60093   |
| Dielectric Constant                                      |               |          | IEC 60250   |
| 100 Hz                                                   | 3.40          |          |             |
| 1 MHz                                                    | 3.30          |          |             |
| Dissipation Factor                                       |               |          | IEC 60250   |
| 100 Hz                                                   | 6.0E-3        |          |             |
| 1 MHz                                                    | 9.0E-3        |          |             |
| Flammability                                             | Nominal Value | Unit     | Test Method |
| Flame Rating (1.5 mm)                                    | V-0           |          | UL 94       |

### Processing Information

| Injection                          | Nominal Value | Unit |
|------------------------------------|---------------|------|
| Drying Temperature - Hot Air Dryer | 90 to 100     | °C   |
| Drying Time - Hot Air Dryer        | 2.0 to 4.0    | hr   |
| Processing (Melt) Temp             | 250 to 300    | °C   |
| Mold Temperature                   | 60 to 90      | °C   |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 150x150x2 mm

<sup>3</sup> 4 mm

