

## XANTAR™ LDS 3760

Mitsubishi Engineering-Plastics Corp - Polycarbonate

### General Information

#### Product Description

LDS (Laser Direct Structuring), Flame retardant (Phosphate), High Flow, Black color only

#### General

|                   |                                        |                            |                  |
|-------------------|----------------------------------------|----------------------------|------------------|
| Additive          | • Flame Retardant                      |                            |                  |
| Features          | • Flame Retardant                      | • High Flow                | • Laser Markable |
| Uses              | • Cell Phones                          | • Laser Direct Structuring |                  |
| Appearance        | • Black                                |                            |                  |
| Processing Method | • 3D Printing, Laser Sintering/Melting |                            |                  |

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

| Physical                                      | Nominal Value | Unit                   | Test Method     |
|-----------------------------------------------|---------------|------------------------|-----------------|
| Density                                       | 1.27          | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)      | 29            | g/10 min               | ISO 1133        |
| Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)    | 28            | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage                             |               |                        | Internal Method |
| Across Flow                                   | 0.40 to 0.60  | %                      |                 |
| Flow                                          | 0.40 to 0.60  | %                      |                 |
| Water Absorption (Saturation, 23°C)           | 0.35          | %                      | ISO 62          |
| Mechanical                                    | Nominal Value | Unit                   | Test Method     |
| Tensile Modulus                               | 2500          | MPa                    | ISO 527-1/1     |
| Tensile Stress (Yield)                        | 60.0          | MPa                    | ISO 527-2/50    |
| Tensile Strain                                |               |                        | ISO 527-2/50    |
| Yield                                         | 5.0           | %                      |                 |
| Break                                         | > 50          | %                      |                 |
| Flexural Modulus <sup>2</sup>                 | 2400          | MPa                    | ISO 178         |
| Flexural Stress <sup>2</sup>                  | 90.0          | MPa                    | ISO 178         |
| Impact                                        | Nominal Value | Unit                   | Test Method     |
| Charpy Notched Impact Strength                |               |                        | ISO 179         |
| -30°C                                         | 20            | kJ/m <sup>2</sup>      |                 |
| 23°C                                          | 55            | kJ/m <sup>2</sup>      |                 |
| Charpy Unnotched Impact Strength              |               |                        | ISO 179         |
| -30°C                                         | No Break      |                        |                 |
| 23°C                                          | No Break      |                        |                 |
| Notched Izod Impact Strength                  |               |                        | ISO 180/4A      |
| -20°C                                         | 20            | kJ/m <sup>2</sup>      |                 |
| 23°C                                          | 55            | kJ/m <sup>2</sup>      |                 |
| Multi-Axial Instrumented Impact Energy (23°C) | 40.0          | J                      | ISO 6603-2      |



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| Thermal                           | Nominal Value | Unit     | Test Method |
|-----------------------------------|---------------|----------|-------------|
| Deflection Temperature Under Load |               |          |             |
| 0.45 MPa, Unannealed              | 105           | °C       | ISO 75-2/B  |
| 1.8 MPa, Unannealed               | 103           | °C       | ISO 75-2/A  |
| Vicat Softening Temperature       | 111           | °C       | ISO 306     |
| CLTE                              |               |          | ISO 11359-2 |
| Flow                              | 6.0E-5        | cm/cm/°C |             |
| Transverse                        | 6.0E-5        | cm/cm/°C |             |
| Electrical                        | Nominal Value | Unit     | Test Method |
| Surface Resistivity               | > 1.0E+15     | ohms     | IEC 60093   |
| Volume Resistivity                | > 1.0E+15     | ohms·cm  | IEC 60093   |
| Dielectric Constant (1 MHz)       | 3.00          |          | IEC 60250   |
| Dissipation Factor (1 MHz)        | 5.0E-3        |          | IEC 60250   |
| Flammability                      | Nominal Value | Unit     | Test Method |
| Flame Rating                      |               |          | UL 94       |
| 0.60 mm                           | V-1           |          |             |
| 1.5 mm                            | V-1           |          |             |

| Processing Information             |               |      |  |
|------------------------------------|---------------|------|--|
| Injection                          | Nominal Value | Unit |  |
| Drying Temperature - Hot Air Dryer | 90 to 100     | °C   |  |
| Drying Time - Hot Air Dryer        | 4.0 to 6.0    | hr   |  |
| Rear Temperature                   | 270 to 310    | °C   |  |
| Middle Temperature                 | 270 to 310    | °C   |  |
| Front Temperature                  | 270 to 310    | °C   |  |
| Nozzle Temperature                 | 270 to 310    | °C   |  |
| Mold Temperature                   | 70 to 100     | °C   |  |

