Automotive Material Solutions
We are committed to producing high-performance materials and developing optimal solutions to create the future for automotives in close partnership with you.
Product Overview

**INTERIOR**
Super Low Gloss ABS, Low Gloss PC/ABS, High Flow PC/ABS, High Stiffness PC/ABS/GF
Plastics for automotive interior applications require various physical properties, like thermal, mechanical, chemical resistant and low TVOC (Total Volatile Organic Compound) properties. Our ABS and PC alloy resins with good physical properties help to improve impact resistance and weight reduction.

**EXTERIOR**
Metal Plating Material, Weather-Resistant ASA, High Modulus PC/PET, High Flow and High Impact PC/PBT
Our engineering plastic resin group including ASA, metal-plating ABS, PC alloy are well suited for exterior applications such as radiator grille, mirror, door handle with excellent weatherability.

**LIGHTING**
High Heat Resistant PBT Alloy, High Heat Resistant ABS, High Gloss-Low Gas PC/ABS
Automotive head lamps are made up of many engineering plastic parts, including polycarbonate lens, bezel, reflector and other intricate components. We provide not only special ABS with low out-gassing but the top-of-the line PBT/PET alloy for direct-metalizing designed to reduce costs and boost productivity.

**STRUCTURE**
Conductive and High Heat Resistant PA/PP/CT, Dimensional Stability PBT/ASA/GF, Low Temperature Impact PC/PBT
Our CNT composite material and special reinforced materials provide effective weight-reduction solutions and excellent dimensional stability benefit for structure consisted of steel and high modulus materials.
Low Gloss ABS, PC/ABS

**SL-0100**
(ABS, Sheet)

**LH-0300**
(ABS, Injection)

**WP-1098**
(PC/ABS)

\textit{INFINO®, starex®} Low Gloss ABS, PC/ABS materials have been developed for non-painting application purpose. This UV stabilized product comes with low gloss level and excellent mechanical properties.

**Benefits**
- Good weatherability
- Good impact strength

**Applications**
- Center fascia
- Air vent cover

**Characteristics**

<table>
<thead>
<tr>
<th>Product Line-up</th>
<th>ABS</th>
<th>PC Alloys</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-0100</td>
<td>SL-0300</td>
<td>WP-1098</td>
</tr>
<tr>
<td>General Purpose</td>
<td>Mid-Heat ABS</td>
<td>PC/ABS (Gloss 30 L)</td>
</tr>
<tr>
<td>Matt ABS (Gloss 10 L)</td>
<td>Mid-Heat ABS (Gloss 30 L)</td>
<td>High impact, Injection</td>
</tr>
<tr>
<td>Low Gloss</td>
<td>PC/ASA (Gloss 30 L)</td>
<td>Injection</td>
</tr>
<tr>
<td>SL-0100</td>
<td>HP-1000XA</td>
<td>WR-7250HS</td>
</tr>
<tr>
<td>Low Heat Resistant</td>
<td>HP-1089</td>
<td></td>
</tr>
<tr>
<td>HP-1098</td>
<td>WP-1098</td>
<td></td>
</tr>
<tr>
<td>Super Low Gloss</td>
<td>HP-1098</td>
<td></td>
</tr>
<tr>
<td>SL-0300</td>
<td>WP-1098</td>
<td></td>
</tr>
<tr>
<td>High Heat Resistant</td>
<td>HP-1098</td>
<td></td>
</tr>
<tr>
<td>SL-0330</td>
<td>WP-1098</td>
<td></td>
</tr>
<tr>
<td>Low GLOSS</td>
<td>WP-1098</td>
<td></td>
</tr>
<tr>
<td>SL-0330</td>
<td>WP-1098</td>
<td></td>
</tr>
<tr>
<td>PC/ABS</td>
<td>SL-0100</td>
<td></td>
</tr>
<tr>
<td>SL-0330</td>
<td>WP-1098</td>
<td></td>
</tr>
<tr>
<td>PC/ABS/GF</td>
<td>WP-1100</td>
<td></td>
</tr>
<tr>
<td>WP-1120</td>
<td>WP-1120</td>
<td></td>
</tr>
</tbody>
</table>

**Gloss Change by Tool Temperature**

<table>
<thead>
<tr>
<th>Tool Temp.</th>
<th>WP-1098</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>30°C</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>60°C</td>
<td>33</td>
<td>40</td>
</tr>
<tr>
<td>90°C</td>
<td>63</td>
<td>76</td>
</tr>
</tbody>
</table>

**Interior**

![Car Interior Image]
Low TVOC ABS

**starrex®** Low TVOC ABS can be used for injection part of automotive interior with a very low total volatile organic compound and well balanced physical, thermal properties.

**BENEFITS**
- Low TVOC: VDA277 (<50μgC/g)
- Fulfilling VW, DBL, BMW, Toyota VOC requirement

**APPLICATIONS**
- Center console
- Window switch panel

**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Low TVOC: VDA 277</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Heat Resistance**

<table>
<thead>
<tr>
<th></th>
<th>SR-0320LT</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDT</td>
<td>94°C</td>
<td>92°C</td>
</tr>
<tr>
<td>Heat Sagging (90°C)</td>
<td>4mm</td>
<td>5mm</td>
</tr>
<tr>
<td>Heat Sagging (95°C)</td>
<td>9mm</td>
<td>10mm</td>
</tr>
</tbody>
</table>

**Impact Strength**

<table>
<thead>
<tr>
<th></th>
<th>SR-0320LT</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charpy 23°C</td>
<td>30 PPM</td>
<td>Ref. A</td>
</tr>
<tr>
<td>Charpy -30°C</td>
<td>25 PPM</td>
<td>Ref. B</td>
</tr>
</tbody>
</table>

High Flow PC/ABS

**INFINO® PC/ABS (WP Series)** is characterized by its high flowability. The product also has excellent material properties with an optimal balance.

**BENEFITS**
- High flowability

**APPLICATIONS**
- Center fascia
- Air vent

**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Impact &amp; Heat Property</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Impact Strength Maintenance Rate**

ISO 180, ISO 179 impact (WP-1069, WP-1089, Reference (PC 65%))

**Thermal Stability**

<table>
<thead>
<tr>
<th>Gloss (ISO)</th>
<th>WP-1069</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>99.1</td>
<td>95.9</td>
<td>101.8</td>
</tr>
<tr>
<td>95.9</td>
<td>101.8</td>
<td>87.6</td>
</tr>
</tbody>
</table>

**Gloss (60°)**

- Before: 95.9
- After: 87.6
- Gloss = 3.2
- Flow mark and discoloration
High Stiffness PC/ABS/GF

**INFINO**. PC/ABS/GF has excellent dimension stability. Its mechanical properties such as impact strength and high stiffness are also reliable.

**BENEFITS**
- Impact strength
- Dimensional stability

**APPLICATIONS**
- Instrument panel
- Glove box
- Metal-back molding

**CHARACTERISTICS**

**Dimensional Stability**

Samsung PC/ABS/GF demonstrates good dimensional stability

**Difference**

Good Adhesion between Resin and GF

“High Modulus & Impact Strength”

**High Flowability**

**Impact Strength**

<table>
<thead>
<tr>
<th>WP-1200</th>
<th>Reference GF 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WP-1100**
**WP-1200**
**WP-1120**

**EXTERIOR**

**ABS**
- METAL PLATING
  - WP-0100 R
  - WP-0117
- BLOW MOLDING
  - BM-0100U

**PC/ASA**
- GENERAL PURPOSE
  - WP-0110
  - WP-0120
- METAL PLATING
  - WP-0141
  - WP-0141G

**PC/PET/MF**
- WP-0200

**PBT/PC**
- PAINTING
  - WP-0200

**PBT/PET/GF**
- WP-0250
Metal Plating Material

starex® Metal Plating ABS is a material that forms stable anchor hole with high-level adhesion strength to its excellent etching performance. The product with uniform rubber dispersion and optimal flowability minimizes the occurrence of pit, thereby resulting in high-quality surface after the plating process is completed. INFINO® Metal plating PC/ABS maintains optimal surface appearance and high-level adhesion through the combination of SAN, rubber size and rubber types.

BENEFITS
• Excellent surface
• High adhesion strength
• Quality consistency

APPLICATIONS
• Radiator grille
• Rear garnish
• Door handle
• Emblem

CHARACTERISTICS
Metal Plating ABS (MP-0160 R, MP-0670)
Good Surface Quality without Pitting
Well dispersed rubber and quality consistency

Good Surface Quality without Pitting
Thermal Cycle Test Result

<table>
<thead>
<tr>
<th>Result (Blister)</th>
<th>Adhesion Strength [g]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP Series</td>
<td>Reference 1</td>
</tr>
<tr>
<td>OK</td>
<td>1,020</td>
</tr>
</tbody>
</table>

*For Cycle Test: 70˚C (1Hr.) → 25˚C (0.5Hr.) → -30˚C (1Hr.) → 25˚C (0.5Hr.)

MP-0670

Good Surface Quality with Pitting
Under etched Pit 4.5
Adhesion 250

Incompletely etched Pit 6.2
Adhesion 387

MP-0160 R

Good Surface Quality without Pitting
Regularly etched Pit 1.7
Adhesion 415

Under etched Pit 4.5
Adhesion 250

WP-1041G

Weather Resistant ASA

starex® WX Series shows balanced properties such as heat resistance and impact strength. The product has gone through rigorous weather resistance tests in order to minimize color fastness and discoloration, targeting exterior materials market.

BENEFIT
• Superior weather performance
• High impact resistance
• Longer term retention of “Fresh and New” appearance

APPLICATION
• Outside mirror
• Radiator grille
• Pillar

CHARACTERISTIC

<table>
<thead>
<tr>
<th>CLASS</th>
<th>Weatherability (3,000h)</th>
<th>Impact Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>Delta E</td>
<td>Gloss Retention</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional ASA</td>
<td>5~18</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>starex® WX Series</td>
<td>≥ 3</td>
<td>25~40%</td>
</tr>
</tbody>
</table>

Grade Selection
Heat Resistance
High Heat Resistance
Super High Heat Resistance

<table>
<thead>
<tr>
<th>WX-9300UV</th>
<th>WX-9310UV</th>
<th>WX-9330UV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional ASA</td>
<td>5~18</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>starex® WX Series</td>
<td>≥ 3</td>
<td>25~40%</td>
</tr>
</tbody>
</table>

Properties

<table>
<thead>
<tr>
<th>Grade</th>
<th>WX-9300UV</th>
<th>WX-9310UV</th>
<th>WX-9330UV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Resistance</td>
<td>FDI (N.G)</td>
<td>3,430 / 28</td>
<td>3,400 / 28</td>
</tr>
<tr>
<td>Dupont Drop (Distortion Rate)</td>
<td>12%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Weatherability (3,000h)</td>
<td>dE</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Gloss Retention</td>
<td>44%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>MI</td>
<td>12</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>VST</td>
<td>98</td>
<td>101</td>
</tr>
</tbody>
</table>
Weather Resistant PC/ASA

WR-7000
WX-7010

INFINO® PC/ASA demonstrates superior weatherability performance with well-balanced properties such as impact strength, heat resistance and flow, targeting various exterior applications.

**BENEFITS**
- Superior weatherability
- High Impact resistance
- Good thermal stability
- Good flowability

**APPLICATIONS**
- Radiator grill
- Outside mirror
- Roof rack
- Rear spoiler

**CHARACTERISTICS**

PC/ASA WR-7000

WR-7000 Reference

PC/ASA WX-7010

WR-7000 Reference

High Modulus PC/PET

AE-2030
AE-2130
AE-2230

INFINO® PC/PET and PC/PET/MF demonstrate better paintability while minimizing surface defects after the painting process is completed, thanks largely to its excellent dimensional stability, high toughness and low CLTE.

**BENEFITS**
- High impact strength
- Good toughness and low CLTE
- Dimensional stability

**APPLICATIONS**
- Radiator grille
- Door handle
- Rear spoiler
- Garnish

**CHARACTERISTICS**

PC/PET AE-2030

Surface Quality

<table>
<thead>
<tr>
<th></th>
<th>AE-2030</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloss (60°)</td>
<td>98</td>
<td>80</td>
</tr>
</tbody>
</table>

In AE-2030, 75°C x 10^-6 has better gloss and shows good paintability.

PC/PET/MF AE-2130, AE-2230

Improved Surface Quality

<table>
<thead>
<tr>
<th>Schematic Diagram</th>
<th>Injection Molding Specimen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gate</td>
</tr>
<tr>
<td>Gate</td>
<td>MF dispersion optimizes Good surface finish</td>
</tr>
<tr>
<td>Gate</td>
<td>MF aggregation Flash, flow mark</td>
</tr>
</tbody>
</table>

AE-2130: 5% MF, AE-2230: 20% MF
High Flow and High Impact PC/PBT

**AE-3060**

*INFINO* PC/PBT is designed for automotive exterior applications as it has high impact strength and chemical resistance, excellent dimensional stability and stable injection molding capability.

**BENEFITS**
- High toughness
- Good dimensional stability
- High flowability

**APPLICATIONS**
- Door handle
- Roof rack
- Pillar

**CHARACTERISTICS**

**High Flowability**

- Spiral Flow Test
- AE-3060 shows the highest flowability at the same condition

**High Impact Strength**

- Notched IZOD
- AE-3060 shows the highest impact performance at room/low temp

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**APPLiCATiONs**

- Door handle
- Roof rack
- Pillar

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**CHArACTEriSTiCS**

- Good impact performance at room/low temp
- Mold temp.: 60°C
- Nozzle temp.: 260°C
- Specimen thickness.: 2mm

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**AE-3060 shows the highest flowability at the same condition**

---

**AE-3060 shows the highest impact performance at room/low temp**
High Heat Resistant PBT

ASF Series
ASF-9810F
ASF-9810FM
ASF-9810FL

Materials for Head Lamp Bezel require excellent surface quality as well as low gas output, easy mold release and high heat resistance. INFINO® ASF Series has applied well-tailored additive system for remarkable less mold deposit, allowing for direct metallization that helps cut production costs.

**BENEFITS**
- High heat resistance
- High gloss surface
- Low gas
- Easy mold release

**APPLICATIONS**
- Head lamp bezel
- Fog lamp bezel
- Rear lamp reflector

**CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Easy Mold Release</th>
<th>ASF Series</th>
<th>Conventional PBT</th>
</tr>
</thead>
</table>

On top of high heat resistance, the product adopts top-of-the-line lubricants specially designed to improve mold release even when there is no under cut on the back of the product.

<table>
<thead>
<tr>
<th>Special Surface Roughness</th>
</tr>
</thead>
</table>

The use of amorphous materials has improved the surface flatness significantly, resulting in an optimal surface quality for direct metallization.

| Reduce Cooling Time |

The optimization of re-crystallization temperature can reduce the cooling time for injection molding by more than 20%, allowing for an important cost-reduction during the production process.

**High Gloss-Low Gas PC/ABS**

INFINO® PC/ABS (HP Series) is characterized by its high gloss. The products come with low gas generation and well-balanced physical properties, targeting various lighting applications.

**HP-1000X**
**HP-1000XA**
**HP-1000XG**

**BENEFITS**
- High gloss
- High heat resistance
- High impact resistance
- Low gas

**APPLICATIONS**
- Rear lamp housing
- Center high mounting stop lamp
- Rear lamp reflector

**CHARACTERISTICS**

| High Flowability |

INFINO® HP Series
Reference

| Spiral Test |

| Melt Flow (250°C, 2.16kgf) |

| 37g/10min | 34g/10min |

| Low Out Gassing |

**Fogging test (250°C, 1H)**

| ASF Series | Conventional PBT |

**Heat Flow (W/g)**

| Temperature (°C) |

| 150°C | 200°C | 250°C |

| 0.0 | 0.5 | 1.0 |

For more detailed information, please refer to the ASF Series Reference.
**Diffusion PC**

**LT-1220**

*INFINO®* Diffusion PC is designed for light guide plate in head lamp and rear lamp application as it offers excellent light diffusion effect, high flow for complex structure, high heat resistance as well as customized color variety.

**APPLICATIONS**

- Light guide plate
- Inner lens

**CHARACTERISTICS**

**Uniformed Lighting Image (without LED Hot Spot)**

<table>
<thead>
<tr>
<th>Material</th>
<th>LT-1220</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMMA Red Covering</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>PMMA Clear Covering</td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Hard Coating PC Covering</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**UV Resistance**

<table>
<thead>
<tr>
<th>Combination</th>
<th>Δ E (SAE J 1960, 2000K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMMA Red Covering</td>
<td>1.3</td>
</tr>
<tr>
<td>PMMA Clear Covering</td>
<td>1.5</td>
</tr>
<tr>
<td>Hard Coating PC Covering</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**BENEFITS**

- High flowability
- High heat resistance
- High impact resistance
- No LED hot spot
- Uniformed diffusion image

**APPLICATIONS**

- Light guide plate
- Inner lens

**CHARACTERISTICS**

- High flowability
- High heat resistance
- High impact resistance
- No LED hot spot
- Uniformed diffusion image

**APPLY**

- **Light guide plate**
- **Inner lens**

**DIFFUSION PC**

**INFINO®**

Diffusion PC is designed for light guide plate in head lamp and rear lamp application as it offers excellent light diffusion effect, high flow for complex structure, high heat resistance as well as customized color variety.
Conductive and High Heat Resistant PA/PPE/CNT

CA-7000

Plastic fenders give not only over 40% weight reduction effect but design freedom compared with steel fenders. INFINO® PA/PPE/CNT with conductive and high heat resistant properties can provide lightweight solution.

**BENEFITS**
- High heat resistance
- Weight reduction
- Design freedom
- Conductivity
- Dimensional stability

**APPLICATIONS**
- Fender
- Fuel filler door
- Body panel

**CHARACTERISTICS**

**Thermal Stability and High Impact Property**

**Sagging Test**

- Elastic modulus (E') at 205°C
- CA-7000 = 170 MPa
- Reference = 63 MPa

**DMTA Measurement (2 point bending)**
- Temp. range: 20 ~ 240°C
- Scanning rate: 5°C/min.
- Frequency: 1Hz

**Lower Moisture Absorption**

CA-7000 is engineered to have lower moisture absorption ratios than other comparable products in the market.

**Better Surface Quality**

SAMSUNG SDI has adopted CNT (Carbon Nano Tube) composite for producing conductive fillers. Conductive PA/PPE/CNT grades can be used for the electrostatic painting process without conductive primers. This advantage also allows for fewer production processes and lower manufacturing costs.

**CNT Composite is Better Surface Quality than Carbon Fiber**

**DMTA Measurement**

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>CA-7000</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>10.0</td>
<td>8.0</td>
</tr>
<tr>
<td>100</td>
<td>8.0</td>
<td>5.0</td>
</tr>
<tr>
<td>150</td>
<td>6.0</td>
<td>4.0</td>
</tr>
<tr>
<td>200</td>
<td>4.0</td>
<td>2.0</td>
</tr>
<tr>
<td>250</td>
<td>2.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Oven Condition**

- Temp. range: 200°C/1hr.

**Submerged in water @RT**

- Time (days)
Dimensional Stability PBT/ASA/GF

AR-5300H  AR-5210  AR-5110

Automotive OEMs are developing new models equipped with panorama sunroof in response to its popularity in the market. But the complicated design and specialized functions of roof module lead to increase the weight. INFINO® PBT/ASA/GF (AR Series) developed for plastic sunroof frame provides excellent dimensional stability with a competitive lightweight solution.

**BENEFITS**
- Dimensional stability
- Weight reduction
- Part integration
- High flowability, High stiffness

**APPLICATIONS**
- Panoramic sunroof frame

The plastic frame for panorama sunroofs can cut the weight by as much as 40% compared with its steel counterpart.

**CHARACTERISTICS**
INFINO® PBT/ASA/GF (AR Series) has better transverse mold shrinkage rate than other comparable materials in the market. It also has lower CLTE, which helps reduce deformation after injection molding and bolsters dimensional stability.

### TD Shrinkage Comparison

#### Mechanical Direction CLTE

<table>
<thead>
<tr>
<th>GF 10%</th>
<th>GF 20%</th>
<th>GF 30%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Transverse Direction CLTE

<table>
<thead>
<tr>
<th>GF 10%</th>
<th>GF 20%</th>
<th>GF 30%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Low Temperature Impact PC/PBT

AE-3063I

INFINO® PC/PBT (AE-3063I) is designed for automotive bumper and energy absorber applications as it has low temperature impact strength, chemical resistance, and high flowability.

**BENEFITS**
- High toughness
- Good dimensional stability
- Chemical resistance
- Good flow properties

**APPLICATIONS**
- Bumper beam
- Energy absorber

**CHARACTERISTICS**

### Impact Strength Comparison

INFINO® PC/PBT (AE-3063I) has better impact strength at wide temperature range than other comparable materials in the market.

### Flowability

<table>
<thead>
<tr>
<th>Test Condition</th>
<th>AE-3063I</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MI=260°C, 5kg</td>
<td>MI=21, MI=14</td>
</tr>
</tbody>
</table>

INFINO® PC/PBT (AE-3063I) can help to make a big part injection molding and it has superior impact absorption energy.
<table>
<thead>
<tr>
<th>Properties</th>
<th>Physical Properties</th>
<th>Mechanical Properties</th>
<th>Thermal Properties</th>
<th>Material Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Method</td>
<td>ASTM D-790</td>
<td>ISO 1183</td>
<td>ASTM D-1238</td>
<td>ISO 1133</td>
</tr>
<tr>
<td>Test Condition</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>g/cm³</td>
<td>kgf/cm²</td>
<td>KJ/m²</td>
<td>g/100°C/hr</td>
</tr>
<tr>
<td>Melt Flow Index</td>
<td>g/10 min</td>
<td>kgf/cm²</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Melting Point</td>
<td>°C</td>
<td>g/10 min</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Tenacity</td>
<td>MPa</td>
<td>kgf/cm²</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>MPa</td>
<td>kgf/cm²</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>MPa</td>
<td>kgf/cm²</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Izod Impact (Notched)</td>
<td>KJ/m</td>
<td>KJ/m</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Charpy Impact</td>
<td>KJ</td>
<td>KJ</td>
<td>KJ/m²</td>
<td>-</td>
</tr>
<tr>
<td>Hardness VST</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
</tr>
</tbody>
</table>

### Materials

**Polymer**

- **AS**
  - ASA
  - GFR-ASA
- **Metal Filling ABS**
- **PC/ABS**
- **PC**
- **PW-1071**
- **MG-0330**
- **SL-0100**
- **WP-1200**

**Other**

- **Test**
  - Specific Gravity
  - Melt Flow Index
  - Melting Point
  - Tenacity
  - Flexural Strength
  - Flexural Modulus
  - Izod Impact (Notched)
  - Charpy Impact
  - Hardness VST

**Applications**

- **Lighting**
  - **PC/ABS** (High Impact)
  - **PC/ABS** (High Flow)
  - **PC/ABS** (Semi-suppressed)
  - **PC/ABS** (Radiator Grille, Side Mirror)
  - **PC/ABS** (Panorama Sunroof Frame)
  - **PC/ABS** (Rear Lamp Housing)
  - **PC/ABS** (I/P Part, Center Fascia)
  - **PC/ABS** (Housing, Roof Rack)
  - **PC/ABS** (Radiator Grille, Energy Absorber)
  - **PC/ABS** (Rear Lamp Housing)
  - **PC/ABS** (Key Application)
  - **PC/ABS** (Test SOP/Spec Set)
  - **PC/ABS** (PC/ASA/PC/PBT/ASA/GF)
  - **PC/ABS** (PC/PET/PC/ASA/PC/PET/ASA/GF)
  - **PC/ABS** (PC/PET/PC/ASA/PC/PET/ASA/GF)

- **Interior**
  - **Rear Lamp Housing**
  - **Interior Part**
  - **Low Gloss ABS**
  - **High Heat ABS**
  - **Standard Part**
  - **Low Gloss ABS**

- **Exterior**
  - **Rear Lamp Housing**
  - **Exterior Part**
  - **Low Gloss ABS**
  - **High Heat ABS**
  - **Standard Part**
  - **Low Gloss ABS**

### Notes

- Specific Gravity: g/cm³
- Melt Flow Index: g/10 min
- Melting Point: °C
- Tenacity: MPa
- Flexural Strength: MPa
- Flexural Modulus: MPa
- Izod Impact (Notched): KJ/m
- Charpy Impact: KJ
- Hardness VST: %
Integrated Solutions

We provide integrated solutions to help you to be more innovative and more efficient. To enhance long-term success of our customers and partners we have developed sustainable and advanced products and solutions.

Global Network

HEADQUARTERS (1)

GLOBAL SUBSIDIARY (5)

SALES OFFICE (18)

PLANT (3)

**Integrated Solutions**

- **Material Solution**
  - Broad product line-up and differentiation
  - Speedy development
  - Cost reduction

- **Design Solution**
  - Advanced design and material solution
  - Application development
  - Advanced technology, CAE support

- **Technical Solution**
  - Global tech support
  - Enhancing productivity
  - Process solution
  - Global quality control

- **EcoWay Solution**
  - Eco-friendly production process
  - Non-painting materials
  - PCM based recycled plastics

- **Global Supply Chain Solution**

We provide integrated solutions to help you to be more innovative and more efficient. To enhance long-term success of our customers and partners we have developed sustainable and advanced products and solutions.
Value your imagination

We provide value to turn your imagination into reality with our innovative materials and optimal solutions.

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