

**PRODUCT DESCRIPTION - DATA SHEET**

PO853DT is a halogen-free flame retardant polycarbonate based resin range available in standard and customized colors. In addition to good flammability performance, making it easy processing at low temperature for a wide variety of applications in aircraft interiors.

**Features**

- Flame Retardant: Compliance with CCAR25.853 (a)&(d) which thicknesses range from 1.5mm to 4mm
- Texture: Low gloss brings texture aesthetics
- Color: Custom Colors
- Formability: Extruding for 3-D designed vacuum forming and injection molding

**Application**

- Seating and arm rests
- Window surrounds
- Door shrouds and structural supports
- Interior components application
- Galley equipment

| Properties                        | Standard                        | Condition            | Unit                  | Value |
|-----------------------------------|---------------------------------|----------------------|-----------------------|-------|
| <b>Mechanical Properties</b>      |                                 |                      |                       |       |
| Tensile Strength                  | ISO 527                         | 50 mm/min            | MPa                   | 75    |
| Tensile Strength at Break         | ISO 527                         | 50 mm/min            | %                     | 95    |
| Flexural Stress                   | ISO 178                         | 2 mm/min             | MPa                   | 105   |
| Flexural Modulus                  | ISO 178                         | 2 mm/min             | MPa                   | 2600  |
| Izod Impact (Notched)             | ISO 180                         | 5.5 J                | kJ/m <sup>2</sup>     | NB    |
| <b>Flame Retardant Properties</b> |                                 |                      |                       |       |
| Vertical Burning                  | CCAR25.853(a) Appendix F Part 1 | 12 s                 | -                     | Pass  |
| Vertical Burning                  | CCAR25.853(a) Appendix F Part 1 | 60 s                 | -                     | Pass  |
| Heat Release (Max)                | CCAR25.853(d) Appendix F Part 4 | 35 kW/m <sup>2</sup> | kW/m <sup>2</sup>     | ≤65   |
| Heat Release (Total)              | CCAR25.853(d) Appendix F Part 4 | 35 kW/m <sup>2</sup> | kW*min/m <sup>2</sup> | ≤65   |
| Smoke Density 4Dm                 | CCAR25.853(d) Appendix F Part 5 | 25 kW/m <sup>2</sup> | /                     | ≤200  |
| Smoke Toxicity                    | HB7066                          | 25 kW/m <sup>2</sup> | /                     | Pass  |
| <b>Heat Properties</b>            |                                 |                      |                       |       |
| Heat Deflection Temp.             | ISO 75-1, -2                    | 1.80 MPa             | °C                    | 94    |
| Vicat Softening Temp              | ISO 306                         | B /120               | °C                    | 113   |
| <b>Physical Properties</b>        |                                 |                      |                       |       |
| Density                           | ISO 1183                        | 23 °C                | g/m <sup>3</sup>      | 1.33  |
| Gloss                             | ISO 2813                        | 60°                  | -                     | 20~30 |

**POLYLINE™ PO853DT**  
Flame Retardant Polycarbonate

| <b>Injection Molding</b>  | <b>Unit</b> | <b>Condition</b> |
|---------------------------|-------------|------------------|
| Drying Temperature        | °C          | 95~100           |
| Drying Time               | h           | 3-6              |
| Melt Temperature          | °C          | 250~280          |
| Nozzle Temperature        | °C          | 245~275          |
| Front-Zone 3 Temperature  | °C          | 250~280          |
| Middle-Zone 2 Temperature | °C          | 240~270          |
| Rear-Zone 1 Temperature   | °C          | 230~250          |
| Mold Temperature          | °C          | 50~80            |
| Back Pressure             | MPa         | 0.3~0.7          |
| Screw Speed               | rpm         | 40~70            |
| Shot to Cylinder Size     | %           | 40~60            |
| Vent Depth                | mm          | 0.025            |

1) Above values are measured at 23°C and RH 50%. These values are typical values only, not specifications.

2) In case of colored products, these figures might vary slightly.

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