

Solvay Specialty Polymers Ixef® 2057 Polyarylamide (PARA), 45% Mineral Filler

Categories: [Polymer](#); [Thermoplastic](#); [Polyamide-imide \(PAI\)](#)

Material Notes: Ixef 2057 is a 45% mineral-reinforced polyarylamide which exhibits high strength and stiffness, and outstanding surface gloss. Due to its mineral reinforcement, Ixef 2057 resin mold with very low warpage.

- Black: Ixef 2057/9000
- Custom Colorable

Features: Good Chemical Resistance; Good Creep Resistance; Good Dimensional Stability; Good Strength; High Flow; High Stiffness; Low Moisture Absorption; Low Warpage; Outstanding Surface Finish

Uses: Appliance Components; Appliances; Automotive Applications; Automotive Under the Hood; Bushings; Business Equipment; Furniture; Gears; Industrial Applications; Lawn and Garden Equipment; Machine/Mechanical Parts; Metal Replacement; Power/Other Tools

Availability: Africa & Middle East; Asia Pacific; Europe; North America; South America

Hot Runners: 250°C to 260°C (482°F to 500°F)
Injection Pressure" rapid

Drying

The material as supplied is ready for molding without drying. However, If the bags have been open for longer than 24 hours, the material needs to be dried. When using a desiccant air dryer with dew point of -28°C (-18°F) or lower, these guidelines can be followed: 0.5-1.5 hour at 120°C (248°F), 1-3 hours at 100°C (212°F), or 1-7 hours at 80°C (176°F).

Injection Molding

IXEF 2057 compound can be readily injection molded in most screw injection molding machines. A general purpose screw is recommended, with minimum back pressure.

The measured melt temperature should be about 280°C (536°F), and the barrel temperatures should be around 250 to 260°C (482 to 500°F) in the rear zone, gradually increasing to 260°C to 290°C (500°F to 554°F) in the front zone. If hot runners are used, they should be set to 250°C to 260°C (482°F to 500°F).

To maximize crystallinity, the temperature of the mold cavity surface must be held between 120°C and 140°C (248°F and 284°F). Molding at lower temperatures will produce articles that may warp, have poor surface appearance, and have a greater tendency to creep. Set injection pressure to give rapid injection. Adjust holding pressure and hold time to maximize part weight. Transfer from injection to hold pressure at the screw position.

Information provide by Solvay Specialty Polymers

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.61 g/cc	0.0582 lb/in ³	ISO 1183
Water Absorption	0.180 %	0.180 %	24 hrs; ISO 62
Linear Mold Shrinkage	0.00400 - 0.00500 cm/cm	0.00400 - 0.00500 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	100 MPa	14500 psi	ISO 527-2
Elongation at Break	1.60 %	1.60 %	ISO 527-2
Tensile Modulus	12.0 GPa	1740 ksi	ISO 527-2
Flexural Modulus	12.0 GPa	1740 ksi	ISO 178
Flexural Strength	170 MPa	24700 psi	ISO 178
Izod Impact, Unnotched	3.00 J/cm	5.62 ft-lb/in	ASTM D256
Izod Impact, Notched	0.350 J/cm	0.656 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	14.0 µm/m-°C	7.78 µin/in-°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	150 °C	302 °F	Unannealed; ISO 75-2/A
Flammability, UL94	HB	HB	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	250 - 260 °C	482 - 500 °F	
Front Barrel Temperature	260 - 290 °C	500 - 554 °F	
Melt Temperature	280 °C	536 °F	
Mold Temperature	120 - 140 °C	248 - 284 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	0.500 - 1.50 hour	0.500 - 1.50 hour	
Back Pressure	0.000 - 1.00 MPa	0.000 - 145 psi	

Descriptive Properties	
Additional Properties	Moisture Absorption - Internal Method: 1.8 %
Appearance	Black; Colors Available
Forms	Pellets

Processing Method

Injection Molding

RoHS Compliance

RoHS Compliant

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.