PRODUCT DATA SHEET

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Polypropylene Impact Copolymer

CMR648

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MFR: 8.5 g/10min

Density: 0.904 g/cm^3

Features

- Medium flow
- Recommended for use in applications where superior impact properties and toughness are required
- Excellent balance between impact and stiffness properties
- Excellent impact toughness at low temperatures (as low as -30°C)
- Contains a nucleating agent which ensures rapid crystallisation, resulting in an improved impact to stiffness balance as well as shorter cooling times

Applications

Injection moulding

- Bottle crates
- Dairy and industrial crates
- Transport and storage containers
- Folding boxes
- Buckets
- Tool cases
- Garden tools

Additives

- Antioxidant
- Processing stabiliser
- Acid scavenger
- Nucleating agent
- Antistatic

Typical properties (not to be construed as specifications)		Value (SI)	Value (English)	Method
Resin Properties	Melt mass-flow rate – MFR (230/2.16)	8.5 g/10min	8.5 g/10min	ISO 1133
	Moulding Shrinkage – S_{Mp} / S_{Mn}	1.4 / 1.3 %	1.4 / 1.3 %	ISO 294-4
Physical Properties	Flexural modulus	1 000 MPa	145 035 psi	ISO 178
	Tensile modulus of elasticity	1 050 MPa	152 290 psi	ISO 527-2
	Tensile stress at yield	21 MPa	3 045 psi	ISO 527-2
	Tensile strain at yield	6.0 %	6.0 %	ISO 527-2
	Tensile strain at break	>50 %	>50 %	ISO 527-2
	Charpy notched impact strength (23°C)	50 kJ/m^2	24 ft·lbf/in^2	ISO 179-1
	Charpy notched impact strength (0°C)	10 kJ/m^2	4.8 ft·lbf/in^2	ISO 179-1
	Charpy notched impact strength (-20°C)	7.0 kJ/m^2	3.4 ft·lbf/in^2	ISO 179-1
	Ball indentation hardness – HB	45 N/mm^2	6 525 psi	ISO 2039-1
Thermal Properties	Melting temperature – DSC	168°C	334°F	ISO 11357-3
	Heat deflection temperature – HDT / A (1.8 MPa)	48°C	118°F	ISO 75-2
	Heat deflection temperature – HDT / B (0.45 MPa)	80°C	176°F	ISO 75-2
	Vicat softening temperature – VST / A120 (10 N)	144°C	291°F	ISO 306

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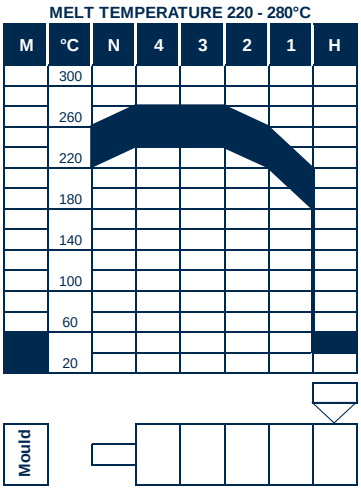
Typical processing conditions – CMR648

Injection moulding



Handling

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal protection to prevent possible mechanical or thermal injury to the eyes. Fabrication areas should be ventilated to carry away fumes or vapours. Please consult the material safety data sheet (SDS) for more detailed information.

Storage

As ultraviolet light may cause a change in material properties, all resins should be protected from direct sunlight during storage. If stored in cool (<25˚C), dry area with low ambient light levels, polyolefin resins are expected to maintain their original material and processing properties for at least 12 months.

Combustibility

Polypropylene resins will burn when supplied adequate heat and oxygen. They should be handled and stored away from contact with direct flames and/or other ignition sources. In burning, polypropylene resins contribute high heat and may generate a dense black smoke. Fires can be extinguished by conventional means with water, water mist being preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus.

Conveying

Conveying equipment should be designed to prevent accumulation of fines and dust particles that are contained in all polypropylene resins. The fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used:

- be equipped with adequate filters
- is operated and maintained in such a manner to ensure no leaks develop
- that adequate grounding exists at all times

It is further recommended that good housekeeping is practiced throughout the facility.

Regulatory & Legal Compliance

This material complies with FDA regulation 21 CFR 177.1520 when used unmodified and according to good manufacturing practices for food contact applications. Refer to applicable food contact compliance statement which is available on request.

This material is not medically approved and should therefore not be used in any such application.