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TERRAMAC

Molding Conditions for TERRAMAC resins

Injection molding conditions

<Basic and high-impact grades:TE-2000,TE-1030,TE-1070>

Nozzle	Cylinder temperature (°C)				Limit temperature (°C)	Mold temperature (°C) (actual surface temperature)	Back pressure (kgf/cm ²) (gauge pressure)
	Front	Middle	Rear				
180~220	180~220	180~220	130~170	240	10~30	5~15	

* Use of chillers is recommended for controlling the mold temperature. Higher mold temperature may results in troubles in molding such as whitening, improper release of the molded products, and others.

<Heat-resistant and high-durability grades:TE-7000,TE-7307,TE-7300,TE-8210,TE-8300>

Nozzle	Cylinder temperature (°C)				Limit temperature (°C)	Mold temperature (°C) (actual surface temperature)	Back pressure (kgf/cm ²) (gauge pressure)
	Front	Middle	Rear				
190~210	190~210	180~200	150~170	240	100~110	5~15	

* Use oils, pressurized water, heater, or others to control the mold temperature, and make sure to keep the mold temperature (actual surface temperature) in the range of 100 to 110 °C. The temperature control is very important for providing the molded products with higher crystallinity and greater heat resistance.

Extrusion molding conditions

<Extrusion grades:TP-4000,TP-4030>

Die	Cylinder temperature(°C)				Limit temperature (°C)	Coolant temperature (°C)	Distance between die and sizer (cm)	Drawdown rate	Sizing method
	Meter	Compressor	Supplier						
150~180	160~200	160~200	150~180	240	8~15	2~5	0.87~0.92	Dry vacuum	

* The above conditions are determined with reference to specified contour extrusion molding. Depending on the shape of an extruder and extruded article, the conditions may change considerably.

Foam sheet molding conditions

<Foam sheet grades:HV-6250H>

Foam extrusion molding conditions

Cylinder temperature(°C)			Cooling zone temperature(°C)	Die temperature(°C)
Front	Middle	Rear		
190~220	190~230	180~200	170~200	150~180

Vacuum and pressure molding conditions

Pre-heater temperature(°C)	Sheet temperature (°C)	Pre-heating time (second)	Pressing time (second)	Die temperature (°C)
150~280	80~140	4~16	4~16	20~120

* The above conditions are determined with reference to foam sheet molding using CO₂ gas. Depending on the type and amount of a foaming agent, the conditions may change considerably. Increasing the die temperature to 110 °C or higher allows crystallization in the molding process. Molded articles fully crystallized are resistant to heat of 100 °C or higher. In this case, longer pressing time improves crystallization.

crystallization.

<Other precautions>

O Prevention of moisture absorption during molding

TERRAMAC resins are delivered as dried and packed in an aluminum moisture-proof bag. However after unpacked, the resins may absorb moisture, leading to decrease in the molecular weight of resins during molding. Accordingly, use hopper driers for prevention of moisture absorption during molding.

To stabilize molding conditions, use of a dehumidifying drier is recommended. Use up all the material contained in a bag, transfer the remaining material to a moisture-proof can, or fold and seal the opening of the bag with a tape.

O Drying

The resins left unpacked may contain water by absorbing moisture. Re-dry these resins.

TE-1030, TE-1070, TP-4030: Use a dehumidifying drier at 80°C for 5 hours or more

TE-2000, TE-7000, TE-7307, TE-7300, TE-8210, TE-8300, TP-4000, HV-6250H :At 100°C for 5 hours or more

(use of a dehumidifying drier is recommended)

O Recycling use of sprues, runners, and the like

Sprues and runners should also be dried, except they are processed inline.

Dry these resins under the following drying conditions.

TE-2000, TE-1030, TE-1070: Use a dehumidifying drier, at 70°C for 8 hours or more

* Recycled material, including molded products, sprues, and runners of the above grades, are resistant to heat of approx. 60°C. Thus, the blocking phenomenon is expected during drying. Mix virgin pellets and recycled material, then dry them.

TE-7000, TE-7307, TE-7300, TE-8210, TE-8300: At 100°C for 8 hours or more

(Use of a dehumidifying drier is recommended.)

* Recycled material molded at the recommended die temperature has heat resistance. Thus, the above remarks for the basic and shock-resistant grades need not be followed.

In any case, automatic return in molding is recommended.

<Precautions about this information>

- The data above are typical values of test pieces determined by our tests, and do not guarantee the properties of resins in a particular application.
- In applying your products to individual applications, take into account legal regulations, industrial property rights, product specifications, your own self-imposed standards, and the like, and make sure to confirm the properties of your products by conducting product tests according to the purpose of your use.
- The data and descriptions above are prepared on the basis of the documents, information, and data currently available, and may subject to change without prior notice based on new findings.
- Read carefully the material safety data sheets (MSDS) of the resins in advance to handling.
- Contact us in advance, if you wish to use these resins in particular applications, such as medical devices, containers or packaging of foods, kid's playthings, and others.

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