

Injection moulding for TORELINA®

1) Pre-drying:

Although TORELINA absorbs little water, it is recommended to pre-dry it for more than 3 hours at 130°C for a better appearance.

2) Injection Moulding Machine:

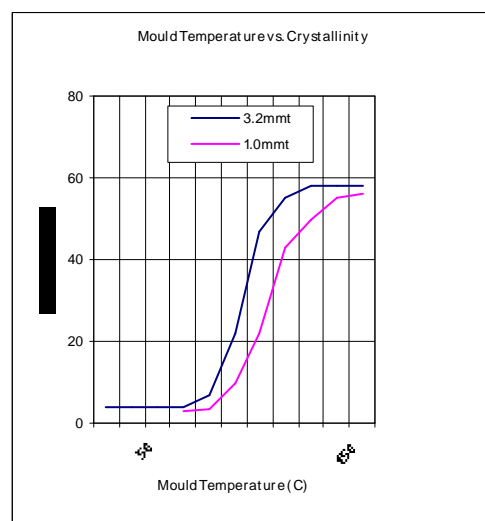
A screw type injection machine is commonly used. Although either an open nozzle or shut-off nozzle can be used, it is advised to use a shut-off nozzle because open nozzle can cause drooling. Also, as for barrel and screws, use friction-resistant, anticorrosive types.

3) Standard moulding conditions:

Property		Condition
Pre-drying		130°C X 3 hours
Barrel Temperatures	1 (Feed throat)	290 ~ 300°C
	2	300°C
	3	310°C
	4 (Nozzle)	320°C
Nozzle temperature		310 ~ 320°C
Mould temperature		130 ~ 150°C
Injection speed		Middle to high speed
Injection pressure		39 ~ 69MPa (400 ~ 700kgf/cm ²)
Screw rotation speed		50 ~ 100 rpm

Note: When the mould temperature is varied the crystallinity of TORELINA changes considerably at around 90°C which is the glass transition temperature for TORELINA.

The temperature range from 80 to 110°C is called transition area where the crystallinity changes greatly with mould temperature change. The transition area should be avoided because it is difficult to control the quality of moulded products and carry out smooth mould releasing.



Grade: A504, Barrel temperature: 320°C
Measurement of crystallinity is made by wide-angle X-ray diffraction method.