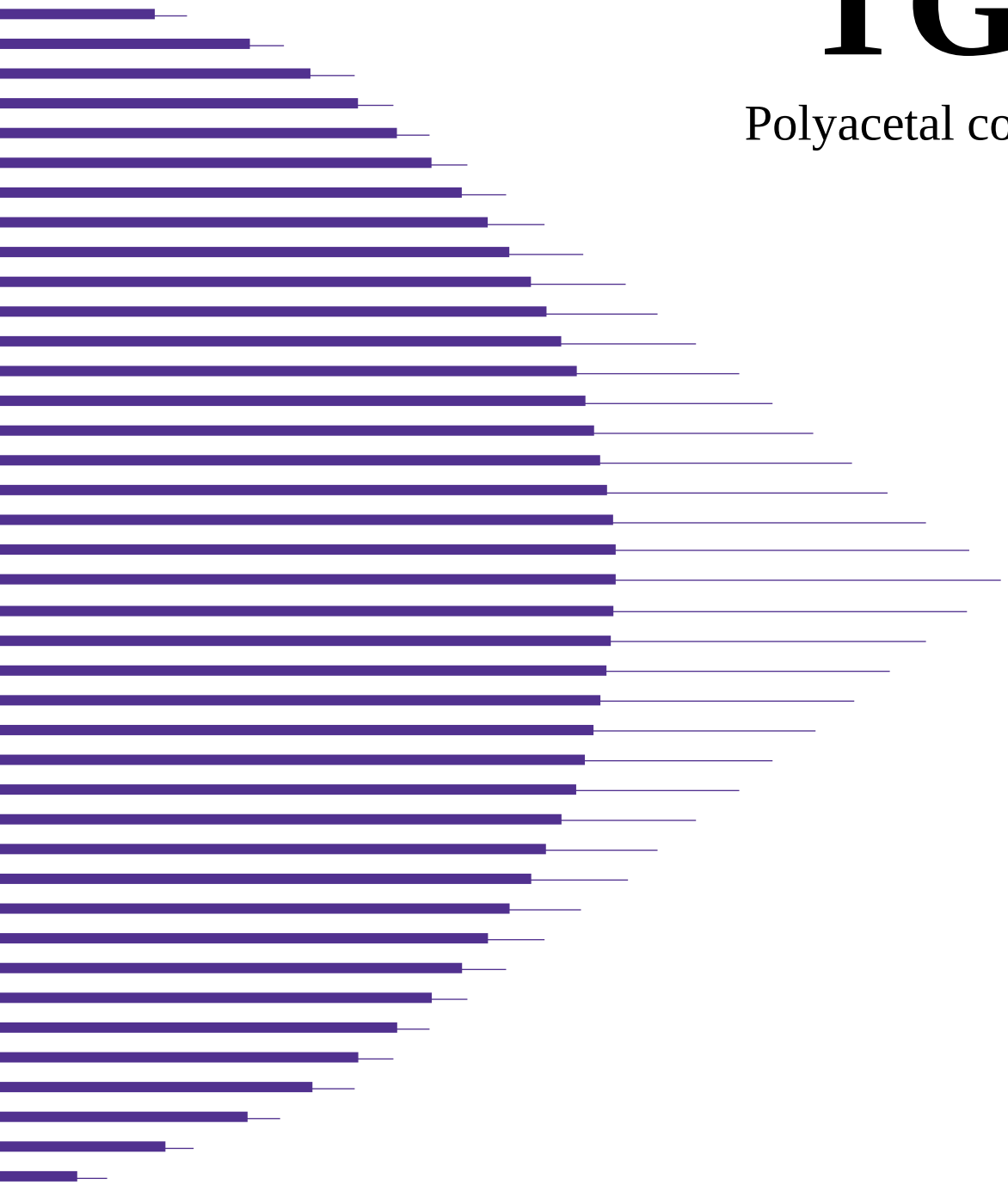
Iupital®

TG20

Polyacetal copolymer



Mitsubishi Engineering-Plastics Corporation

Properties

Properties	Test Method	Terms	Units	TG20
Physical properties				
Density	ISO 1183	-	g/cm^3	1.41
Water absorption	-	23degC, 60%RH	%	0.22
Rheological properties				
Melt Mass-flow Rate Melt Volume-flow Rate	ISO 1133	 Temperature Load	g/10min cm^3/10min degC kg	9.0 7.7 190 2.16
Moulding shrinkage (3mmt)	-	MD TD	%	2.0 -
Mechanical properties				
Tensile modulus Yield stress Yield strain Nominal strain at break Stress at break Strain at break	ISO 527-1 , 527-2	-	MPa % MPa %	2900 64 8.5 30 - -
Flexural strength Flexural modulus	ISO 178	-	MPa	90 2600
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m^2	250
Charpy notched impact strength		23 degC	kJ/m^2	7.0
Thermal properties				
Melting temperature	ISO 11357-3		degC	166
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	100 156
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	1.1E-04 1.1E-04
Flammability	UL94	0.8mmt	-	HB equivalence
Electrical properties				
Relative permittivity	IEC 60250	100Hz 1MHz	- -	3.9 3.9
Dissipation factor	IEC 60250	100Hz 1MHz	- -	0.002 0.007
Volume resistivity	IEC 60093	-	ohm-m	1.E+12
Surface resistivity	IEC 60093	-	ohm	1.E+16
Electric strength	IEC 602431	1mmt 3mmt	MV/m	32 19
Comparative tracking index	IEC 60112	-	-	600

Typical injection molding conditions

Iupital

Pre-Drying Condition

Drying is necessary to prevent silver streak and odor problem.

- Drying temperature: 80 – 120°C
- Drying time : >3hrs

Injection Molding Machine

- Screw type : With non-return ring at screw head
- Nozzle shape of cylinder : Open nozzle

Resin replacement, Shut-down and Temporary shut-down

(1) Resin replacement, Shut-down

It is desirable that Iupital TG20 is replaced by polystyrene in the heating cylinder.

(2) Temporary shut-down

When work is interrupted, it is desirable to purge in the heating cylinder and to keep the temperature of the heating cylinder at 165°C or lower.

Typical injection molding conditions

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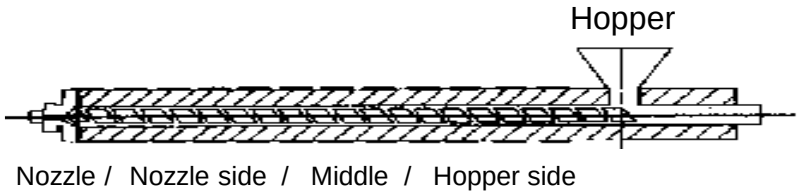
Molding Condition

(1) Resin Temperature



＜Example of setting temperature＞

Nozzle	Nozzle side	Middle	Hopper side
185～210°C	190～210°C	180～200°C	170～190°C

Resin temperature of 200±10°C is recommended.

Over 230°C is not recommended to prevent decomposition.

(2) Mold Temperature

Normally mold temperature of 40～120°C is recommended, and preferably 60～80°C is better.

(3) Injection Pressure

Normally 50-100MPa

(4) Screw speed of rotation

Normally 80-120rpm

(5) Back Pressure

Normally 0.5-1.0MPa

Attention point in case of molding trouble

If melted resin is kept in heating cylinder for long times, it is necessary to purge before producing molding articles.

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