Iupital™

FG2025MZ

Polyacetal copolymer
Glass fiber reinforced grade
For water fitting application

GLOBAL POLYACETAL

Characteristics

Iupital™ FG2025MZ is an acetal copolymer reinforced by glass fiber and conform to the standards for water fitting application in various countries.

Properties

	Test Method	Terms	Units	FG2025MZ	FG2025
Physical properties					
Density	ISO 1183	-	g/cm^3	1.59	1.59
Water absorption	-	23deg.C, 60%RH	%	0.20	0.20
Rheological properties					
Melt Mass-flow Rate	ISO 1133		g/10min	-	9.0
Melt Volume-flow Rate			cm^3/10min	6.3	6.3
		Temperature	deg.C	190	190
		Load	kg	2.16	2.16
Moulding shrinkage (3mmt)	-	MD	%	0.6	0.6
		TD		-	-
Mechanical properties					
Tensile modulus	ISO 527-1 , 527-2	-	MPa	9800	10000
Yield stress				-	-
Yield strain			%	-	-
Nominal strain at break				-	-
Stress at break			MPa	135	140
Strain at break			%	3	3
Flexural strength	ISO 178	-	MPa	200	210
Flexural modulus				8800	9100
Charpy impact strength	ISO 179-1 , 179-2	23deg.C	kJ/m^2	60	60
Charpy notched impact strength		23deg.C	kJ/m^2	9.0	9.0
Thermal properties					
Melting temperature	ISO 11357-3		deg.C	166	166
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa	deg.C	162	162
		0.45MPa		164	164
Coefficient of Linear thermal expansion	ISO 11359-2	MD	1/deg.C	3.0E-05	3.0E-05
		TD		1.1E-04	1.1E-04
Flammability	UL94	0.8mmt	-	HB	HB
Electrical properties					
Relative permittivity	IEC 60250	100Hz	-	-	4.1
		1MHz	-	-	4.1
Dissipation factor	IEC 60250	100Hz	-	-	0.003
		1MHz	-	-	0.008
Volume resistivity	IEC 60093	-	ohm-m	-	1.E+12
Surface resistivity	IEC 60093	-	ohm	-	1.E+16
Electric strength	IEC 602431	1mmt	MV/m	-	25
		3mmt		-	16
Comparative tracking index	IEC 60112	-	-	-	600

The listed properties are portrayed as general information only and are not product specifications.

Global polyacetal disclaims any liability in connection with the use of the information in this table.

GLOBAL POLYACETAL

Approvals for Iupital FG2025MZ

- NSF Ansi 14 & 61 (US)
- WRAS (BS6920) (UK)
- ACS (XP P41 250) (France)
- KTW BWGL (Germany)
- DVGW W270 (Germany)

Typical injection molding conditions

Pre-Drying Condition

Drying is necessary to prevent silver streak and odor problem.

Drying temperature	: 80 – 90 deg.C
Drying time	: 3 – 4 hr

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 is replaced by polystyrene in the heating cylinder.

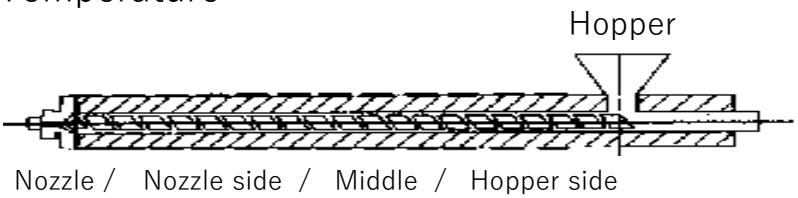
(2) Temporary shut-down

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

Typical injection molding conditions

Molding Condition

(1) Resin Temperature



＜Example of setting temperature＞

Nozzle	Nozzle side	Middle	Hopper side
190～210deg.C	190～210deg.C	180～200deg.C	170～190deg.C

Resin temperature of 200±10deg.C is recommended.

Over 230deg.C is not recommended to prevent decomposition.

(2) Mold Temperature

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

(3) Injection Pressure

Normally 50 - 100MPa.

Set the injection peak pressure so that it does not exceed the set pressure.

(4) Screw speed of rotation

Normally 80 - 120rpm.

(5) Back Pressure

Normally 5 - 10MPa.

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.