

Dupilon[®] MTB1000R 8920F

Polycarbonate resin for LDS technology

 **Mitsubishi Engineering-Plastics Corporation**

This catalogue does not intend to guarantee production achievement by our customers. Also, all data including figures and tables in this catalogue are typical values obtained under MEP's standard test methods, and may not be applicable for those which are used under different conditions. This document is not intended for warranty of customer's production achievement.

1. Outline of Iupilon MTB1000R 8920F

MEP succeeded in developing PCR for the use of LDS; laser direct structuring.
This grade combines good properties; toughness, stiffness, etc.

2. Major physical properties

Please refer to the table of the next page (p.3).

3. Important Matters in Molding

In order to make full use of the outstanding features of Iupilon MTB1000R 8920F, please pay much attention to the conditions as below.

- 1. Recommended Molding Conditions

Pre-drying:	120°C, 4~8 hours
Molding temperature:	270~300°C
Mold temperature:	70~100°C
Holding pressure:	80~120MPa

- 2. The suitable selection of the barrel capacity of molding machines

In order to reduce the holding time of the melting resin in the barrel and avoid material degradation, please set the injection machine in terms of 30 - 70% of its capacity.

- 3. When you suspend, or stop molding

Please fully replace with suitable purging agents.
(PC, PS and PE, etc)

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Properties		Test method	Unit	Values
Color		-	-	Black
Content of filler and reinforced material		-	%	10
Physical properties				
Density		ISO 1183	g/cm ²	1.34
Rheological properties				
MVR		ISO1133	cm ³ /10min	29
MFR			g/10min	35
Molding shrinkage (3.2mmt)	Flow		%	0.41
	Cross flow		%	0.41
Mechanical properties				
Charpy impact strength	w/o notch	ISO179	kJ/m ²	NB
	with notch			5.1
Flexural modulus		ISO178	MPa	3560
Flexural strength			MPa	103
Tensile strain		ISO527-1	MPa	3570
Yield stress			MPa	62
Stress at break		ISO527-2	MPa	50
Strain at break			%	12
Thermal properties				
Deflection temperature under load	0.45MPa	ISO75-1	°C	136
	1.80MPa	ISO75-2	°C	127
Electrical properties				
Dielectric constant	(1MHz)	IEC60250	-	3.2
	(110Hz)		-	3.3
Dielectric dissipation factor	(1MHz)		-	0.0160
	(110Hz)		-	0.0018
Volume resistivity		IEC60093	Ω·m	1.3E+16
Surface resistivity			Ω	3.1E+15
CTI		IEC60112	-	175
Flammability				
UL94 Rating		UL94	-	

Notes: All the data in this table are typical values obtained under our standard test methods.

Note

- All data on this catalogue are typical values obtained under our standard test methods.
- The examples of the applications on this catalogue are not intended for warranty of customer's production achievement.
- Please examine in your company about the industrial property, the operating conditions, etc. concerned in uses and applications on this catalogue.
- Please refer to the technical data of material and grades to be used, and material safety data sheet "MSDS", when you handle our products (transportation, keeping, molding, and abolition, etc.). Please confirm enough safety in the uses for food container packing, medical parts, safe instruments, and toys for children, etc.
- Some of fiber reinforced resin is applicable to specified items for strategy substance. Please feel free to ask us about them. Regarding export sales of the applicable products and of products including the applicable products, please comply with the Foreign Exchange and the Foreign Trade Control statute. When you mold, or clean molding machines and ducts, please install a ventilator partially, or entirely because harmful gas occurs possibly due to heat decomposition of resin.

* We may change the contents of this catalogue for the revision without a preliminary announcement.