PPS(Polyphenylene Sulfide)

FORTRON®

1140A6

HF2000/HD9100

(Glass Fiber reinforced grade)

Polyplastics

NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under varying conditions prescribed by applicable standards and test method.
- This brochure has been prepared based on our own experiences and laboratry test data, and therefore all data shown here are not always applicable to parts used under different conditions. We do not guarantee that these data are directly applicable to the application conditions of users and we ask each user to make his own decision on the application.
- It is the users' responsibility to investigate patent rights, service life and potentiality of applications introduced in this brochure.
- Materials we supply are not intended for the implant applications in the medical and dental fields, and therefore are not recommended for such uses.
- For all works done properly, it is advised to refer to the appropriate **“Technical Catalog”** for specific material processing.
- For safe handling of materials we supply, it is advised to refer to the Material Safety Data Sheet **“MSDS”** of the proper material.
- This brochure is edited based on reference literatures, information and data currently available to us. So the contents of this brochure are subject to change without notice due to new data.
- Please contact our office for any questions about products we supply, descriptive literatures or any description in this brochure.

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General Properties of 1140A6

table1-1 General Properties（ISO）

Item	Unit	Test Method	Glass Fiber reinforced
			1140A6
			High strength
Color			HF2000/HD9100
ISO(JIS)quality-of-the-material display:		ISO11467 (JIS K6999)	>PPS-GF40<
Density	g/cm^3	ISO 1183	1.66
Water absorption (23℃,24hrs)	%	ISO 62	0.01
Melt viscosity (310℃,1000/sec)	Pa·s	ISO 11443	260
Tensile strength	MPa	ISO 527-1,2	210
Strain at break	%	ISO 527-1,2	1.9
Flexural strength	MPa	ISO 178	290
Flexural modulus	MPa	ISO 178	14000
Charpy impact strength (notched)	kJ/m^2	ISO 179/1eA	11
Temperature of deflection under load (1.8MPa)	℃	ISO 75-1,2	270
Coefficient of linear thermal expansion (Normal temperature, Flow direction)	x10^{-5}/℃	ISO 11359-2	2
Coefficient of linear thermal expansion (Normal temperature, Transverse direction)	x10^{-5}/℃	ISO 11359-2	4
Dielectric breakdown strength (3mmt)	kV/mm	IEC 60243-1	16
Volume resistivity	Ω·cm	IEC 60093	4 × 10^{16}
Dielectric constant (1kHz)		IEC 60250	4.2
Dielectric constant (1MHz)		IEC 60250	4.2
Dielectric dissipation factor (1kHz)		IEC 60250	0.001
Dielectric dissipation factor (1MHz)		IEC 60250	0.002
Tracking resistance (CTI)	V	IEC 60112	125
Mold Shrinkage (80 □×2mmt, Flow direction)	%	ISO 11443	0.3
Mold Shrinkage (80 □×2mmt, Transverse direction)	%	ISO 11443	0.7
Flammability		UL94	V-0
The yellow card File No.			E109088
Appropriate List number of Ministerial Ordinance for Export Trade Control			-

All figures in the table are the typical values of the material and not the minimum values of the material specifications.

1. Characteristics

1140A6 is glass fiber 40% reinforced grade. It has high strength and toughness which are the characteristics of linear PPS polymer.

2. Thermal Properties

2-1) Coefficient of Linear Thermal Expansion

(Table2-1) Coefficient of Linear Thermal Expansion

Unit: $\times 10^{-5}$/degC

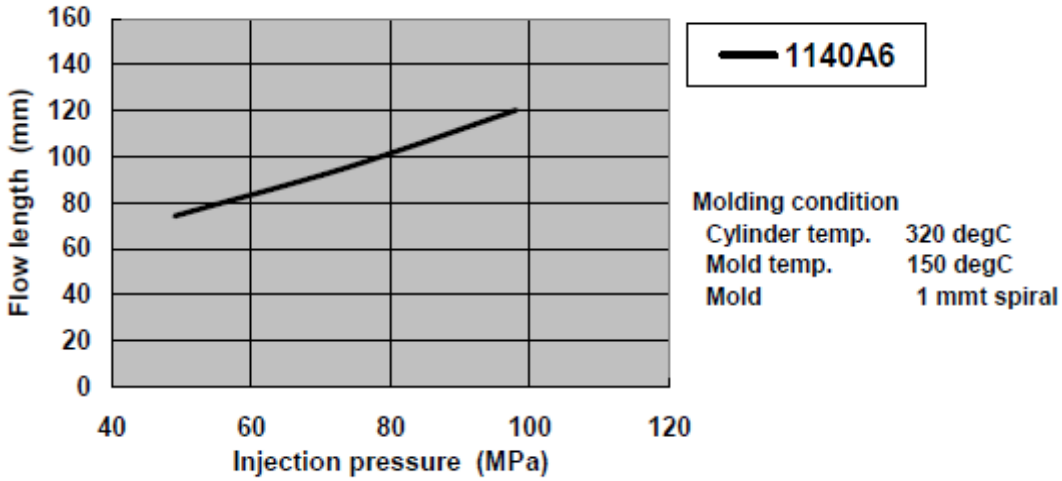
Grade		1140A6	
Direction		Flow direction	Transverse direction
Temperature (degC)	-30	1.2	3.5
	0	1.3	3.9
	50	1.5	4.0
	100	1.5	4.6
	150	1.5	5.8
	200	1.4	6.8

Standard temperature: 20 degC

3. Molding Properties

3-1) Flowability

(Figure 3-1) Flowability (1mmt)



2-2) Mold Shrinkage

(Figure 2-2) Mold Shrinkage (80x80x2mmt)