DURAFIDE® PPSGrade Catalog

Polyphenylene Sulfide (PPS)

DURAFIDE®

1140A6

HF2000/HD9100

GF Reinforced

POLYPLASTICS CO., LTD.

General Properties of 1140A6

table1-1 General Properties (ISO)

table1-1 General Properties (ISO)				
Item	Unit	Test Method	GF Reinforced	
			1140A6	
			High Strength	
Color			HF2000/HD9100	
ISO(JIS)quality-of-the-material display:		ISO11469 (JIS K6999)	>PPS-GF40<	
Density	g/cm³	ISO 1183	1.66	
Water absorption (23°C,24hrs,1mmt)	%	ISO 62	0.04	
Melt viscosity (310°C,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	14,000	
Charpy notched impact strength (23°C)	kJ/m²	ISO 179/1eA	11	
Temperature of deflection under load (1.8MPa)	$^{\circ}$	ISO 75-1,2	270	
Coefficient of linear thermal expansion (Normal temperature, Flow direction)	x10 ⁻⁵/°C	Our standard	1	
Coefficient of linear thermal expansion (Normal temperature, Transverse direction)	x10 ⁻⁵/°C	Our standard	4	
Electric strength (3mmt)	kV/mm	IEC 60243-1	16	
Volume resistivity	Ω·cm	IEC 60093	5 × 10 ¹⁵	
Volume resistivity (Our standard)	Ω·cm		-	
Relative permittivity (1kHz)		IEC 60250	4.2	
Relative permittivity (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	
Arc resistance	S	ASTM D495	123	
Rockwell hardness	M(Scale)	ISO2039-2	105	
Flammability		UL94	V-0	
The yellow card File No.			E109088	
Appropriate List number of Ministerial Ordinance for Export Trade Control			Item 16 of Appendix -1	

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: ×10⁻⁵/degC

Unit: ×10 /degC					
Grade		1140A6			
Direction		Flow direction	Transverse direction		
Temperature (degC)	-30	1.3	4.0		
	0	1.4	4.1		
	50	1.4	4.3		
	100	1.4	4.8		
	150	1.3	6.4		
	200	1.2	7.2		

Standard temperature: 20 degC

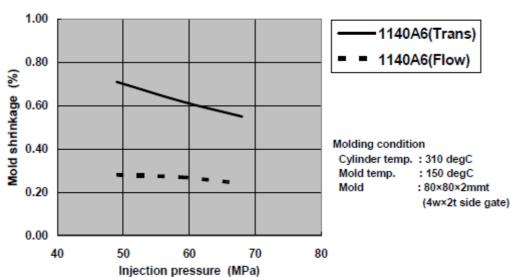
3. Molding Properties

3-1) Flowability

160 -1140A6 140 Flow length (mm) 120 100 80 Molding condition Cylinder temp. 320 degC 60 150 degC Mold temp. 40 1 mmt spiral Mold 20 0 60 80 40 100 120 Injection pressure (MPa)

(Figure 3-1) Flowability (1mmt)

2-2) Mold Shrinkage



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



NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under conditions prescribed by applicable standards and test methods.
- This brochure has been prepared based on our own experiences and laboratory 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 appropriate technical catalogs for specific material processing.
- For safe handling of materials we supply, it is advised to refer to the Safety Data Sheet "SDS" of the proper material.
- This brochure is edited based on reference literature, information and data available to us at the time of creation. The contents of this brochure are subject to change without notice upon achievement of 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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POLYPLASTICS CO., LTD.

JR Shinagawa East Bidg., 18-1, Konan 2-chome, Minato-ku, Tokyo, 108-8280 Japan Tel: +81-3-6711-8610 Fax: +81-3-6711-8618

http://www.polyplastics.com/en/