

DURAFIDE® PPS

Grade Catalog

Polyphenylene Sulfide(PPS)

DURAFIDE®

6150T73

HD9050

Special

POLYPLASTICS CO., LTD.

DURAFIDE® 6150T73

HD9050

Property : Special

Characteristic : High Impact, Low Gas

ISO Marking Code : >PPS-I-(GF+MD)50<

Test Method : ISO11469 (JIS K6999)

Table 1-1 General Properties

Physical properties

Density		1.71 g/cm ³	ISO 1183
Water absorption	23° C, 24hrs, 1mmt	0.05 %	ISO 62

Mechanical properties

Tensile strength		150 MPa	ISO 527-1,2
Strain at break		1.8 %	ISO 527-1,2
Flexural strength		220 MPa	ISO 178
Flexural modulus		12200 MPa	ISO 178
Charpy notched impact strength	23°C	10.5 kJ/m ²	ISO 179/1eA

Thermal properties

Temperature of deflection under load	1.8MPa	270 °C	ISO 75-1,2
Coefficient of linear thermal expansion	Normal temperature, Flow direction	2 x10 ⁻⁵ /°C	Our standard
Coefficient of linear thermal expansion	Normal temperature, Transverse direction	4 x10 ⁻⁵ /°C	Our standard

Electrical properties

Electric strength	3mmt	17 kV/mm	IEC 60243-1
Volume resistivity		6 x 10 ¹⁵ Ω · cm	IEC 60093
Volume resistivity (Our standard)		— Ω · cm	
Relative permittivity	1kHz	4.5	IEC 60250
Relative permittivity	1MHz	4.4	IEC 60250
Dielectric dissipation factor	1kHz	0.002	IEC 60250
Dielectric dissipation factor	1MHz	0.006	IEC 60250
Tracking resistance (CTI)		150 V	IEC 60112
Arc resistance		130 s	ASTM D495

Molding properties

Melt viscosity	310°C、1,000/sec	230 Pa · s	ISO 11443
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Durability

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

1. Characteristics

DURAFIDE® PPS 6150T73 is a newly developed high-impact grade by taking advantage of the compounding technology that we have cultivated.

6150T73 exhibits high heat shock resistance and low gas generation compared with our conventional high-impact grades.

2. Thermal Properties

2.1 Linear thermal expansion

Table 2-1 DURAFIDE® PPS 6150T73 linear thermal expansion

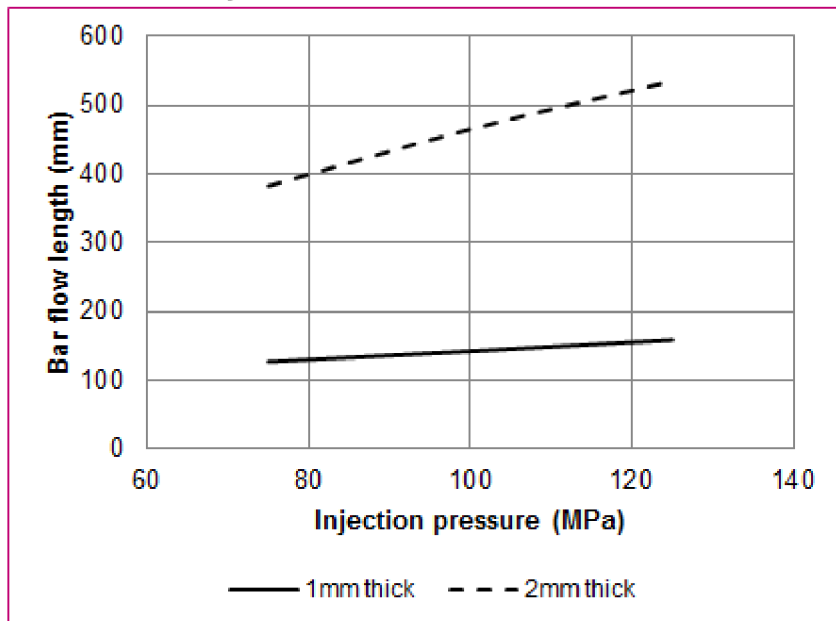
Unit: $\times 10^{-5}/^{\circ}\text{C}$

Grade		6150T73	
Direction		Flow	Transverse
Temp. ($^{\circ}\text{C}$)	-40	1.7	4.3
	0	1.7	4.2
	50	1.6	4.3
	100	1.9	7.0
	150	1.8	8.5
	200	1.7	8.2

Reference temperature : 20°C

3. Moldability

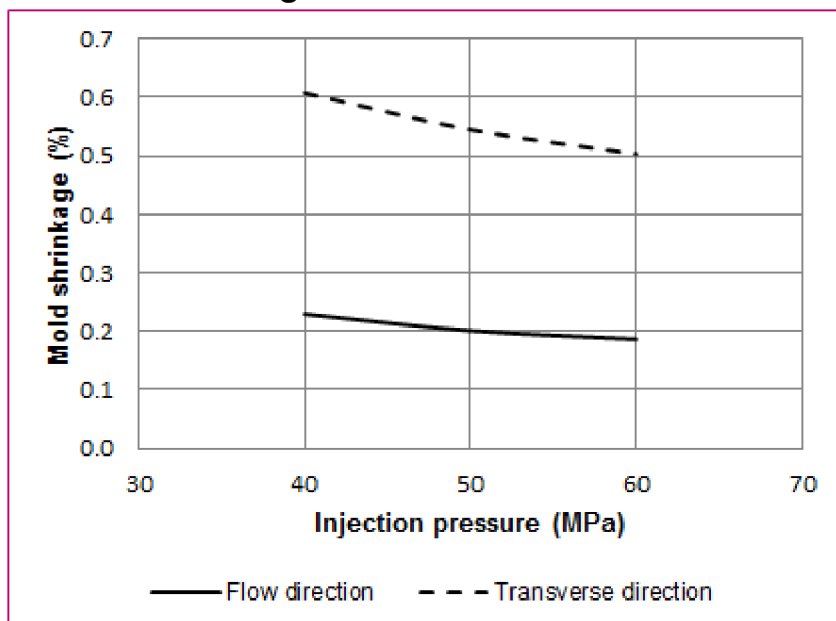
3.1 Flowability



< Molding conditions >
Cylinder temperature: 320°C
Mold temperature : 140°C
Injection speed : 50mm/s
Mold: Bar flow test mold

Figure 3-1 DURA FIDE® PPS 6150T73 bar flow length

3.2 Mold shrinkage



< Molding conditions >
Cylinder temperature: 320°C
Mold temperature : 140°C
Injection speed : 17mm/s
Mold: 80x80x2mmt Flat plate
Side gate : 4w x 2t

Figure 3-2 DURA FIDE® PPS 6150T73 mold shrinkage

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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