

Polyphenylene Sulfide (PPS)

**DURAFIDE®**

6150T73

HD9050

Special

**POLYPLASTICS CO., LTD.**



# General Properties of 6150T73

table1-1 General Properties (ISO)

Item	Unit	Test Method	Special
			6150T73
			High Impact, Low Gas
Color			HD9050
ISO(JIS)quality-of-the-material display:		ISO11469 (JIS K6999)	>PPS-I-(GF+MD)50<
Density	g/cm <sup>3</sup>	ISO 1183	1.71
Water absorption (23°C,24hrs,1mmt)	%	ISO 62	0.05
Melt viscosity (310°C,1000/sec)	Pa·s	ISO 11443	230
Tensile strength	MPa	ISO 527-1,2	150
Strain at break	%	ISO 527-1,2	1.8
Flexural strength	MPa	ISO 178	215
Flexural modulus	MPa	ISO 178	11,700
Charpy notched impact strength (23°C)	kJ/m <sup>2</sup>	ISO 179/1eA	9.5
Temperature of deflection under load (1.8MPa)	°C	ISO 75-1,2	265
Coefficient of linear thermal expansion (Normal temperature, Flow direction)	x10 <sup>-5</sup> /°C	Our standard	2
Coefficient of linear thermal expansion (Normal temperature, Transverse direction)	x10 <sup>-5</sup> /°C	Our standard	4
Electric strength (3mmt)	kV/mm	IEC 60243-1	17
Volume resistivity	Ω·cm	IEC 60093	6 × 10 <sup>15</sup>
Volume resistivity (Our standard)	Ω·cm		-
Relative permittivity (1kHz)		IEC 60250	4.5
Relative permittivity (1MHz)		IEC 60250	4.4
Dielectric dissipation factor (1kHz)		IEC 60250	0.002
Dielectric dissipation factor (1MHz)		IEC 60250	0.006
Relative permittivity (2GHz)		Cavity resonator method	-
Dielectric dissipation factor (2GH z)		Cavity resonator method	-
Tracking resistance (CTI)	V	IEC 60112	150
Arc resistance	s	ASTM D495	130
Rockwell hardness	M(Scale)	ISO2039-2	-
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

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**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

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## 2-1 Linear thermal expansion

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

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

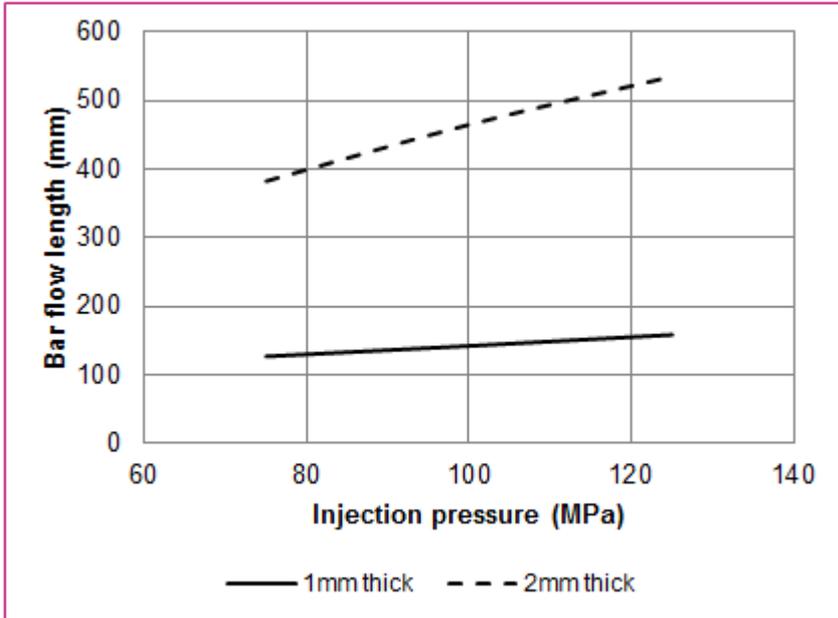
Grade		6150T73	
Direction		Flow	Transverse
Temp. ( $^{\circ}\text{C}$ )	-40	1.7	4.3
	0	1.7	4.2
	50	1.6	4.3
	100	1.9	7.0
	150	1.8	8.5
	200	1.7	8.2

Reference temperature :  $20^{\circ}\text{C}$



# 3. Moldability

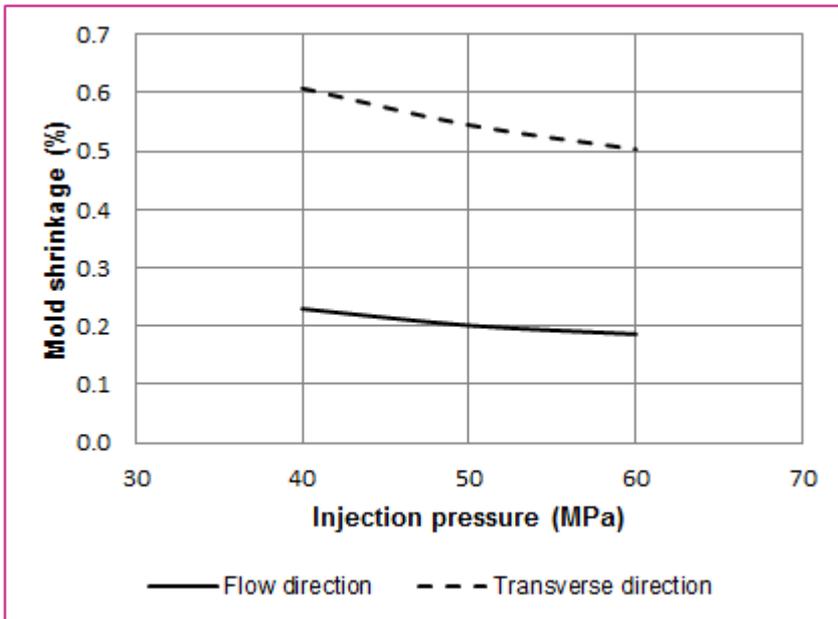
## 3-1 Flowability



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

Figure 3-1 DURAFIDE® PPS 6150T73 bar flow length

## 3-2 Mold shrinkage



< Molding conditions >  
Cylinder temperature: 320°C  
Mold temperature : 140°C  
Injection speed : 17mm/s  
Mold: 80x80x2mm Flat plate  
Side gate : 4w x 2t

Figure 3-2 DURAFIDE® 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.

DURAFIDE® is a registered trademark of Polyplastics Co., Ltd. in Japan and other countries.

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