Polyphenylene Sulfide (PPS)

DURAFIDE®

6150T6

HF2000/HD9100

Special

POLYPLASTICS CO., LTD.

物性中心 www.ponci.com.cn/wxb/ +13538586433 +18816996168

General Properties of 6150T6

table1-1 General Properties（ISO）

Item	Unit	Test Method	Special 6150T6 High Impact
Color			HF2000/HD9100
ISO(JIS)quality-of-the-material display:		ISO11469 (JIS K6999)	>PPS-I-(GF+MD)50<
Density	g/cm^3	ISO 1183	1.71
Water absorption (23°C,24hrs,1mmt)	%	ISO 62	0.05
Melt viscosity (310℃,1000/sec)	Pa·s	ISO 11443	240
Tensile strength	MPa	ISO 527-1,2	155
Strain at break	%	ISO 527-1,2	1.7
Flexural strength	MPa	ISO 178	205
Flexural modulus	MPa	ISO 178	11,200
Charpy notched impact strength (23℃)	kJ/m^2	ISO 179/1eA	8.0
Temperature of deflection under load (1.8MPa)	℃	ISO 75-1,2	265
Coefficient of linear thermal expansion (Normal temperature, Flow direction)	x10^{-5}/℃	Our standard	1
Coefficient of linear thermal expansion (Normal temperature, Transverse direction)	x10^{-5}/℃	Our standard	4
Electric strength (3mmt)	kV/mm	IEC 60243-1	16
Volume resistivity	Ω·cm	IEC 60093	2 × 10^{16}
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	0.004
Dielectric dissipation factor (1MHz)		IEC 60250	0.005
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	126
Rockwell hardness	M(Scale)	ISO2039-2	90
Flammability		UL94	V-0 (Only black)
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

6150T6 has the following characteristics to optimize the additional amount of glass fiber, mineral, and impact modifier.

- Extremely high heat shock resistant.
- High dimensional stability.
- Almost same mechanical properties with standard grade.

2. Heat Shock Resistance

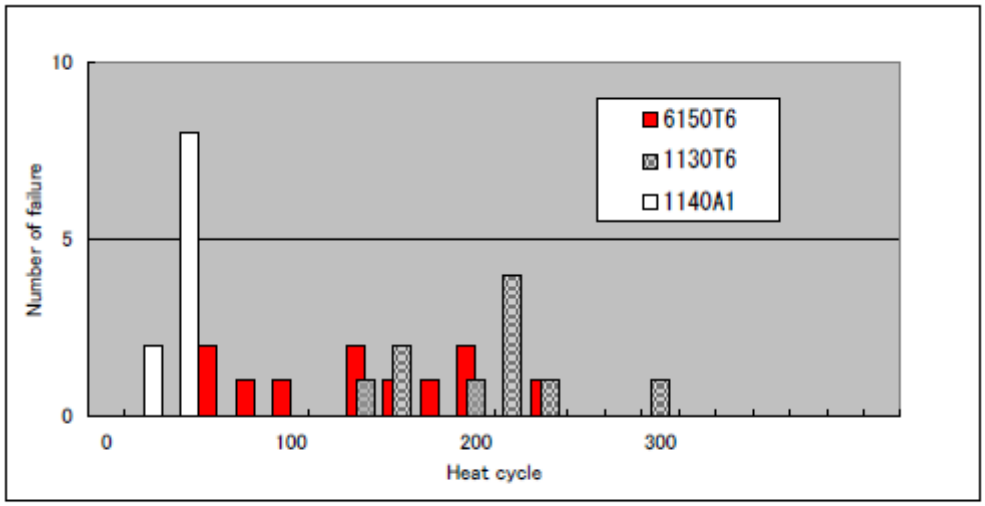
6150T6 has extremely high heat shock to optimize the additional amount of glass fiber and mineral.

(Table 2-1) Heat Shock Resistance

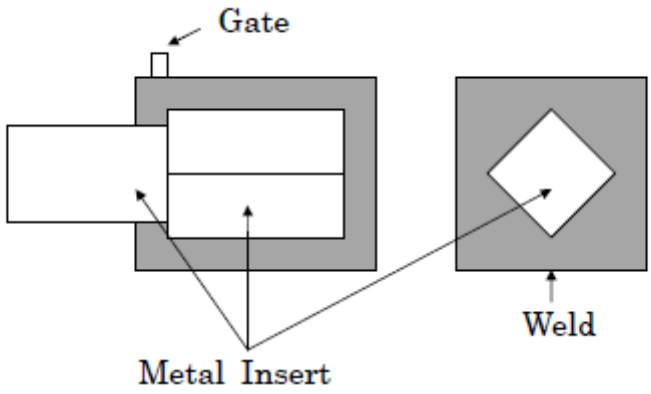
Unit:Cycle

	6150T6	1130T6	1140A1
Cycle to heat shock rupture	150	200	30

(Figure 2-1) Heat Shock Resistance



(Shape of Test Piece)



(Evaluation Method)

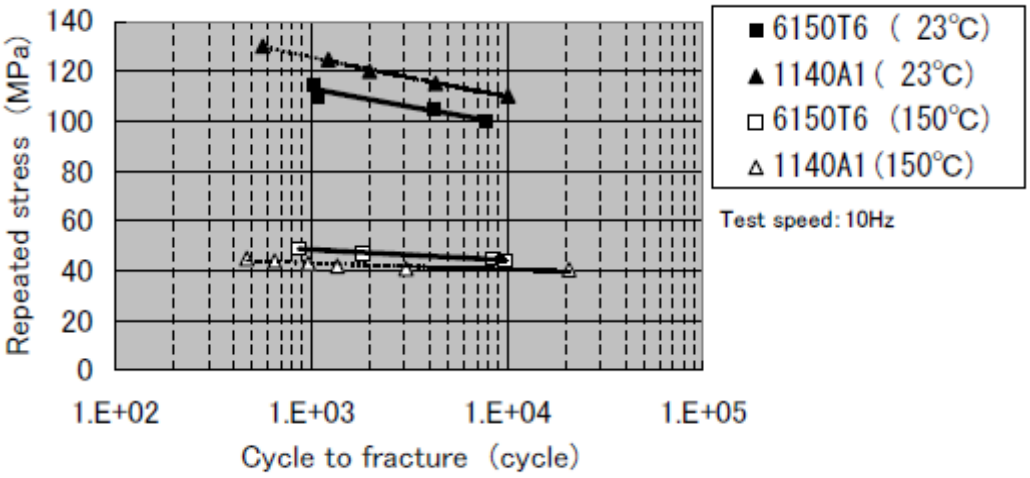
Heat cycle conditoin : -40℃(2HR) ⟷ 180℃(2HR)

Evaluation : Watch samples once 20cycle (n=10)

3 Physical and Mechanical Properties

3-1) Tensile Fatigue Property

(Figure3-1) Tensile Fatigue Property



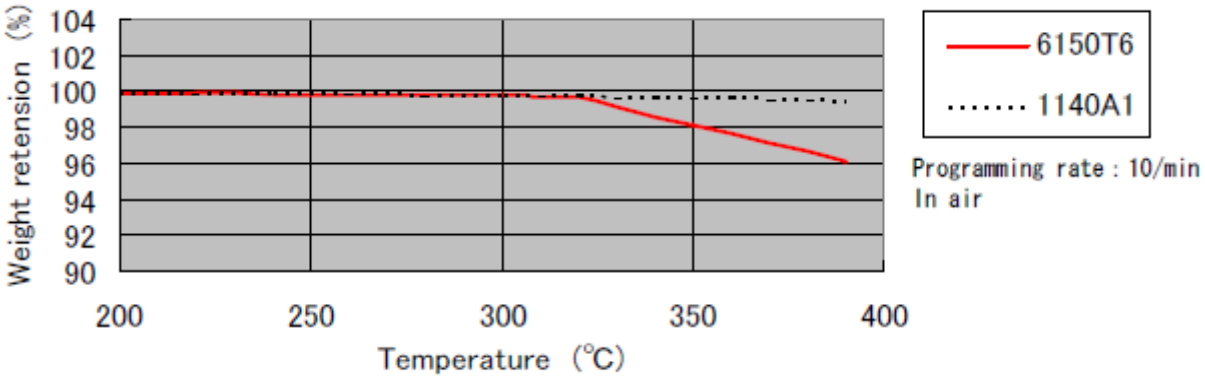
4. Thermal Prroperties

4-1) Thermal stability

・Because impact modifier is inferior to PPS in thermal stability, there is concern that gas or mold deposit is generated from it.

・**6150T6** has good thermal stability under 320℃ because of using stable impact modifier.

(Figure 4-1) Thermogravimetry Curve



4-2) Coefficient of Linear Thermal Expansion

(Table 4-1) Coefficient of Linear Thermal Expansion

Unit : $\times 10^{-5}$/℃

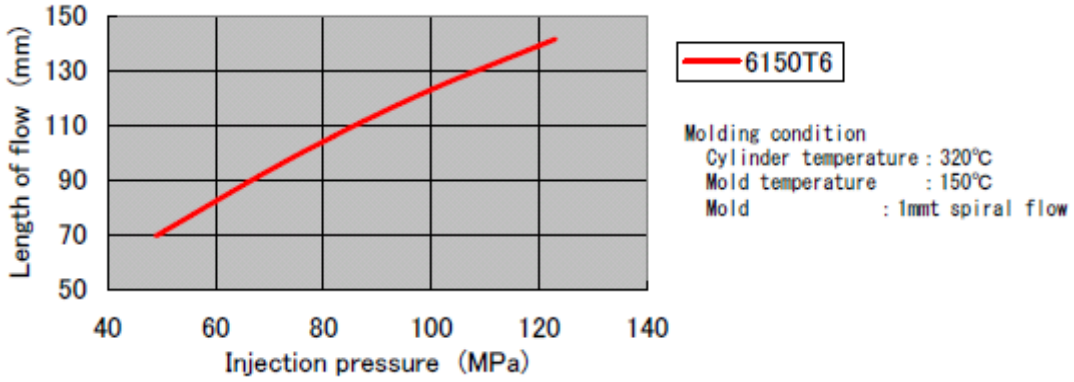
Grade		6150T6	
Direction		Flow direction	Transverse Direction
Temperature (℃)	-30	1.5	3.7
	0	1.5	3.6
	50	1.3	3.5
	100	1.3	4.6
	150	1.2	5.5
	200	1.1	5.6

Standard Temperature:20℃

5. Mold Properties

5-1) Flowability

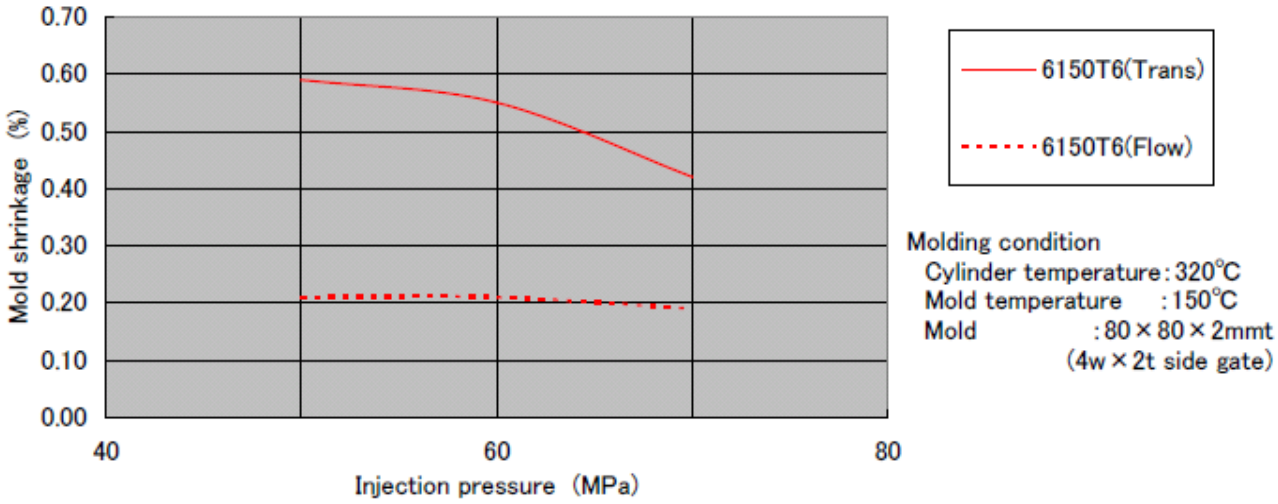
(Figure 5-1) Flowability (1mmt)



5-2) Mold Shrinkage

(Figure 5-2) Mold Shrinkage (80□×2mmt)

(Figure 6-2) Mold Shrinkage (80□×2mmt)



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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.
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- 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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