

Polyacetal (POM)

**DURACON®**

SF-10

CF2001

High Impact, Flexible

**POLYPLASTICS CO., LTD.**

# General Properties of SF-10

table1-1 General Properties (ISO)

Item	Unit	Test Method	High Impact, Flexible
			SF-10
			High Impact, Flexible
Color			CF2001
ISO(JIS)quality-of-the-material display:		ISO11469 (JIS K6999)	>POM-I<
Density	g/cm <sup>3</sup>	ISO 1183	1.36
Water absorption (23°C,24hrs,1mmt)	%	ISO 62	0.6
MFR (190°C、2.16kg)	g/10min	ISO 1133	-
MVR (190°C、2.16kg)	cm <sup>3</sup> /10min	ISO 1133	-
Tensile strength	MPa	ISO 527-1,2	45
Strain at break	%	ISO 527-1,2	60 <sup>+1</sup>
Tensile modulus	MPa	ISO 527-1,2	1,900
Flexural strength	MPa	ISO 178	61
Flexural modulus	MPa	ISO 178	1,800
Charpy notched impact strength (23°C)	kJ/m <sup>2</sup>	ISO 179/1eA	12.0
Temperature of deflection under load (1.8MPa)	°C	ISO 75-1,2	82
Coefficient of linear thermal expansion (23 - 55°C、Flow direction)	x10 <sup>-5</sup> /°C	Our standard	13
Coefficient of linear thermal expansion (23 - 55°C、Transverse direction)	x10 <sup>-5</sup> /°C	Our standard	13
Electric strength (3mmt)	kV/mm	IEC 60243-1	-
Volume resistivity	Ω·cm	IEC 60093	-
Surface resistivity	Ω	IEC 60093	-
Volume resistivity (Our standard)	Ω·cm		-
Surface resistivity (Our standard)	Ω		-
Mold Shrinkage (60×60×2mmt, Flow direction, Cavity Pressure 60 MPa)	%	ISO 294-4	2.4
Mold Shrinkage (60×60×2mmt, Transverse direction, Cavity Pressure 60 MPa)	%	ISO 294-4	2.1
Rockwell hardness	M(Scale)	ISO2039-2	60
Specific wear amount (Thrust, vs C-Steel, material side, pressure 0.49MPa, 30cm/s)	x10 <sup>-3</sup> mm <sup>3</sup> /(N·km)	JIS K7218	0.50
Specific wear amount (Thrust, vs C-Steel, steel side, pressure 0.49MPa, 30cm/s)	x10 <sup>-3</sup> mm <sup>3</sup> /(N·km)	JIS K7218	0.01>
Coefficient of Dynamic Friction (Thrust, vs C-Steel, pressure 0.49MPa, 30cm/s)		JIS K7218	0.50
Specific wear amount (Thrust, vs C-Steel, material side, pressure 0.98MPa, 30cm/s)	x10 <sup>-3</sup> mm <sup>3</sup> /(N·km)	JIS K7218	-

Item	Unit	Test Method	High Impact, Flexible
			SF-10
			High Impact, Flexible
Specific wear amount (Thrust, vs C-Steel, steel side, pressure 0.98MPa, 30cm/s)	$\times 10^{-3} \text{mm}^3/(\text{N} \cdot \text{km})$	JIS K7218	-
Coefficient of Dynamic Friction (Thrust, vs C-Steel, pressure 0.98MPa, 30cm/s)		JIS K7218	-
Specific wear amount (Thrust, vs M90-44, material side, pressure 0.06MPa, 15cm/s)	$\times 10^{-3} \text{mm}^3/(\text{N} \cdot \text{km})$	JIS K7218	1.0
Specific wear amount (Thrust, vs M90-44, M90-44 side, pressure 0.06MPa, 15cm/s)	$\times 10^{-3} \text{mm}^3/(\text{N} \cdot \text{km})$	JIS K7218	3.0
Coefficient of Dynamic Friction (Thrust, vs M90-44, pressure 0.06MPa, 15cm/s)		JIS K7218	0.40
Flammability		UL94	HB
The yellow card File No.			E45034
Appropriate List number of Ministerial Ordinance for Export Trade Control			Item 16 of Appendix -1

\*1) Nominal strain at break

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

# 1.Moldability of SF series

Fig.1-1:Effects of cylinder residence time

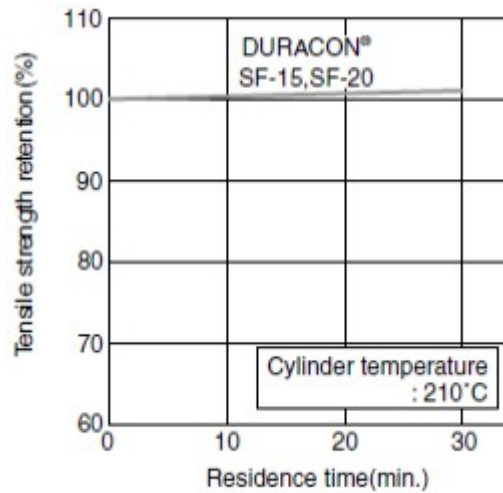
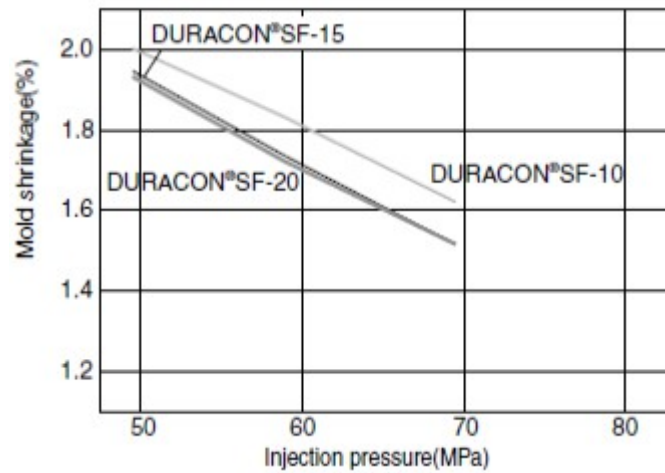


Fig.1-2:Mold shrinkage (80 x 80 x 2mmt)



Processing parameters

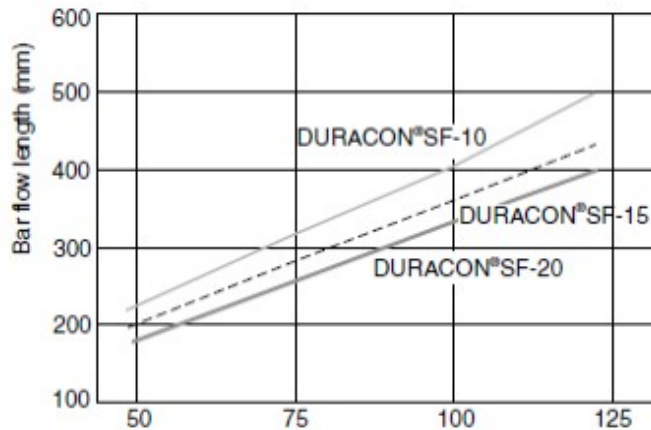
Cylinder temperature : 190-190-170-150°C

Mold temperature : 60°C

Injection speed : 66 mm/sec

Fig.1-3:Bar flow length

(2mmt)



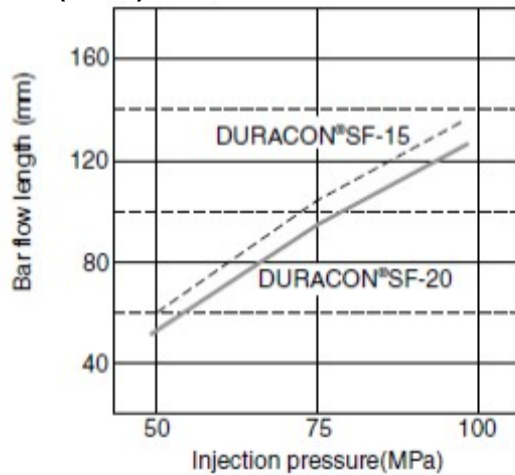
Processing parameters

Cylinder temperature : 190-190-170-150°C

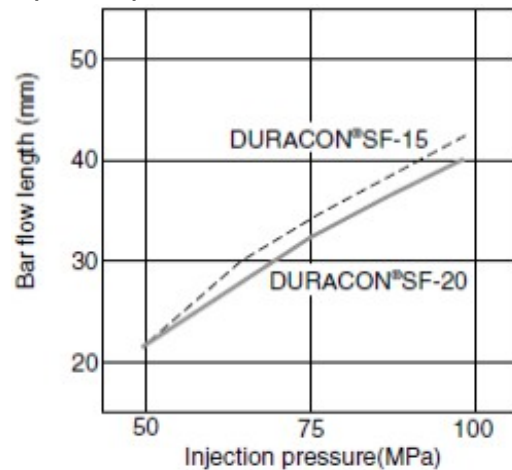
Mold temperature : 80°C

Injection speed : 66 mm/sec

(1mmt)



(0.5mmt)



## 2.Other Properties of SF series

Fig.2-1:Gasoline resistance

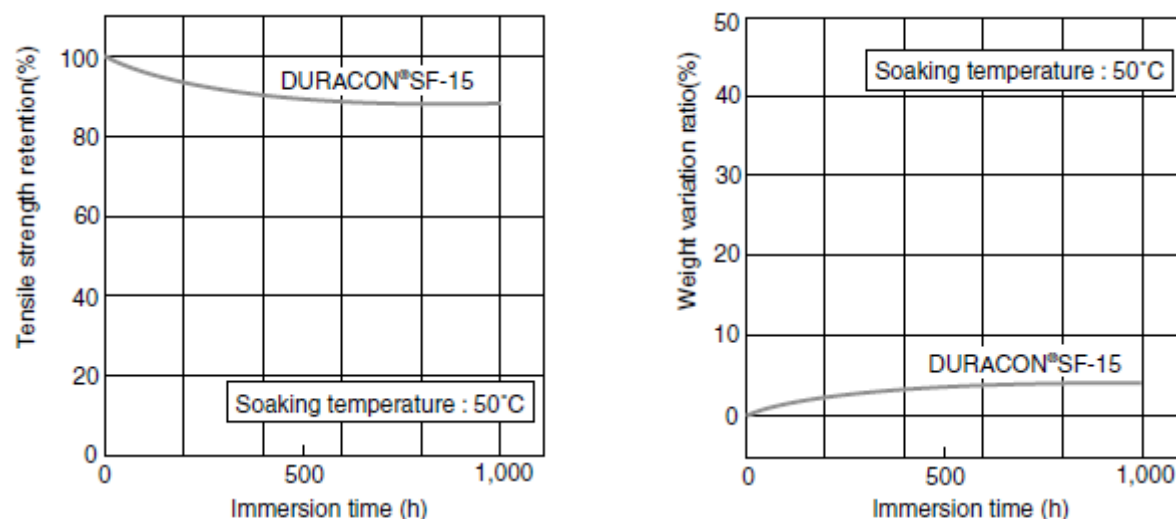
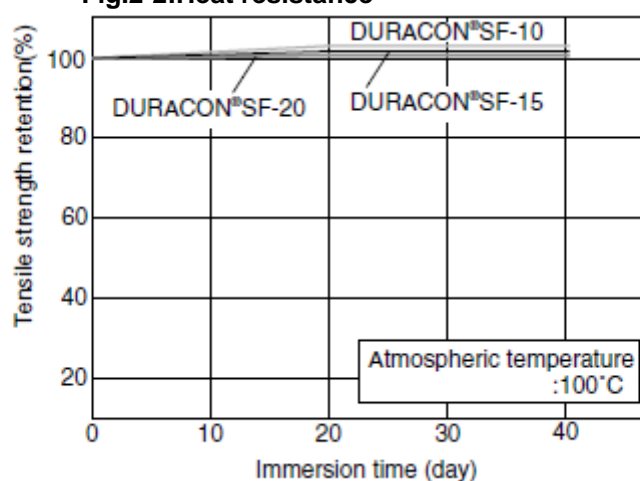


Fig.2-2:Heat resistance



## **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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