# RTP 303 TFE 20 SI 2

# Polycarbonate

## RTP Company

### Message:

Warning: The status of this material is 'Commercial: Limited Issue' The data for this material has not been recently verified.

Please contact RTP Company for current information prior to specifying this grade.

General Information				
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight			
Additive	PTFE lubricant (20%)			
	Silicone lubricant (2%)			
Features	Good dimensional stability			
reatures	Low friction coefficient			
	Good wear resistance			
	Lubrication Calf lubrication			
	Self-lubricating			
RoHS Compliance	Contact manufacturer			
Appearance	Black			
	Natural color			
Forms	Particle			
Processing Method	Injection molding			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	1.50	g/cm³	ASTM D792	
Molding Shrinkage - Flow (3.18 mm)	0.20	%	ASTM D955	
Water Absorption (23°C, 24 hr)	0.060	%	ASTM D570	
Hardness	Nominal Value	Unit	Test Method	
Rockwell Hardness (R-Scale)	118		ASTM D785	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Modulus	6210	MPa	ASTM D638	
Tensile Strength (Yield)	82.7	MPa	ASTM D638	
Tensile Elongation (Break)	2.5	%	ASTM D638	
Flexural Modulus	5170	MPa	ASTM D790	
Flexural Strength (Yield)	117	MPa	ASTM D790	
Compressive Strength	103	MPa	ASTM D695	
Coefficient of Friction (With Metal-Dynamic)	0.10		ASTM D1894	
Impact	Nominal Value	Unit	Test Method	

Notched Izod Impact (3.18 mm)	96	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	530	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	138	°C	ASTM D648
1.8 MPa, not annealed	135	°C	ASTM D648
CLTE - Flow	2.7E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.29	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	Nominal Value 1.0E+16	Unit ohms·cm	Test Method ASTM D257
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Volume Resistivity Dielectric Strength	1.0E+16 18	ohms·cm	ASTM D257 ASTM D149
Volume Resistivity  Dielectric Strength  Dielectric Constant (1 MHz)	1.0E+16 18 3.20	ohms·cm	ASTM D257 ASTM D149 ASTM D150

#### Additional Information

Molding Shrinkage, Linear-Flow, ASTM D955, 6.35mm: 3mm/m.The coefficient of friction was tested on a Falex Model No.6 Wear Testing Machine at 50 FPM, 2000 PV, against C1018 steel of hardness 15-25 Rockwell C, 14-17 micro smoothness.

Injection	Nominal Value	Unit
Drying Temperature	121	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Suggested Max Regrind	20	%
Rear Temperature	288 - 343	°C
Middle Temperature	288 - 343	°C
Front Temperature	288 - 343	°C
Mold Temperature	65.6 - 121	°C
Injection Pressure	68.9 - 103	MPa
Back Pressure	0.172 - 0.345	MPa
Screw Speed	50 - 90	rpm
Clamp Tonnage	6.9 - 11	kN/cm²

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#### Recommended distributors for this material

# Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519 Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

