# RTP 305.3 TFE 15

# 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.

-Preliminary Product Data per RTP Co.-

Additive PTE Lubricant (15%) Features Lubrication RoHS Compliance Contact manufacturer  Appearance Black Natural color  Forms Particle Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.58 g/cm³ ASTM D792 Molding Shrinkage - Flow (3.18 mm) 0.10 % ASTM D955 Water Absorption (23°C, 24 hr) 0.060 % ASTM D955 Water Absorption (23°C, 24 hr) 0.060 % ASTM D792 Hardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118	General Information				
Features         Lubrication           RoHS Compliance         Contact manufacturer           Appearance         Black           Natural color           Forms         Particle           Processing Method         Injection molding           Physical         Nominal Value         Unit         Test Method           Specific Gravity         1.58         g/cm³         ASTM D792           Molding Shrinkage - Flow (3.18 mm)         0.10         %         ASTM D995           Water Absorption (23°C, 24 hr)         0.060         %         ASTM D770           Hardness         Nominal Value         Unit         Test Method           Rockwell Hardness (R-Scale)         118         ASTM D785           Mechanical         Nominal Value         Unit         Test Method           Tensile Modulus         9650         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D790           Compresive Strength         96.5	Filler / Reinforcement	Glass fiber reinforced material, 33% filler by weight			
RoHS Compliance         Contact manufacturer           Appearance         Black Natural color           Forms         Particle           Processing Method         Injection molding           Physical         Nominal Value         Unit         Test Method           Specific Gravity         1.58         g/cm³         ASTM D792           Molding Shrinkage - Flow (3.18 mm)         0.10         %         ASTM D955           Water Absorption (23°C, 24 hr)         0.060         %         ASTM D770           Hardness         Nominal Value         Unit         Test Method           Rockwell Hardness (R-Scale)         118         ASTM D785           Mechanical         Nominal Value         Unit         Test Method           Tensile Modulus         9650         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Strength         152         MPa         ASTM D790           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         O.20         ASTM D645           Wetal-Dynamic)         O.2	Additive	PTFE lubricant (15%)			
Particle	Features	Lubrication			
Natural color   Particle	RoHS Compliance	Contact manufacturer			
Forms         Particle           Processing Method         Injection molding           Physical         Nominal Value         Unit         Test Method           Specific Gravity         1.58         g/cm³         ASTM D792           Molding Shrinkage - Flow (3.18 mm)         0.10         %         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         9650         MPa         ASTM D638           Tensile Etength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Compressive Strength         152         MPa         ASTM D695           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         Q.20         ASTM D695           Metal-Dynamic)         Q.20         ASTM D695	Appearance	Black			
Processing Method         Injection molding           Physical         Nominal Value         Unit         Test Method           Specific Gravity         1.58         g/cm³         ASTM D792           Molding Shrinkage - Flow (3.18 mm)         0.10         %         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         9650         MPa         ASTM D638           Tensile Strength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D695           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         0.20         ASTM D1894           Impact         Nominal Value         Unit         Test Method           Notched Izod Impact (3.18 mm)		Natural color			
Physical         Nominal Value         Unit         Test Method           Specific Gravity         1.58         g/cm³         ASTM D792           Molding Shrinkage - Flow (3.18 mm)         0.10         %         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         9650         MPa         ASTM D638           Tensile Strength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D695           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With         Metal-Dynamic)         0.20         ASTM D695           Coefficient of Friction (With         Metal-Dynamic)         ASTM D894           Impact         Nominal Value         Unit         Test Method      <	Forms	Particle			
Specific Gravity	Processing Method	Injection molding			
Molding Shrinkage - Flow (3.18 mm)         0.10         %         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         9650         MPa         ASTM D638           Tensile Strength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D790           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         0.20         ASTM D695           Metal-Dynamic)         0.20         ASTM D894           Impact         Nominal Value         Unit         Test Method           Notched Izod Impact (3.18 mm)         96         J/m         ASTM D4812           Thermal         Nominal Value         Unit         Test Method           Undet test Method	Physical	Nominal Value	Unit	Test Method	
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         9650         MPa         ASTM D638           Tensile Elongation (Break)         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D790           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         0.20         ASTM D1894           Impact         Nominal Value         Unit         Test Method           Notched Izod Impact (3.18 mm)         96         J/m         ASTM D4812           Thermal         Nominal Value         Unit         Test Method           Deflection Temperature Under Load         Vnit         Test Method           0.45 MPa, not annealed         149         °C         ASTM D648	Specific Gravity	1.58	g/cm³	ASTM D792	
Hardness Nominal Value Unit Test Method Rockwell Hardness (R-Scale) 118	Molding Shrinkage - Flow (3.18 mm)	0.10	%	ASTM D955	
Rockwell Hardness (R-Scale)         118         ASTM D785           Mechanical         Nominal Value         Unit         Test Method           Tensile Modulus         9650         MPa         ASTM D638           Tensile Strength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D790           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         0.20         MPa         ASTM D1894           Impact         Nominal Value         Unit         Test Method           Notched Izod Impact (3.18 mm)         530         J/m         ASTM D4812           Thermal         Nominal Value         Unit         Test Method           Deflection Temperature Under Load         Unit         Test Method           0.45 MPa, not annealed         149         °C         ASTM D648	Water Absorption (23°C, 24 hr)	0.060	%	ASTM D570	
Mechanical Nominal Value Unit Test Method Tensile Modulus 9650 MPa ASTM D638 Tensile Strength 103 MPa ASTM D638 Tensile Elongation (Break) 2.0 % ASTM D638 Flexural Modulus 8270 MPa ASTM D790 Flexural Strength 152 MPa ASTM D790 Compressive Strength 96.5 MPa ASTM D790 Compressive Strength 96.5 MPa ASTM D695 Coefficient of Friction (With Metal-Dynamic) 0.20 MPa ASTM D790 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 149 °C ASTM D648	Hardness	Nominal Value	Unit	Test Method	
Tensile Modulus         9650         MPa         ASTM D638           Tensile Strength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D790           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         0.20         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         C         ASTM D648	Rockwell Hardness (R-Scale)	118		ASTM D785	
Tensile Strength         103         MPa         ASTM D638           Tensile Elongation (Break)         2.0         %         ASTM D638           Flexural Modulus         8270         MPa         ASTM D790           Flexural Strength         152         MPa         ASTM D790           Compressive Strength         96.5         MPa         ASTM D695           Coefficient of Friction (With Metal-Dynamic)         0.20         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         "C         ASTM D648	Mechanical	Nominal Value	Unit	Test Method	
Tensile Elongation (Break) 2.0 % ASTM D638  Flexural Modulus 8270 MPa ASTM D790  Flexural Strength 152 MPa ASTM D790  Compressive Strength 96.5 MPa ASTM D695  Coefficient of Friction (With Metal-Dynamic) 0.20 MPa 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 VASTM D648  0.45 MPa, not annealed 149 °C ASTM D648	Tensile Modulus	9650	MPa	ASTM D638	
Flexural Modulus  8270  MPa  ASTM D790  Flexural Strength  152  MPa  ASTM D790  Compressive Strength  96.5  MPa  ASTM D695  Coefficient of Friction (With Metal-Dynamic)  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  ASTM D4812  Thermal  Nominal Value  Unit  Test Method  ASTM D4812  Thermal  Nominal Value  Unit  Test Method  ASTM D4812  ASTM D648	Tensile Strength	103	MPa	ASTM D638	
Flexural Strength 152 MPa ASTM D790  Compressive Strength 96.5 MPa ASTM D695  Coefficient of Friction (With Metal-Dynamic) 0.20 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 149 °C ASTM D648	Tensile Elongation (Break)	2.0	%	ASTM D638	
Compressive Strength 96.5 MPa ASTM D695  Coefficient of Friction (With Metal-Dynamic) 0.20 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 149 °C ASTM D648	Flexural Modulus	8270	MPa	ASTM D790	
Coefficient of Friction (With Metal-Dynamic)  Impact  Nominal Value  Unit  Test Method  Notched Izod Impact (3.18 mm)  96  Unnotched Izod Impact (3.18 mm)  530  J/m  ASTM D256  Unnotched Izod Impact (3.18 mm)  Test Method  Deflection Temperature Under Load  0.45 MPa, not annealed  149  C  ASTM D648	Flexural Strength	152	MPa	ASTM D790	
Metal-Dynamic)0.20ASTM D1894ImpactNominal ValueUnitTest MethodNotched Izod Impact (3.18 mm)96J/mASTM D256Unnotched Izod Impact (3.18 mm)530J/mASTM D4812ThermalNominal ValueUnitTest MethodDeflection Temperature Under LoadCASTM D6480.45 MPa, not annealed149°CASTM D648	Compressive Strength	96.5	MPa	ASTM D695	
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	Coefficient of Friction (With Metal-Dynamic)	0.20		ASTM D1894	
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 149 °C ASTM D648	Impact	Nominal Value	Unit	Test Method	
Thermal Nominal Value Unit Test Method  Deflection Temperature Under Load ASTM D648  0.45 MPa, not annealed 149 °C ASTM D648	Notched Izod Impact (3.18 mm)	96	J/m	ASTM D256	
Deflection Temperature Under Load  0.45 MPa, not annealed  149  °C  ASTM D648  ASTM D648	Unnotched Izod Impact (3.18 mm)	530	J/m	ASTM D4812	
0.45 MPa, not annealed 149 °C ASTM D648	Thermal	Nominal Value	Unit	Test Method	
	Deflection Temperature Under Load			ASTM D648	
1.8 MPa, not annealed 146 °C ASTM D648	0.45 MPa, not annealed	149	°C	ASTM D648	
	1.8 MPa, not annealed	146	°C	ASTM D648	

CLTE - Flow	2.3E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.32	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.40		ASTM D150
Dissipation Factor (1 MHz)	7.0E-3		ASTM D150
Arc Resistance	120	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94

#### Additional Information

Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 2mil/in.Wear Factor, K, ASTM D-3702: 35E-10in<sup>3</sup>/min/ft/lb/hrCoefficient of Friction, Dynamic, ASTM D-3702: 0.20The wear factor and coefficient of friction were both 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	103 - 138	MPa	

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### 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

