



## Technical Data Sheet

### TPC Enhanced Grade Polyisobutylene TPC 175, TPC 1105, TPC 1160, TPC 1285, TPC 1350

#### CHARACTERISTICS

TPC offers enhanced grades of polyisobutylene which are replacements for conventional grades of PIB in applications where viscosity and tackiness are desired key qualities. Our proprietary process produces clear, consistent and water white products in a variety of molecular weights and viscosities. Our Enhanced grades are TPC 175, TPC 1105, TPC 1160, TPC 1285 and TPC 1350.

#### TPC 175 APPLICATIONS

TPC 175 can be used for a variety of applications such as: Fuel oil additive, Lubricant Oil additive, Emulsifier, 2 stroke engine oil, viscosity modifiers, hot melt adhesives, roofing membranes, tackifiers, PIBSA reactions, emulsions, asphalt/bitumen, sealants, Polypropylene films, drilling fluid, metal working fluids, cables, compressor oil, polymer and rubber modifiers. TPC 175 has a viscosity range of 75 -95 cSt with a molecular weight of 750.

#### TPC 1105 APPLICATIONS

TPC 1105 can be used for a variety of applications such as: cosmetics, replacement for bright stocks, mineral oils and process oils, cosmetics, PIBSA reactions, emulsions, fuel and lubricant additives, 2 stroke engine oil, viscosity modifiers, personal care products, pour point depressants, corrosion inhibitors, tackifiers, asphalt/bitumen, polymer modification, adhesives and elastomer based sealants and caulks. TPC 1105 has a viscosity range of 4000 – 5000 cSt with a molecular weight of 1050.

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**TPC 1160  
APPLICATIONS**

TPC 1160 can be used for a variety of applications such as: Cosmetics, pressure sensitive adhesives, hot melt adhesives, water based adhesives, automotive sealants, window sealants, tire sealants, viscosity modifiers, tackifiers, PIBSA reactions, emulsions, asphalt/bitumen, elastomer based sealants and caulks, polymer modification, adhesives, cling film, gum base, rubber modifier, roofing membranes. TPC 1160 has a viscosity range of 625 – 685 cSt with a molecular weight of 1600.

**TPC 1285  
APPLICATIONS**

TPC 1285 can be used for a variety of applications such as: Personal care, hot melt adhesives, water based adhesives, automotive sealants, window sealants, tire sealants, emulsions, asphalt/bitumen, elastomer based sealants and caulks, adhesives, stretch/cling film, compressor oil, metal working fluids, submarine cable insulating oils, rubber modifier. TPC 1285 has a viscosity range of 3000 – 3400 cSt with a molecular weight of 2850.

**TPC 1350  
APPLICATIONS**

TPC 1350 can be used for a variety of applications such as: Emulsions, asphalt/bitumen, elastomer based sealants and caulks, adhesives, stretch/cling film, compressor oil, metal working fluids, submarine cable insulating oils, rubber modifier, damping fluids. TPC 1350 has a viscosity range of 4000 – 4500 cSt and a molecular weight of 3500.

**GENERAL**

Enhanced PIB grades are used as replacements for conventional grades of PIB. Enhanced PIB grades are ideal for applications where viscosity and tackiness are key qualities of the material.

TPC Group offers the broadest portfolio of PIB products to the market and is a major supplier to many different markets, including fuels and lubricants, caulks, sealants, adhesives, packaging, greases and emulifiers.

**PACKAGING**

These grades are typically sold in railcar quantities but isocontainers and trucks are also available.



**Technical data Sheet**

**General Sales Specifications**

Property	Method	175	1105	1160	1285	1350
Kinematic Viscosity, cSt	ASTM D445	75-95	190 – 240	625 – 685	3000 – 3400	4000 - 4500
Flash Point, COC, °C	ASTM D92	>140	>185	>210	>210	>210
Specific Gravity @ 15.6 °C	ASTM D4052	0.87 – 0.90	0.88 – 0.91	0.89 – 0.93	0.90 – 0.94	0.90 – 0.94
Color, APHA	ASTM D1209	<70	<50	<50	<50	<50
Haze, Photometric	ASTM D6181	<4	<4	<4	<4	<4
Water, ppm	ASTM D1533	Report	Report	Report	Report	Report
Appearance		Clear and Bright	Clear and Bright	Clear and Bright	Clear and Bright	Clear and Bright

**Supplemental Data <sup>1</sup>**

Technical Data Sheet Property	Method	175	1105	1160	1285	1350	
Molecular Weight, Mn	Proprietary	750	1050	1600	2850	3500	
Kinematic Viscosity, cSt	ASTM D445	100°C	86	220	647	3,121	4,090
		70°C	287	840	2,801	13,172	17,481
		40°C	1,721	5,600	19,809	80,106	107,277
		20°C	7,582	21,200	111,436	346,926	465,790
Water, ppm	ASTM D1533	25	25	25	25	25	
Chlorine, ppm	ASTM D4327	<1	<1	<1	<1	<1	
Sulfur, ppm	ASTM D2622	<1	<1	<1	<1	<1	
Aromatics, ppm	HPLC	<1	<1	<1	<1	<1	
Viscosity Index	ASTM D2270	118	144	187	294	307	
Refractive Index	ASTM D1218	1.4922	1.4971	1.5029	1.5065	1.5054	
Pour Point, °C	ASTM D97	-18	-6	3	12	21	
Dielectric Breakdown Voltage, KV	ASTM D877	50	50	50	50	50	
Power Factor 100°C, (x10 <sup>-6</sup> )	ASTM D924	80	80	80	80	80	
Dissipation Factor @ 100°C, (x10 <sup>-6</sup> )	ASTM BS5737	80	80	80	80	80	
Acid Number	ASTM D974	<0.1	<0.1	<0.1	<0.1	<0.1	
Saponification Number, mg KOH/g	ASTM D94	<1	<1	<1	<1	<1	
Bromine Number, g Br <sub>2</sub> /100g	ASTM 1159	20.6	15.7	10.0	5.9	4.8	
Evaporation Loss, 10 hrs @ 99°C, wt%	ASTM D972	1.80	0.53	0.24	0.10	<0.10	

<sup>1</sup>The supplemental data listed herein is subject to change without notice. The supplemental data is based on randomly selected samples of product and is believed to represent average values. However, TPC Group does not warrant that its products comply with the supplemental data.

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