

REPRESENTATIVE AND TYPICAL TPE PROPERTIES

- The 1100 series is blended using fine mesh cryo crumb rubber blended with post-industrial and post-consumer polypropylene (PP)
- The 1200 series is blended using fine mesh cryo crumb rubber blended with post-industrial and post-consumer high density polyethylene (HDPE)

TPE 1100 Series: Rubber Modified POLYPROPYLENE (PP) for Injection Molding

The TPE 1100 Series exhibits an excellent balance of physical and thermodynamic properties which makes it an ideal choice for applications in Automotive, Appliances, Lawn & Garden, and also Construction Applications. It's ease of Processing Ability(s) along with a broad service temperature range and a reduction of cycle time, make it ideal for Value-Added Applications.

Typical Properties of Commercial Grade: TPE 1120 (20% rubber)		+/- 10%
Melt Flow Index. g/10 min. (230°C/2.16kg)	ASTM D1238	6.42
Density, g/cc	ASTM D792	0.956
Tensile Strength @ yield, psi (rate 2"/min)	ASTM D638	2416
Elongation @ yield, %	ASTM D638	33
Flexural Modulus, psi (1% secant, .05"/min)	ASTM D790	91441
Notched Izod, Impact, ft.lbs/in. @ 23°C	ASTM D256	2.1
Notched Izod, Impact, ft.lbs/in. @ -30°C	ASTM D256	1.1
Hardness, Shore D	ASTM D2240	65
Ash, %	ASTM D5630	3.8

Typical Properties of Commercial Grade: TPE 1125 (25% rubber)		+/- 10%
Melt Flow Index. g/10 min. (230°C/2.16kg)	ASTM D1238	13.26
Density, g/cc	ASTM D792	0.968
Tensile Strength @ yield, psi (rate 2"/min)	ASTM D638	2090
Elongation @ yield, %	ASTM D638	28
Flexural Modulus, psi (1% secant, .05"/min)	ASTM D790	85588
Notched Izod, Impact, ft.lbs/in. @ 23°C	ASTM D256	1.8
Notched Izod, Impact, ft.lbs/in. @ -30°C	ASTM D256	0.98
Hardness, Shore D	ASTM D2240	63
Ash, %	ASTM D5630	3.2

Typical Properties of Commercial Grade: TPE 1130 (30% rubber)		+/- 10%
Melt Flow Index. g/10 min. (230°C/2.16kg)	ASTM D1238	10.8
Density, g/cc	ASTM D792	0.975
Tensile Strength @ yield, psi (rate 2"/min)	ASTM D638	1894
Elongation @ yield, %	ASTM D638	32
Flexural Modulus, psi (1% secant, .05"/min)	ASTM D790	76483
Notched Izod, Impact, ft.lbs/in. @ 23°C	ASTM D256	2.2
Notched Izod, Impact, ft.lbs/in. @ -30°C	ASTM D256	1.2
Hardness, Shore D	ASTM D2240	61
Ash, %	ASTM D5630	4.2

Sample preparation: ASTM Sample Specimens were Injection Molded according to the conditions specified in ASTM D 1248. TPE 1100 Series was molded at 425°F. Mold temperature was 100°F. Bars were conditioned @23°C/50% RH for 40 hrs. Low temp Izod bars were conditioned @ -30°C for 16 hours prior to testing.

TPE 1200 Series: Rubber Modified HIGH DENSITY POLYETHYLENE (HDPE) for Injection Molding

The TPE 1200 Series exhibits an excellent balance of physical and Thermodynamic Properties which makes it an ideal choice for applications in Automotive, Appliances, Lawn & Garden, and also Construction. Its ease of processing ability along with a Broad Service Temperature Range and also a Reduction of Cycle Time, make it ideal for Value Added Applications.

Typical Properties of Commercial Grade: TPE 1220 (20% rubber)		+/- 10%
Melt Flow Index. g/10 min. (190°C/2.16kg)	ASTM D1238	3.5
Density, g/cc	ASTM D792	0.984
Tensile Strength @ yield, psi (rate 2"/min)	ASTM D638	1962
Elongation @ yield, %	ASTM D638	42
Flexural Modulus, psi (1% secant, .05"/min)	ASTM D790	49459
Notched Izod, Impact, ft.lbs/in. @ 23°C	ASTM D256	3.1
Notched Izod, Impact, ft.lbs/in. @ -30°C	ASTM D256	1.4
Hardness, Shore D	ASTM D2240	59
Ash, %	ASTM D5630	2.8

Typical Properties of Commercial Grade: TPE 1225 (25% rubber)		+/- 10%
Melt Flow Index. g/10 min. (190°C/2.16kg)	ASTM D1238	3.6
Density, g/cc	ASTM D792	0.993
Tensile Strength @ yield, psi (rate 2"/min)	ASTM D638	1845
Elongation @ yield, %	ASTM D638	46

Flexural Modulus, psi (1% secant, .05"/min)	ASTM D790	46310
Notched Izod, Impact, ft.lbs/in. @ 23°C	ASTM D256	4.1
Notched Izod, Impact, ft.lbs/in. @ -30°C	ASTM D256	1.6
Hardness, Shore D	ASTM D2240	59
Ash, %	ASTM D5630	3.5
Typical Properties of Commercial Grade: TPE 1230 (30% rubber)		+/- 10%
Melt Flow Index. g/10 min. (190°C/2.16kg)	ASTM D1238	3.7
Density, g/cc	ASTM D792	1.003
Tensile Strength @ yield, psi (rate 2"/min)	ASTM D638	1792
Elongation @ yield, %	ASTM D638	43
Flexural Modulus, psi (1% secant, .05"/min)	ASTM D790	45005
Notched Izod, Impact, ft.lbs/in. @ 23°C	ASTM D256	3.9
Notched Izod, Impact, ft.lbs/in. @ -30°C	ASTM D256	1.6
Hardness, Shore D	ASTM D2240	59
Ash, %	ASTM D5630	3.4

Sample preparation: ASTM sample specimens were injection molded according to the conditions specified in ASTM D 1248. TPE 1200 Series was molded at 350°F. Mold temperature was 100°F. Bars were conditioned @23°C/50% RH for 40 hrs. Low temp Izod bars were conditioned @ -30°C for 16 hours prior to testing.

The information and recommendations in this publication are to the best of our knowledge as reliable per Standard ASTM Tests.

Users should perform their own tests to determine the suitability of these products for their own particular purpose.

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