

ngplastics,corp.

PET/PC 15MFRHF: PET/PC alloy, 15% mineral filled, flame-retardant - Halogen Free

CATEGORIES	PROPERTIES	TESTING METHOD	UNITS		PET/PC 15MFRHF
Glass Filled			%		
Mineral Filled			%		15
Physical	Specific gravity	ASTM-D792	-		1.33
	Moisture Absorption	ASTM-D570	%		0.05
Thermal	Heat Distortion Temp.	ASTM-D648	°C	4.6kg/cm2	90
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	flow direction	0.18 / 23°C
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	Cross flow	0.88 / 23°C
	Mold Shrinkage	ASTM-D955	%	MD	0.31
	Mold Shrinkage	ASTM-D955	%	TD	0.59
	Flammability	UL94	-		<u>V-0@1/32"</u>
Mechanical	Tensile Strength	ASTM-D638	Kg/cm ²		700
	Elongation At Break	ASTM-D638	%		7.5
	Flexural Strength	ASTM-D790	Kg/cm ²		1300
	Flexural Modulus	ASTM-D790	Kg/cm ²		42000
	Izod Impact Strength	ASTM-D256	kg.cm/cm	(Notched)	5
	Rockwell Hardness	ASTM-D785	M		95
	Rockwell Hardness	ASTM-D785	R		120
Other	Melt Flow Index	ISO-R1133	g/10min		60
	Vicat Softening Point	ASTM-D1525	°C	50K/h, 10N	200
Molding Conditions	Resin Temperature	-	°C		250
	Mold Temperature	-	°C		20
	Pre-Drying Temp.	-	°C		20
	Pre-Drying Time	-	Hr		4

15GFRR: PET, 15% glass-fill, flame retardant - RoHS compliant

30GFRHF: PET, 30% glass-fill, flame retardant - Halogen Free

40MGFRR: PET, 40% mineral & glass-fill, flame retardant - RoHS compliant

CATEGORIES	PROPERTIES	TESTING METHOD	UNITS		15GFRR	30GFRHF	40MGFRR
Glass Filled			%		15	30	40
Mineral Filled			%				
Physical	Specific gravity	ASTM-D792	-		1.48	1.57	1.78
	Moisture Absorption	ASTM-D570	%		0.07	0.05	0.05
Thermal	Heat Distortion Temp.	ASTM-D648	°C	4.6kg/cm2	220	220	220
	Heat Distortion Temp.	ASTM-D648	°C	18.6kg/cm2	130	180	200
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	flow direction	0.18 / 23°C	0.19 / 23°C	0.13 / 23°C
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	Cross flow	0.88 / 23°C	0.92 / 23°C	0.65 / 23°C
	Mold Shrinkage	ASTM-D955	%	MD	0.3	0.3	0.27
	Mold Shrinkage	ASTM-D955	%	TD	1.51	1.51	1.19
	Flammability	UL94	-		V-0@1/32"	V-0@1/16"	V-0@1/32"
Mechanical	Tensile Strength	ASTM-D638	Kg/cm ²		940	840	1208
	Elongation At Break	ASTM-D638	%		2.2	2.3	1.3
	Flexural Strength	ASTM-D790	Kg/cm ²		1230	1180	1279
	Flexural Modulus	ASTM-D790	Kg/cm ²		53000	74100	90900
	Izod Impact Strength	ASTM-D256	kg.cm/cm	(Notched)	7	8.85	9.58
	Rockwell Hardness	ASTM-D785	M		95	95	95
	Rockwell Hardness	ASTM-D785	R		120	120	120
Other	Melt Flow Index	ISO-R1133	g/10min		60	50	8
	Vicat Softening Point	ASTM-D1525	°C		210	218	220
Molding Conditions	Resin Temperature	-	°C		250	250	250
	Mold Temperature	-	°C		90-110	90-110	90-110
	Pre-Drying Temp.	-	°C		120	120	120
	Pre-Drying Time	-	Hr		4	4	4

20G: PET, 20% glass-fill

30G: PET, 30% glass-fill

CATEGORIES	PROPERTIES	TESTING METHOD	UNITS		20G	30G
Glass Filled			%		20	30
Mineral Filled			%			
Physical	Specific gravity	ASTM-D792	-		1.45	1.57
	Moisture Absorption	ASTM-D570	%		0.05	0.05
Thermal	Heat Distortion Temp.	ASTM-D648	°C	4.6kg/cm2	220	220
	Heat Distortion Temp.	ASTM-D648	°C	18.6kg/cm2	200	210
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	flow direction	0.25 / 23°C	0.10 / 23°C
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	Cross flow	0.93 / 23°C	0.81 / 23°C
	Mold Shrinkage	ASTM-D955	%	MD	0.3	0.3
	Mold Shrinkage	ASTM-D955	%	TD	1.51	1.1
	Flammability	UL94	-		<u>HB</u>	<u>HB</u>
Mechanical	Tensile Strength	ASTM-D638	Kg/cm ²		965	1263
	Elongation At Break	ASTM-D638	%		2.75	2.47
	Flexural Strength	ASTM-D790	Kg/cm ²		1632	2093
	Flexural Modulus	ASTM-D790	Kg/cm ²		64100	87700
	Izod Impact Strength	ASTM-D256	kg.cm/cm	(Notched)	8.5	13
	Rockwell Hardness	ASTM-D785	M		95	95
	Rockwell Hardness	ASTM-D785	R		120	120
Other	Melt Flow Index	ISO-R1133	g/10min		50	13
	Vicat Softening Point	ASTM-D1525	°C	50K/h, 10N	210	218
Molding Conditions	Resin Temperature	-	°C		250	250
	Mold Temperature	-	°C		90-110	90-110
	Pre-Drying Temp.	-	°C		120	120
	Pre-Drying Time	-	Hr		4	4

E1ST: unfilled

ST: unfilled

CATEGORIES	PROPERTIES	TESTING METHOD	UNITS		E1ST	ST
Glass Filled			%			
Mineral Filled			%			
Physical	Specific gravity	ASTM-D792	-		1.37	1.33
	Moisture Absorption	ASTM-D570	%		0.5	0.5
Thermal	Heat Distortion Temp.	ASTM-D648	°C	4.6kg/cm2	80	80
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	flow direction	1.2 / 23°C	1.4 / 23°C
	Coefficient Of Linear Thermal Expansion	ASTM-E831	mm/mm/°C (X10 ⁻⁵)	Cross flow	1.2 / 23°C	1.4 / 23°C
	Mold Shrinkage	ASTM-D955	%	MD	0.6	0.6
	Mold Shrinkage	ASTM-D955	%	TD	0.8	0.8
	Flammability	UL94	-		<u>HB</u>	<u>HB</u>
Mechanical	Tensile Strength	ASTM-D638	Kg/cm ²		516	350
	Elongation At Break	ASTM-D638	%		40	3
	Flexural Strength	ASTM-D790	Kg/cm ²		933	600
	Flexural Modulus	ASTM-D790	Kg/cm ²		26200	18400
	Izod Impact Strength	ASTM-D256	kg.cm/cm	(Notched)	6.4	85
	Rockwell Hardness	ASTM-D785	M		58	58
	Rockwell Hardness	ASTM-D785	R		111	111
Other	Melt Flow Index	ISO-R1133	g/10min		40	20
	Vicat Softening Point	ASTM-D1525	°C	50K/h, 10N	200	200
Molding Conditions	Resin Temperature	-	°C		250	250
	Mold Temperature	-	°C		20	20
	Pre-Drying Temp.	-	°C		120	120
	Pre-Drying Time	-	Hr		4	4