

**Consumer Electronic Data Cable
Jacket Material Solution (TPU/TPE/mPPE/mPPE-PE)**



Application Advantages

TPU Jacket Material

- 1.UL certification:** UL yellow card certification V0 grade polyether TPU material (yellow card number: E353106), adequately support conventional data line pass UL758/1581 VW-1 combustion test.
- 2.Hydrolysis resistance:** adequately support the cable pass 1000Hrs high temperature and humidity test (85°C/85%,1000Hrs)
- 3.Environmental resistance:** Fully support the environmental and life long testing of cables through oil resistance (IRM902, 60°C, 168Hrs), chemical resistance, mildew resistance, etc
- 4.Heat Resistance:** Fully support the cable pass UL 758/1581 80°C/105°C heat resistance test (113°C/136°C, 168Hrs)
- 5.Excellent mechanical properties:** fully support the wire pass all kinds of rocking, resilient recovery and other tests.
- 6.Advanced Appearance:** Unique extinction formula makes the cable present a very even and fine frosted surface (fog surface) appearance, with advanced texture and touch; best solution for high-end consumer electronic products cable. .

TPE S Jacket Material

- 1.Authoritative certification:** UL yellow card certification V0 TPEs material (yellow card number: E353106), can fully support conventional data lines pass UL758/1581 VW-1 combustion test;
- 2.Non-cracking:** Unique patent formula, PPS-free (polyphenylene ether), can effectively prevent the stress cracking risk of TPEs sheath in long-term bending and winding applications;
- 3.Heat Resistance:** Fully support the cable pass UL 758/1581 80°C/90°C/105°C heat resistance test (113°C/121°C/136°C, 168Hrs)
- 4.More wear-resistant:** the introduction of rubber functional groups provides better wear resistance and softer rubber touch comparing to the conventional TPEs cable sheath;
- 5.Easy to process:** High yield rate of extruding, achieve the processing efficiency of 80—200m/min. PVC equivalent screw.
- 6.High price-performance ratio:** low specific gravity (≤ 1.07), high price-performance ratio, ideal solution for conventional consuming electronic product sheath material.

mPPE / mPPE-PE Jacket Material

- 1.Good flame retardant:** UL V0 grade mPPE/mPPE-PE material, fully support conventional data line pass the UL758/1581 VW-1 combustion test;
- 2.High Strength:** Fully support the cable pass the UL758/1581 tensile strength test for mPPE, mPPE-PE cables, (mPPE: 21.37 Mpa; mPPE-PE: 13.79 Mpa) and other mechanical performance test;
- 3.Heat resistance:** fully support the mPPE、mPPE-PE cable pass the high temperature aging test through UL758/1581; (mPPE: UL105°C: 136°C/168 Hrs; mPPE-PE: UL80°C: 113°C/168 Hrs);
- 4.Higher softness:** The introduction of rubber functional groups provides obvious higher softness and higher wear resistance ability comparing to similar products in the market while been applied to mPPE/mPPE-PE cable sheath;
- 5.Easy to process:** High yield rate of extruding, achieve the processing efficiency of 80—200m/min. PVC equivalent screw.

Properties Datasheet

					Model	Model	Model	Model	Model	Model
General characteristics	Material properties	Testing standard	Test condition	Units	1175F-RS	1195D-ESL	9095E	2995B-ES	2080R	6078B
	Material category	-	-	-	TPU polyether	TPU polyether	SBC	MPPE	SBC	EVC
	Appearance (light/Semi-matte/Frosted)	-	-	-	-	Semi-matte	Semi-matte	Semi-matte	-	Frosted
	Extrusion/injection	-	-	-	Injection molding	Extrusion	Extrusion	Extrusion	Injection molding	Extrusion
Physical characteristics	Hardness	DIN 53505	155	Shore A	75	95	96	97	80	78
	Proportion	DIN 53479	-	g/cm ³	1.03	1.43	1.1	1.08	1.01	1.33
	Melt index	DIN 53735	230°C/5kg	g/10min	3	8	0.2	0.1	10	0.5
	Brittle temperature	ISO 812	-	°C	-60	-50	-40	-40	-50	-35
Mechanical properties	Elongation	DIN 53504	200mm/min	%	650	200	200	200	400	330
	Tensile Strength	DIN 53504	200mm/min	Mpa	20	13	18	23	9	18
	Tearing strength	DIN 53515	500mm/min	KN/m	50	30	45	50	30	26
Hot air aging	Elongation retention rate	DIN 53504	158°C/168h	%			≥60 (136°C)	≥60 (136°C)		≥75 (135°C)
	Tensile strength retention	DIN 53504	158°C/168h	%			≥90 (136°C)	≥90 (136°C)		≥75 (135°C)
Electrical performance	Volume resistivity	ASTM D257	-	Ohm-cm	≥1.0E+11	≥1.0E+11	≥1.0E+15	≥1.0E+15	≥1.0E+15	≥1.0E+11
Combustion performance	Vertical burning test	UL 94	3.0/6.0mm	-			V0(6.0mm)	V0(6.0mm)	V0(6.0mm)	V0(3.0mm)
Feature					Super soft TPU injection products	Non - flame smoke density 152, flame smoke density 69	VW-1 Irradiation-free electron wire	MPPE products, through vw-1	Easy to process flame retardant TPE injection products	The robot cable product with the highest cost performance conforms to ww-1



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