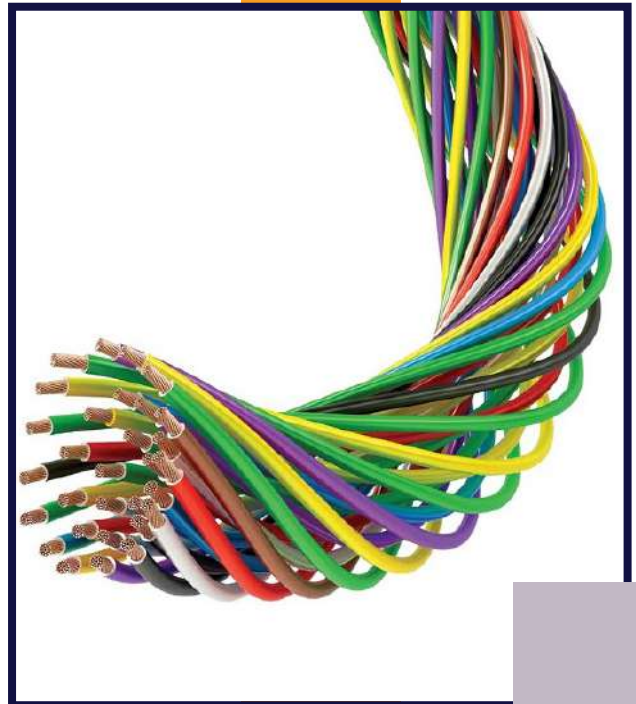




TESC



Cable Compounds Catalog





About Us

Trade and Economy Solution Group (TESG) is well-positioned to utilize its strong legal and financial foundation, extensive communication infrastructure, and business network to assist clients in trading various components.

With our wealth of experience and resources, we have the ability to oversee all aspects of general trading, including marketing, negotiating contracts, making product sales, managing logistics, handling financial transactions, managing customers, providing customs services, as well as sales and procurement engineering. Moreover, we excel in offering a wide range of essential services to ensure that each component is traded globally at the highest quality standards.

Polymer & Petrochemical Department

The integration of polymers into everyday life has reached unprecedented levels, a trend that continues to accelerate. Across various industrial sectors, from water and energy transfer to automotive design and manufacturing, polymers have enabled the development of innovative solutions to a range of complex challenges.

Today, the application of polymers has expanded significantly in comparison to metal and mineral materials, a trajectory that is expected to persist. TESG with its extensive experience in international markets, is poised to guide companies through the rapid development and expansion of polymer products. By creating value across the supply chain, TESG can provide tailored solutions to meet the specific needs of this dynamic industry.



Cable Compounds

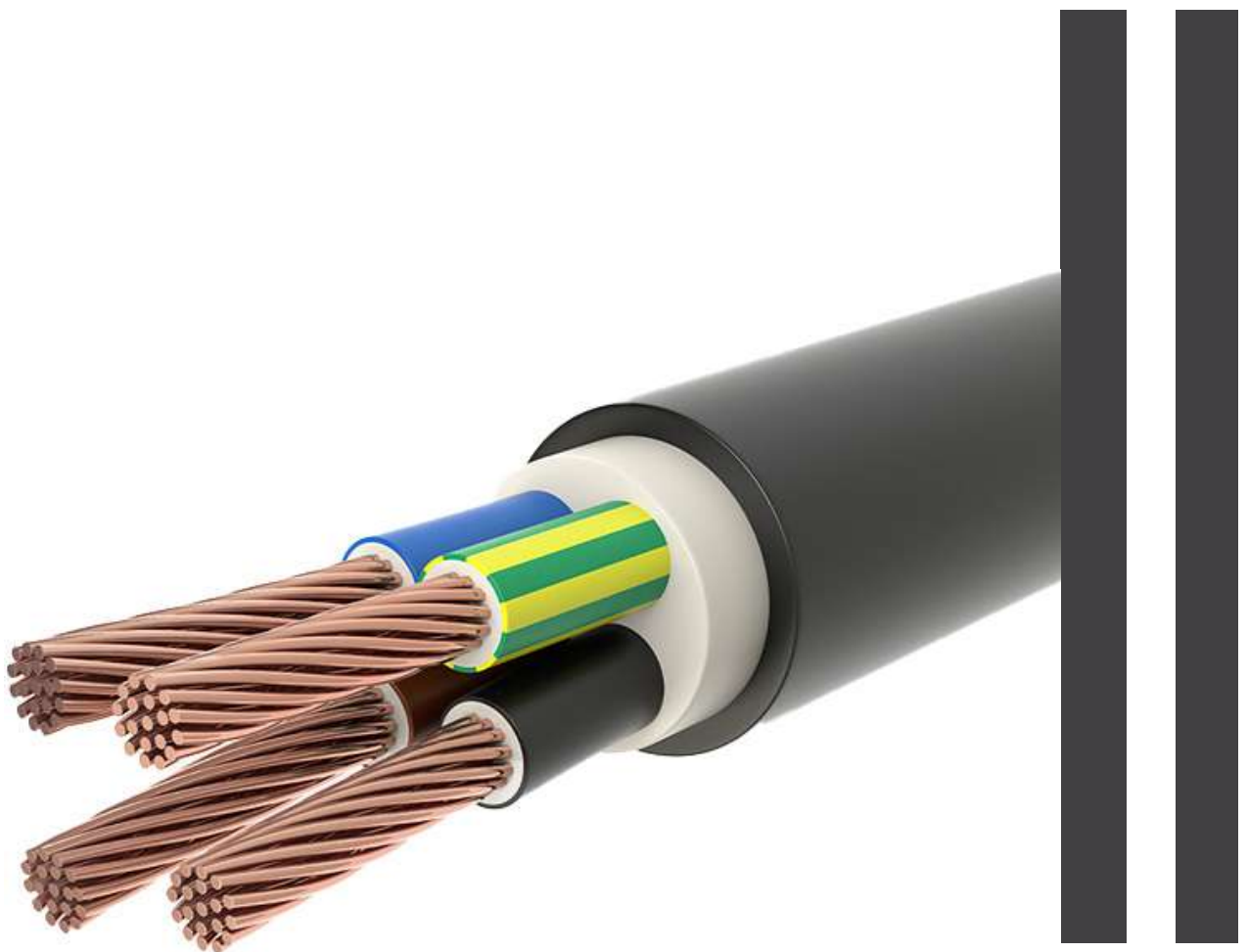
We offer a comprehensive range of PVC, HFFR, and XLPE compounds, widely utilized in the construction of electrical cables for purposes such as insulation, bedding, filler, and sheathing. These compounds are noted for their cost-effectiveness and superior quality, resulting in an extended operational lifespan.

We have the capability to provide custom compounds tailored to your specifications. Our skilled technical team is available to collaborate with you to supply compounds that meet your specific requirements.



Insulation

Insulation serves the essential purpose of withstanding the electrical field applied to the cable throughout its intended lifespan in its designated installation environment. This requires the application of an extruded layer of XLPE, elastomer, rubber, or PVC over the conductor screen using a triple extrusion process. Cables use various types of insulation materials which will be represented later.



PVC-based Compounds

PVC insulated cables are widely used in various industries due to their cost-effectiveness, resistance to biological and chemical elements, and malleability. These cables are commonly employed in electrical applications and exhibit high tensile strength, excellent conductivity, and flexibility. Low voltage copper conductor PVC cables find applications in domestic home appliances, house wiring, lighting circuits, power supply for office automation, control, instrumentation, submarine, mining, and ship wiring.



Insulation	General Description	Density (g/cm ³)	Hardness (shore A)	Classification			
				IEC60227	IEC60502	BS 6746	VDE 0207

TG-I7548	High Speed extrusion Compound for Flexible Cables	1.48	75	PVC/D		TI2	
TP-I8645	Compound for Flexible Cables	1.45	86	PVC/D			
TG-I7643	High Speed extrusion Compound for Flexible Cables	1.43	76	PVC/D		TI2	
TG-I8245	High Speed Compound for Flexible Cables	1.45	82	PVC/D		TI2	
TG-I8445	Insulation Compound for Thin wall Extrusion of Instrument and	1.45	84		PVC/C	TI1	
TG-I8840	Compound for thin wall extrusion instruments and control cables	1.4	88		PVC/A	TI1	
TG-I8450	General Purpose compound for Fixed Cables	1.5	84	PVC/C		TI1	
TP-I8846	compound for Fixed Cables	1.46	88	PVC/C			
TP-I8946	compound for Fixed Cables	1.46	89		PVC/A		
TG-I9230	Insulation Compound for Thin wall Extrusion of Instrument, Telecommunication and Control Cables	1.3	92		PVC/A	TI1	
TP-I8535	Insulation Compound for Telecommunication Cables	1.35	85		PVC/A	TI1	
TG-I8648	Instrument and control cables	1.48	86		PVC/A	TI1	
TG-I8652	General Purpose compound for Fixed cables	1.52	86		PVC/C	TI1	

Insulation for high temperature

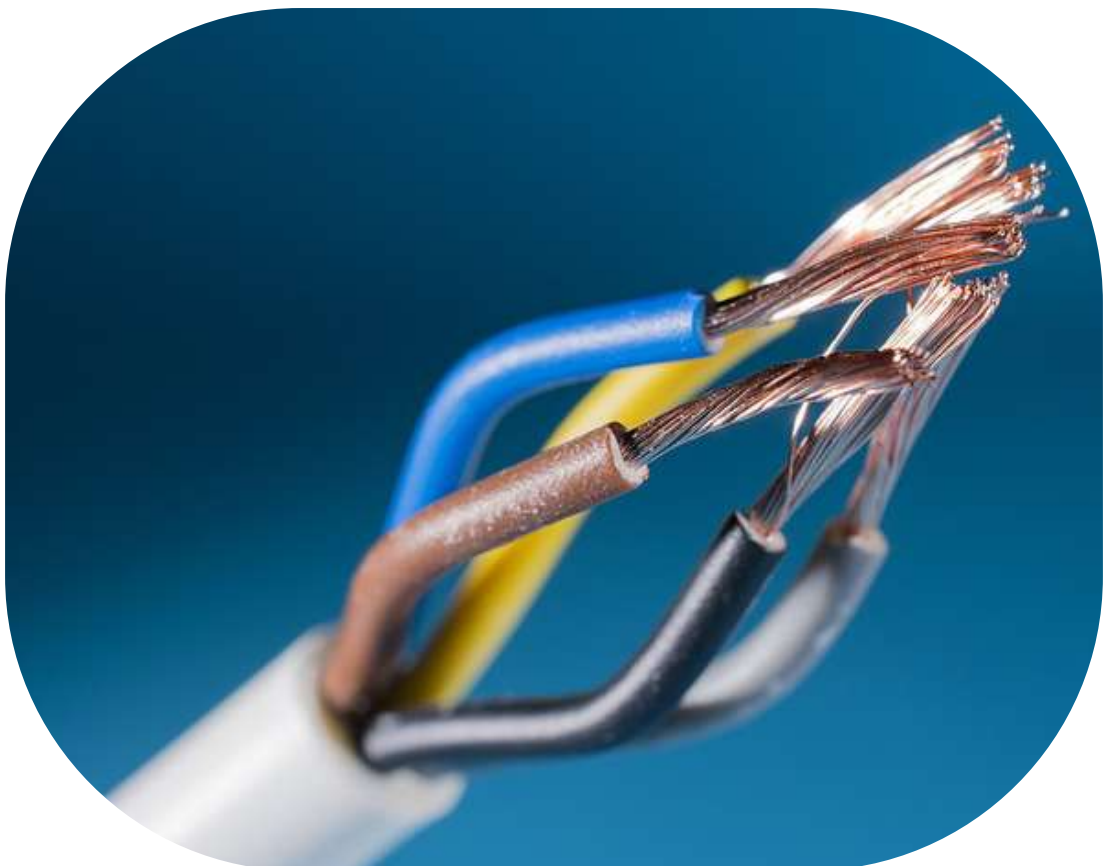
TG-I8348HT	Refrigerator wires insulation in high temperature	1.48	83				
TG-I8440HT	High temperature insulation for Automotive cables	1.4	84	PVC/E			Grade A/B
TG-I8941HT	High temperature insulation for Automotive cables (Include class T1 & T2)	1.41	89	PVC/E			Grade A/B
TG-I9040HT	Insulation Operating temperature 105°C	1.4	90	PVC/E			
TP-I8739	Insulation Operating temperature 105°C	1.39	87	PVC/E			

XLPE-based Compounds

PEX or XLPE cables are made of cross-linked polyethylene, which inhibits the movement of the polyethylene chains, maintaining polyethylene's exceptional properties at high temperatures. This linking process enhances their resistance to temperature, pressure, environmental stress, UV light, chemicals, and oxidation. These cables are suitable for voltages ranging from 240V to 500KV and have various applications, including fire survival, low smoke or halogen-free usage, underwater use, underground burial, and installation on trays and ducts.

Insulation	General Description	MFI	Density (g/cm ³)	Hardness (shore D)	Application
TG-XLP12	Catalyst for silane cured cable, excellent mechanical properties and heat resistance	6	0.94	50	LV power cable
TG-XLP12 BC	Catalyst for silane cured cable, UV resistance	4	0.94	50	Self-supporting aerial cable
TG-XLP13	Catalyst with high-speed extrusion for silane cured cable and excellent electrical properties	5	0.94	50	LV power cable
TG-INS01	Excellent mechanical properties	0.35	0.95	59	Communication cable

Jacketing	General Description	MFI	Density (g/cm ³)	Hardness (shore D)	Application
TG-JAC4	Black LDPE compound, high processability, UV resistance	1	0.93	50	MV & HV Jacketing
TG-JAC5	Black HDPE compound, UV & weather resistance	0.3	0.95	59	MV & HV Jacketing



Bedding & Filler

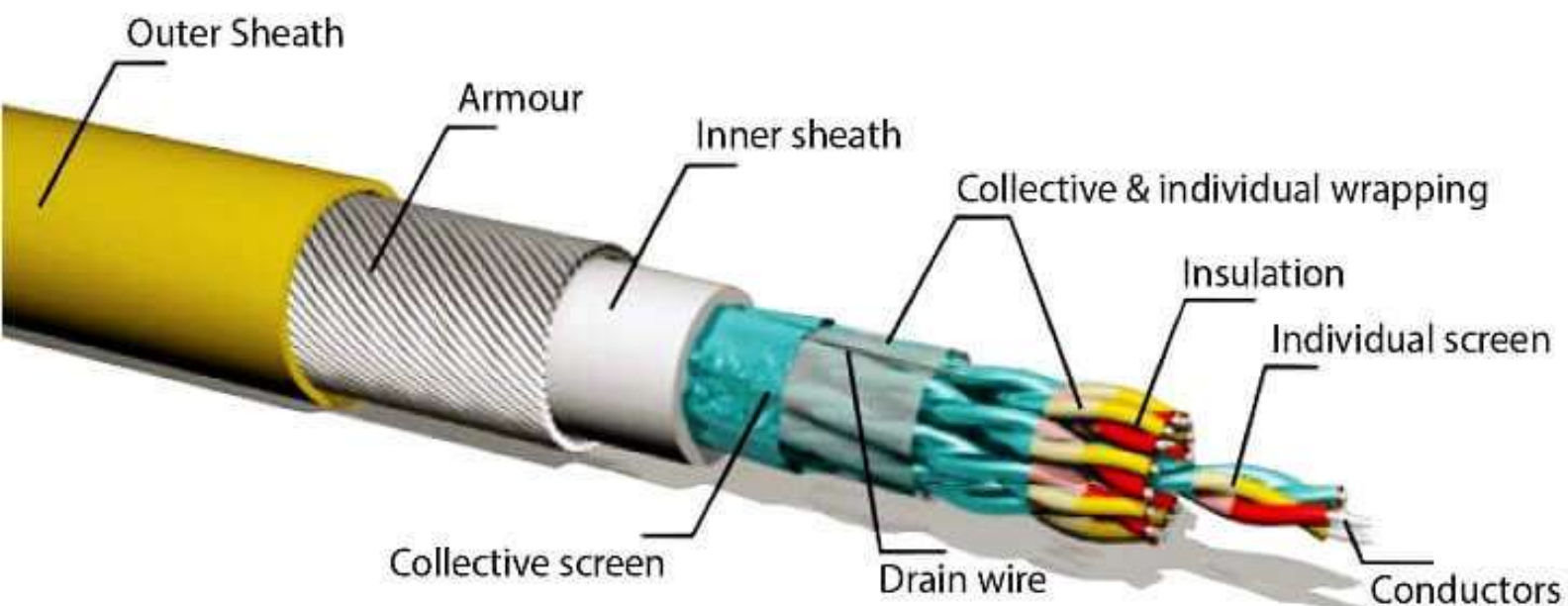
In the instance of three-core cables, the three cores are enclosed together using a polymer compound or non-hygroscopic fillers like polypropylene fillers and then encased with a binder tape to impart a circular shape to the cable. These binder tapes can be crafted from PVC or foamed Polyethylene. For armored cables, a PVC or PE inner sheath (bedding) is applied over the bundled cores. These characteristics are commonly employed in the manufacturing of various low-voltage (LV), medium-voltage (MV), and high-voltage (HV) cables.

Bedding & Filler	General Description	Density (g/cm ³)	Hardness (shore A)	Thermal stability at 200°C (min)	Application
TG-F8060	General purpose easy processable Filler Compound	1.6	80	30	Light Filler
TG-F8870	General purpose easy processable Filler Compound	1.7	88	30	Medium Filler
TG-F8890	General purpose easy processable Filler Compound	1.9	88	30	Heavy Filler
TP-F7560	General purpose easy processable Filler Compound	1.6	75	50	Light Filler
TP-B8460	General purpose easy processable Bedding Compound	1.6	84	80	Bedding
TP-F8070	General purpose easy processable Filler Compound	1.7	80	50	Medium Filler
TP-F8385	General purpose easy processable Filler Compound	1.85	83	60	Heavy Filler
TG-B9068	General purpose easy processable Bedding Compound	1.68	90	40	Bedding
TG-B9057LS	Low Smoke PVC Bedding Compound for Cables	1.57	90	80	Low smoke bedding
TG-B8870	PVC compound for bedding of cables	1.7	88	60	Bedding
TG-B9060LS	PVC compound for Reduced smoke & HCL emission bedding of power cables	1.62	90	60	Low smoke bedding

Sheathing or Jacketing

The primary function of a jacket or sheath is akin to that of skin, serving to repel external elements and confine internal components. This external casing shields the wire or cable core from mechanical, moisture, and chemical hazards. Jackets offer flame resistance, safeguard against sunlight, and streamline installation processes. Available in various types and styles, they are presented in diverse forms, including braids, tapes, and the more prevalent extruded thermoplastic or thermosetting materials.

Cables Sheath





Sheathing	General Description	Density (g/cm ³)	Hardness (shore A)	Classification			
				IEC60227	IEC60502	BS 6746	VDE 0207
TG-S7548	PVC Compound for Flexible Cables with high-speed extrusion processing	1.48	75	ST5		TM2	
TG-S7643	Compound for Flexible Cables with high-speed extrusion processing	1.43	76	ST5		TM2	
TG-S8245	PVC Compound for Flexible Cables with high-speed extrusion processing	1.45	82	ST5		TM2	
TP-S8348	Compound for Flexible Cables	1.48	83	ST5			
TP-S7540	Compound for Flexible Cables	1.40	75	ST5			
TG-S8060	Easy Strippable Compound for Construction Cables	1.60	80			Type 6	
TG-S8445	General Purpose PVC for fixed installation cables	1.45	84	ST4	ST1	TM1	
TG-S8450	General Purpose PVC for fixed installation cables	1.50	84	ST4	ST1	TM2	
TG-S8448	General Purpose PVC for fixed installation cables	1.48	84	ST4	ST1		
TG-S8440	Compound for Clutch Wires	1.40	84				
TG-S8648	General Purpose PVC for fixed installation cables	1.48	86	ST4	ST1	TM3	
TP-S8344	Instrument and Telecommunication cables	1.44	83				
TP-S8443	UV resistance compounds for coaxial cable	1.43	84	ST5			
TP-8449 ATUV	UV resistance compounds for fixed installation cable	1.49	84	ST4			
TP-S8649	General Purpose PVC for fixed installation cables	1.49	86	ST4			
TG-S8652	General Purpose PVC for fixed installation cables	1.52	86	ST4	ST1	TM4	
Sheathing for high temperature							
TG-S9045	PVC compound for 90°C operating temperatures in fixed Installation Cables	1.45	90		ST2		
TP-S88649	PVC compound for 90°C operating temperatures in fixed Installation Cables	1.49	86		ST2		
TP-S8744	Heat resistant compound for 90°C operating temperatures	1.44	87				YM5
TP-S8449	PVC compound for 80°C operating temperatures in fixed Installation Cables	1.49	84		ST1		
TG-S9054	UV resistance compound for 90°C operating temperatures	1.54	90		ST2	Type 9	YM5
TG-S9040 HT	PVC Compound for High Temperature (105°C)	1.40	90	ST10			
TG-S8440 HT	PVC Compound for High Temperature (105°C)	1.40	84				

Flame-Retardant Compounds

Flame retardancy, also referred to as flammability, pertains to the propensity of the plastic material in a cable to ignite, its tendency to produce drips when ignited, and whether such drips will sustain combustion. An efficacious flame-retardant material possesses the ability to endure exposure to a flame without catching fire. In the event of the ignition of the insulation or sheath due to an intense flame, the material should promptly self-extinguish upon removal of the flame source. Flame retardant materials are commonly employed in both fire-resistant and flame-retardant cables.

Sheathing	General Description	Density (g/cm ³)	Hardness (shore A)	L.O.I (%)	Classification			
					IEC60227	IEC60502	BS 6746	VDE 0207
TG-S9054F OR	fire retardant compound for 90°C operating temperatures in oil-resistant cables	1.54	90	33		ST2	Type 9	YM5
TG-S9045F OR	fire retardant compound for oil-resistant cables	1.45	90	37		ST1/ ST2		
TG-S9056 LSOR-ATUV	Low Smoke, Anti termite, UV & Oil resistance PVC Sheathing Compound for Fixed Installation Cables	1.56	90	28		ST2	Type 9	YM5
TG-S9056 LS	Low Smoke PVC Compound for Fixed Installation Cables	1.56	90	29		ST2	Type 9	YM5
TG-S9056 LSOR	Low Smoke & Oil resistance PVC Compound for Fixed Installation Cables	1.56	90	29		ST2	Type 9	YM5





TESCO

XLPE-based compound for sheathing

Jacketing	General Description	MFI	Density (g/cm ³)	Hardness (shore D)	Application
TG-JAC4	Black LDPE compound, high processability, UV resistance	1	0.93	50	MV & HV Jacketing
TG-JAC5	Black HDPE compound, UV	0.3	0.95	59	MV & HV Jacketing

Halogen Free Flame Retardant (HFFR)

The compounds in question have been shown to release less heat and smoke and they do not produce any corrosive gases when burned. These safer materials help decrease the health and life risks associated with fires, as well as minimize damage to equipment and installations in the event of a fire. Our exceptional compounds have a wide range of uses, including low-voltage power cables, control and data cables, coaxial cables, and optical cables. Additionally, they contribute to environmental sustainability.

HFFR	General Description	L.O.I. (%)	Density (g/cm ³)	Hardness (shore D)	Application
TG-HFSI01	Excellent electrical & mechanical properties	33	1.44	52	Insulating for LV power and communication cable
TG-HFSJ01	Excellent mechanical properties and low water permeability, UV resistance	34	1.45	53	Jacketing for LV power and communication cable
TG-HFSB01	High processability	33	1.50	55	Bedding for LV power cable
TP-HF5049	Excellent electrical & mechanical properties at 70 °C for General purposes	35	1.49	50	Both Insulation and Sheathing purposes
TP-HF5049 UV	Excellent electrical & mechanical properties at 70 °C for General purposes, UV resistance	35	1.49	50	Both Insulation and Sheathing purposes
TP-HF5050	Excellent electrical & mechanical properties at 80 °C for General purposes	34	1.50	50	Both Insulation and Sheathing purposes
TP-HF5050 UV	Excellent electrical & mechanical properties at 80 °C for General purposes, UV resistance	34	1.50	50	Both Insulation and Sheathing purposes
TP-HFB5270	General purpose easy processable Bedding Compound	37	1.70	52	Bedding
TP-HFB5090	General purpose easy processable Filler Compound	40	1.90	50	Filler

TPE-based Compounds

TPE cables are made from advanced thermoplastic elastomer materials and are esteemed for their resilience and flexibility. In addition to combining the elasticity of rubber with the adaptability of plastic, they also demonstrate exceptional flame-retardant properties, superior electrical insulation, and resistance to abrasion. Their flexibility and durability make them well-suited for various applications, including consumer electronics.

<i>TPE</i>	<i>General Description</i>	<i>Density (g/cm³)</i>	<i>Hardness (shore A)</i>	<i>Classification IEC60227</i>	<i>Application</i>
TP-EI7530	Excellent resistance in the aquatic environment	1.3	75	PVC/D	Insulation
TP-ES7532	Excellent resistance in the aquatic environment	1.32	75	ST5	Sheath
TP-ES8037	Sheath for welding cables	1.37	80	ST9	Sheath
TP-ES8045 OR	Excellent oil resistance for flexible cable	1.45	80	ST9	Sheath



Contact Info

Please feel free to contact us for any additional information and technical consultation. We have the capability to provide you with a customized product of superior quality at a competitive cost.



+98 21 44180186
+98 21 44180162



Rahyaft Complex, MSTPark, 22 district, Tehran



info@tesg.ir



www.tesg.ir