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ENTERPRISE
PRODUCT ALBUM

Opta New Materials (Jiangsu) Co., Ltd.

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COMPANY PROFILE

Founded in June 1999 in Zhenjiang, Jiangsu, Opta is a high-tech enterprise specializing in the R&D, production and sales of high-performance, eco-friendly polymer materials, dedicated to advancing China's new materials industry.

The company boasts a professional R&D team, advanced production & testing facilities, and solid tech innovation systems through collaborations with academic institutions. It has passed quality, environmental and occupational health & safety management certifications, and earned honors including Provincial Engineering Technology Research Center for Flame-Retardant Cable Materials, Specialized & Innovative SME, Intelligent Demonstration Workshop, Gazelle Enterprise and Municipal Green Factory.

With over 20 years of craftsmanship, we are customer-centric, delivering high-quality, customized solutions that meet international standards, supported by reliable full-lifecycle services.

Core Business & Solutions

•**LSZH Polyolefin** – Low-smoke, halogen-free flame-retardant materials compliant with RoHS, REACH, etc. Used for cables in airports, subways, rail transit, high-rise buildings, and EVs, etc.

•**Functional Masterbatch** – High-concentration color masterbatch for PE, PP, ABS, PA, EVA, PC, PVC, TPE, PET. Also specialty grades: anti-rodent, anti-termite, anti-UV, anti-static.

•**TPE Elastomer** – Combines rubber elasticity with plastic processability. Used in auto wiring, charging piles, industrial cables, consumer electronics.

Opta New Materials drives innovation to deliver safer, greener, smarter material solutions for a better, sustainable future.







Corporate Culture

Corporate Vision

Become the core force driving the progress of China's new materials industry

Corporate Mission

Empower the world with customized new materials

Corporate Values

Customer First, Continuous Improvement, Pragmatic Efficiency, Value Creation

Development History

June 1999 — Jointly founded by Finland' s Optatech and Yangzhong Organic Chemical Factory.

November 1999 — Official production of hot melt adhesive, silane cross-linked PE cable material, and cross-linked pipe material.

January 2003 — Launch professional production of low-smoke, halogen-free and flame-retardant cable materials.

March 2013 — A joint venture of Samsung Technology and Finland's Premix, Obao Polymer Jiangsu was founded.

December 2014 — The company relocated to Zhenjiang Port.

October 2015 — Obtained the certification of National High-Tech Enterprise.

October 2020 — Founded the provincial R&D center for flame-retardant cable materials.

December 2022 — Granted Jiangsu Provincial Specialized & Innovative SME title.

June 2025 — Renamed Opta New Materials (Jiangsu) Co., Ltd.



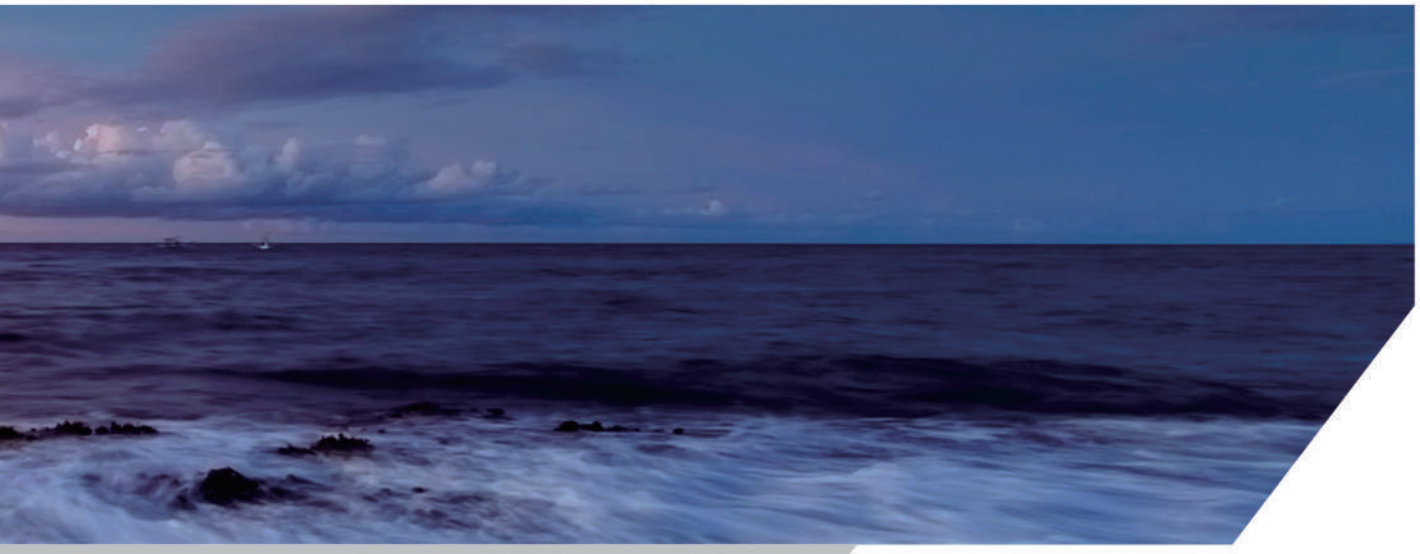
ENTERPRISE QUALIFICATION












CQM
China Quality Mark
质量管理体系认证证书
Quality Management System Certificate
Opta New Materials (Jiangsu) Co., LTD
环境管理体系认证证书
Environmental Management System Certificate
Opta New Materials (Jiangsu) Co., LTD


CQM
China Quality Mark
职业健康安全管理体系认证证书
Occupational Health and Safety Management System Certificate
Opta New Materials (Jiangsu) Co., LTD
IQNET
Certificate
IQNET
Certificate
IQNET
Certificate

R&D & Quality Assurance

Full-Lifecycle Quality Control

Process	Control Key Points	Technical Support
Raw Material Screening	Rigorous supplier audits and raw material testing for PE, EVA, aluminum hydroxide, etc.	Infrared spectrometer, halogen tester, laser particle size analyzer
Producing Process Monitoring	Real-time monitoring of mixing ratio, extrusion temp, pelletizing speed, etc. ensures process stability.	Semi-automated production management system
Finished Product Inspection	Covers 30+ properties: mechanical, flame retardant, insulation, weathering, etc.	Universal testing machine, horizontal & vertical flame tester, dielectric constant tester, aging chamber, etc
Batch Traceability	Unique batch number enables full traceability of production, tests, and applications.	ERP traceability system

Testing Items

Mechanical Properties

- Tensile strength, elongation at break
- Aging (IEC/UL)
- High-temperature compression, heat deflection
- Thermal shock
- Thermal elongation
- Thermal shrinkage
- Oil resistance test

Physical Properties

- Density
- Moisture content
- Melt flow index (MFI)
- Color difference
- Hardness
- Infrared spectrum

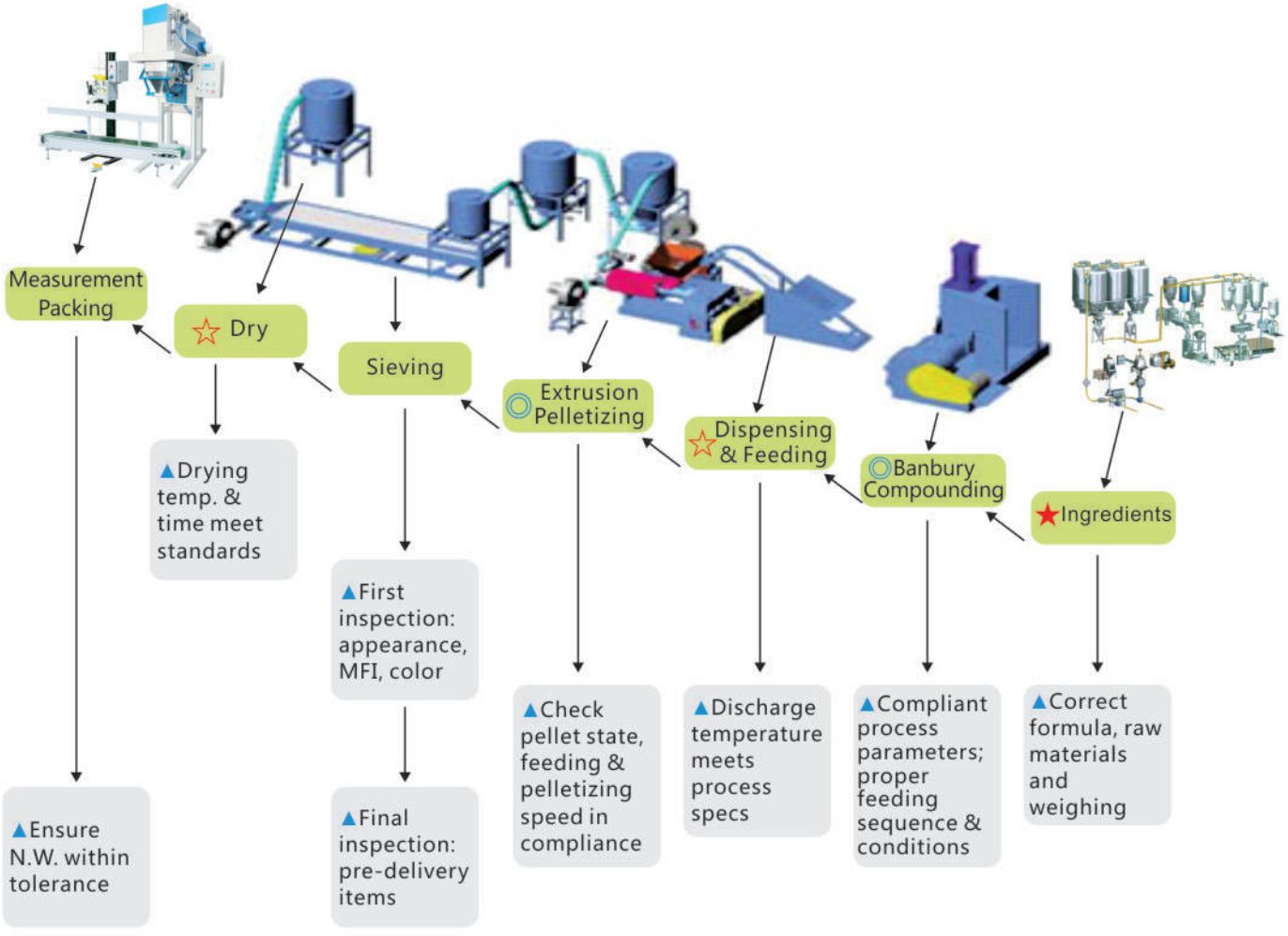
Flame Performance

- Oxygen index
- Single-wire combustion test
- Halogen acid gas emission, PH value Conductivity test

Electrical Properties

- Volume resistivity

Production & Quality Control



Note : ★Key process ◎ Special process ☆ Key control point ▲Key quality control point

Thermoplastic Low Smoke Zero Halogen Cable Materials

Product Name	Model	Product Name	Model
Thermoplastic LSZH flame-retardant sheathing compound	EPC6907	Thermoplastic LSZH flame-retardant injection molding compound	EPC6902
Thermoplastic LSZH flame-retardant insulation compound	EPC6901	Thermoplastic LSZH flame-retardant elastomer	EPC6801
Thermoplastic LSZH flame-retardant oxygen barrier compound	EPC6909	Low-temperature resistant LSZH flame-retardant cable compound	EPC6802

Product Applications

EPC6907: Excellent processability, flame retardancy and self-extinguishing; good crack resistance and low thermal shrinkage, ideal for LSZH cable sheathing.

EPC6901: Outstanding insulation, low water absorption, good processability and flame retardancy, ideal for LSZH cable insulation.

EPC6909: Excellent flame retardancy, low heat release and high char yield, used as cable oxygen barrier layer.

EPC6902: Good flowability, moldability and self-extinguishing, used for branch cable and connector injection parts.

EPC6801: Soft touch, used in flexible cables to replace soft PVC.

EPC6802: Soft touch, good scratch resistance, low smoke, remains flexible at extremely low temperatures, ideal for low-temperature cables.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC6 series can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃for 4 hours in a dehumidifying dryer.

Coloring

Coloring: Natural material can be colored , full series masterbatches available.

Product Performance

Test Item		EPC6907	EPC6901	EPC6909	EPC6902	EPC6801	EPC6802	Test Method
Density, g/cm³		1.48	1.46	1.63	1.02	1.42	1.43	ISO 1183-1
Melt Index, g/10min		7.1	7.5	4.6	108	5.8	1.5	ISO 1133, (b)
Tensile Strength, MPa		12.6	13.2	8.0	4.2	9.1	10.1	IEC 60811-1-1
Elongation at Break, %		220	230	60	200	300	250	IEC 60811-1-1
Aging Test, ℃*Hs		110*168						IEC 60811-1-2
Tensile Strength after Aging, Mpa		14.2	14.7	--	4.6	10.5	11.5	
Elongation at Break after Aging, %		191	219	--	180	259	209	
Oxygen Index, %		35	34	45	26	30	31	ISO 4589-2
Smoke Density	Flaming	56	54	43	--	89	51	ASTM E-662
	Nonflaming	210	201	187	--	245	193	
Toxicity Index		1	1	1	1	1	1	NES 713
Hardness, SHA		97	96	95	92	89	90	ASTM D2240
High-Temp. Stress Test , ℃*Hs		90*4				80*4	90*4	IEC 60811-3-1
Thermal Deformation, %		20	28	--	--	35	25	
Low-Temp. Impact @-25℃		Pass	Pass	--	--	Pass	--	IEC 60811-1-4
Low-Temp. Impact @-55℃		--	--	--	--	--	Pass	
Low-Temp. elongation @-55℃, %		--	--	--	--	--	75	
Thermal Shock @130℃		Pass	Pass	--	--	Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	0	0	0	0	0	IEC 60754
PH (min)		6.2	6.2	6.4	5.8	6.0	6.2	IEC 60754
Conductivity (max), μS/mm		0.8	0.8	0.8	3	1.2	1	IEC 60754
Volume Resistivity, Ω*m		$1.3*10^{12}$	$3*10^{12}$	--	$3*10^{12}$	$7*10^{12}$	$5*10^{12}$	IEC 60093

Irradiation Cross-Linked LSZH Flame Retardant Cable Materials

Product Name	Model	Rec. Irrad. Dose
90℃ Irradiation Cross-Linked LSZH Flame Retardant Compound	EPC9901	10~12MRad
105℃ Irradiation Cross-Linked LSZH Flame Retardant Compound	EPC9051	10~12MRad
105℃ Irradiation Cross-Linked LSZH Hign Flame Retardant Compound	EPC9054	10~12MRad
125℃ Irradiation Cross-Linked LSZH Flame Retardant Compound	EPC9251	10~12MRad
150℃ Irradiation Cross-Linked LSZH Flame Retardant Compound	EPC9501	10~12MRad

Product Applications

EPC9901 meets WDZ-YJ-J90 in GB/T 32129-2015.
EPC9051 meets WDZ-YJ-J105 in GB/T 32129-2015.
EPC9054 for 105℃ Class A bundled flame test cables.
EPC9251 meets WDZ-YJ-J125 in GB/T 32129-2015.
EPC9501 meets WDZ-YJ-J150 in GB/T 32129-2015.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC9 series can be produced on PVC/PE extruders.
Melt temperature: Melt temperature: ≤165℃, max 175℃.
Screw & head: Low compression ratio (CR 1:1.2) recommended.
For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

Coloring: Natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC9901	EPC9051	EPC9054	EPC9251	EPC9501	Test Method
Density, g/cm³		1.48	1.46	1.55	1.46	1.43	ISO 1183-1
Melt Index, g/10min		9.2	8.9	1.9	8.8	10.2	ISO 1133, (b)
Tensile Strength, MPa		13.3	13.7	12.7	12.9	16.8	IEC 60811-1-1
Elongation at Break, %		240	250	200	245	230	IEC 60811-1-1
Aging Test, ℃*Hs		120*168	136*168	136*168	158*168	180*168	IEC 60811-1-2
Tensile Strength after Aging, Mpa		15.1	15.4	14.7	14.9	18.9	
Elongation at Break after Aging, %		203	213	168	215	175	
Oxygen Index, %		34	34	38	34	33	ISO 4589-2
Smoke Density	Flaming	54	50	45	55	48	ASTM E-662
	Nonflaming	201	197	166	206	181	
Toxicity Index		1	1	1	1	1	NES 713
Hardness, SHA		96	96	96	96	97	ASTM D2240
Low-Temp. Impact @-25℃		Pass	Pass	Pass	Pass	Pass	IEC 60811-1-4
Thermal Shock @150℃		Pass	Pass	Pass	Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	0	0	0	0	IEC 60754
PH (min)		6.2	6.2	6.2	6.4	6.1	IEC 60754
Conductivity (max), μS/mm		0.8	0.8	0.8	0.8	0.8	IEC 60754
Volume Resistivity, Ω*m		$3*10^{12}$	$2.3*10^{12}$	$1.1*10^{12}$	$3.1*10^{12}$	$8*10^{12}$	IEC 60093
Thermal Elongation 200℃*15min, %		30	35	30	30	60	IEC 60811-2-1
Permanent Deformation, %		5	5	5	5	5	IEC 60811-2-1

*All mechanical properties tested after irradiation.

UL Standard Irradiation Cross-linked LSZH Flame Retardant Cable Materials

Product Name	Model	Rec. Irrad. Dose
105℃ Irradiation Cross-Linked LSZH polyolefin compound	EPC9053	10~12MRad
125℃ Irradiation Cross-Linked LSZH polyolefin compound	EPC9252	10~12MRad
125℃ Irradiation Cross-Linked LSLH polyolefin compound	LFR9252	10~12MRad
150℃ Irradiation Cross-Linked LSZH polyolefin compound	EPC9502	10~12MRad
150℃ Irradiation Cross-Linked LSLH polyolefin compound	LFR9502	10~12MRad

Product Applications

EPC9053 is low smoke zero halogen, meets UL1581 Class 33 105°C XLPO for VW-1 vertical flame test wires.

EPC9252 is low smoke zero halogen, meets UL1581 125°C XLPO for FT-2 horizontal flame test wires.

LFR9252 is low smoke low halogen, meets UL1581 125°C XLPO for VW-1 vertical flame test wires.

EPC9502 is low smoke zero halogen, meets UL1581 150°C XLPO for FT-2 horizontal flame test wires.

LFR9502 is low smoke low halogen, meets UL1581 150°C XLPO for VW-1 vertical flame test wires.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

PC9053, EPC9252, LFR9252 can be produced on PVC/PE extruders.
Melt temperature: Melt temperature: ≤165℃, max 175℃.
Screw & head: Low compression ratio (CR 1:1.2) recommended.
For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC9053, EPC9252, LFR9252, EPC9502, LFR9502 natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC9053	EPC9252	LFR9252	EPC9502	LFR9502	Test Method
Density, g/cm³		1.47	1.38	1.33	1.38	1.33	ISO 1183-1
Melt Index, g/10min		5.5	11	28	11	28	ISO 1133, (b)
Tensile Strength, MPa		11.3	15.1	17.3	15.2	16.5	IEC 60811-1-1
Elongation at Break, %		215	345	450	350	480	IEC 60811-1-1
Aging Test, ℃*Hs		136*168	158*168		180*168		IEC 60811-1-2
Tensile Strength after Aging, Mpa		12.2	16.3	18.5	17.9	18.2	
Elongation at Break after Aging, %		190	300	397	302	395	
Oxygen Index, %		45	29	34	28	32	ISO 4589-2
Smoke Density	Flaming	166	67	--	75		ASTM E-662
	Nonflaming	293	233	--	240		
Toxicity Index		1	1	--	1	--	NES 713
Hardness, SHA		96	95	95	95	95	ASTM D2240
High-Temp. Stress Test , ℃*Hs		121*1	121*1	121*1	121*1	121*1	IEC 60811-3-1
Thermal Deformation, %		24	33	28	33	31	
Low-Temp. Impact @-25℃		Pass	Pass	Pass	Pass	Pass	IEC 60811-1-4
Thermal Shock @150℃		Pass	Pass	Pass	Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	0	--	0	--	IEC 60754
PH (min)		4.8	6.2	--	6.1	--	IEC 60754
Conductivity (max), μS/mm		1.1	1.5	--	1.7	--	IEC 60754
Volume Resistivity, Ω*m		$2*10^{12}$	$2.5*10^{12}$	$1.8*10^{13}$	$1.5*10^{12}$	$1.5*10^{13}$	IEC 60093
Thermal Elongation 200℃*15min, %		30	45	60	55	60	IEC 60811-2-1
Permanent Deformation, %		5	6	6	5	6	IEC 60811-2-1

*All mechanical properties tested after irradiation.

Irradiation Cross-linked Cable Materials for Automotive Wiring

Product Name	Model	Rec. Irrad. Dose
100℃ Irradiation Cross-Linked LSZH Compound	EPC9007	10~12MRad
125℃ Irradiation Cross-Linked LSZH Compound	EPC9257	10~12MRad
150℃ Irradiation Cross-Linked LSZH Compound	EPC9507	10~12MRad
150℃ Irradiation Cross-Linked LSZH Elastomer Compound	EPC9508	10~12MRad

Product Applications

EPC9007, EPC9257, EPC9507 comply with JASO D611 and ISO 6722. They are halogen-free, low-smoke, high-hardness and heat-resistant, used for eco-friendly automotive low-voltage wires.

EPC9508 meets ISO 19642-5 Class D and is used for eco-friendly automotive high-voltage wires.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	140°C	155°C	160°C	165°C	165°C	170°C	175°C

EPC9007, EPC9257, EPC9507, EPC9508 can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC9007, EPC9257, EPC9507, EPC9508 natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC9007	EPC9257	EPC9507	EPC9508	Test Method
Density, g/cm³		1.47	1.41	1.41	1.48	ISO 1183-1
Tensile Strength, MPa		13.1	16.3	15.7	10.5	IEC 60811
Elongation at Break, %		210	250	255	320	IEC 60811
Short-Term Aging Test, ℃*Hs		125*240	150*240	175*240	175*240	ISO 6722
		Pass	Pass	Pass	Pass	
Long-Term Aging Test, ℃*Hs		100*3000	125*3000	150*3000	150*3000	ISO 6722
		Pass	Pass	Pass	Pass	
Thermal Overload Test, ℃*Hs		150*6	175*6	200*6	200*6	ISO 6722
		Pass	Pass	Pass	Pass	
Oxygen Index, %		32	28	28	30	ISO 4589-2
Hardness, Shore D		58	63	63	--	ISO R868
Hardness, Shore A		--	--	--	88	ISO R868
Smoke Density	Flaming	68	64	72	75	ASTM E-662
	Nonflaming	189	171	177	250	
High-Temp. Stress Test , ℃*Hs		100*4	125*4	150*4	150*4	ISO 6722
Thermal Deformation, %		5	5	15	30	
Low-Temp. Winding@-40℃		Pass	Pass	Pass	Pass	ISO 6722
Halogen Content, PPM		0	0	0	0	IEC 60754
PH (min)		6.1	6.3	6.0	5.6	IEC 60754
Conductivity (max), μS/mm		0.9	1.1	1.2	0.3	IEC 60754
Volume Resistivity, Ω*m		$1.3*10^{12}$	$1.5*10^{12}$	$1.6*10^{12}$	$3.2*10^{12}$	IEC 60093
Thermal Elongation 200℃*15min, %		35	35	55	80	IEC 60811
Permanent Deformation, %		5	5	5	5	IEC 60811
Gasoline Immersion Test, 23℃*20Hs , OD change rate		11	13	13	19	ISO 6722
Diesel Immersion Test, 23℃*20Hs , OD change rate		12	11	12	19	ISO 6722
Engine Oil Immersion Test, 50℃*20Hs , OD change rate		11	13	13	18	ISO 6722
Immersion test of power steering fluid, 50℃*20Hs , OD change rate		25	23	26	29	ISO 6722
Immersion test of transmission oil, 50℃*20Hs , OD change rate		21	24	22	25	ISO 6722
Battery Acid Resistance Test		Pass	Pass	Pass	Pass	ISO 6722

*All mechanical properties tested after irradiation.

Communication Cable LSZH Flame Retardant Cable Materials

Product Name	Model	Product Name	Model
Thermoplastic LSZH Flame Retardant Tight-Buffer Compound	EPC6901	Thermoplastic LSZH Flame Retardant Sheathing Compound	EPC6910
Thermoplastic LSZH Flame Retardant Sheathing Compound	EPC6907	Thermoplastic LSZH Flame Retardant Sheathing Compound	EPC6906
Thermoplastic LSZH Flame Retardant Sheathing Compound	EPC6908	Anti-adhesion LSZH Cable Compound	EPC6912

Product Applications

EPC6901 is used for optical fiber tight buffer layers.

EPC6906 is used for CPR Cca communication cables.

EPC6907 is used for CPR Eca communication cables.

EPC6908 is used for CPR Dca communication cables.

EPC6910 is used for CPR Cca communication cables.

EPC6912 has excellent heat-resistant properties, features anti-adhesion, and is easy to strip. It is used for indoor optical fiber cables.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC69 series can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC69xx natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC6901	EPC6907	EPC6908	EPC6910	EPC6906	EPC6912	Test Method
Density, g/cm³		1.46	1.48	1.53	1.55	1.47	1.48	ISO 1183-1
Melt Index, g/10min		7.5	7.3	5.1	4.2	7.7	7.5	ISO 1133, (b)
Tensile Strength, MPa		13.2	12.5	13.1	14.2	11.2	14.3	IEC 60811-1-1
Elongation at Break, %		230	240	220	205	240	230	IEC 60811-1-1
Aging Test, ℃*Hs		110*168						IEC 60811-1-2
Tensile Strength after Aging, Mpa		14.7	14.2	14.5	15.8	12.9	15.8	
Elongation at Break after Aging, %		219	206	191	179	210	200	
Oxygen Index, %		34	34	42	44	46	35	ISO 4589-2
Smoke Density	Flaming	54	58	55	50	122	60	ASTM E-662
	Nonflaming	201	198	188	174	199	200	
Toxicity Index		1	1	0.9	0.8	1	1	NES 713
Hardness, SHA		96	96	96	97	96	98	ASTM D2240
High-Temp. Stress Test , ℃*Hs		90*4					120*4	IEC 60811-3-1
Thermal Deformation, %		28	20	23	22	10	19	
Low-Temp. Impact @-25℃		Pass	Pass	Pass	Pass	Pass	Pass	IEC 60811-1-4
Thermal Shock @150℃		Pass	Pass	Pass	Pass	Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	0	0	0	0	0	IEC 60754
PH (min)		6.2	6.2	6.0	6.3	5.8	6.1	IEC 60754
Conductivity (max), μS/mm		0.8	0.8	0.8	0.6	4.8	0.9	IEC 60754
Volume Resistivity, Ω*m		$3*10^{12}$	$2.3*10^{12}$	$1.8*10^{12}$	$1.2*10^{12}$	$4.2*10^{12}$	$1.2*10^{12}$	IEC 60093

Photovoltaic (PV) Irradiation Cross-linked LSZH Cable Materials

Product Name	Model	Rec. Irradiation Dose
PV Irradiation Cross-Linked LSZH Insulation Compound	EPC9256-III	10~12MRad
PV Irradiation Cross-Linked LSZH sheathing Compound	EPC9255-III	10~12MRad

Product Applications

EPC9255-Ⅲ and EPC9256-Ⅲ feature excellent heat resistance, acid & alkali resistance, UV resistance and flame retardancy with low smoke emission. Used together, they produce photovoltaic cables complying with TUV 2Pfg1169-2007, IEC 62930 and EN 50618-2014.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC9255-III and EPC9256-III can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Product Performance

Test Item		EPC9255-III	EPC9256-III	Test Method
Density, g/cm³		1.46	1.38	ISO 1183-1
Melt Index, g/10min		13.2	10	ISO 1133, (b)
Tensile Strength, MPa		13.3	14.7	IEC 60811-1-1
Elongation at Break, %		215	210	IEC 60811-1-1
Aging Test, ℃*Hs		158*168		IEC 60811-1-2
Tensile Strength after Aging, Mpa		15.6	16.2	
Elongation at Break after Aging, %		185	191	
Oxygen Index, %		33	28	ISO 4589-2
Hardness, SHA		96	97	ASTM D2240
Smoke Density	Flaming	66	52	ASTM E-662
	Nonflaming	205	213	
Light Transmittance (> 60%)		Pass	Pass	EN50618
High-Temp. Stress Test , ℃*Hs		140*4	--	IEC 60811-3-1
Thermal Deformation, %		21	--	
Low-Temp. Impact @-40℃		Pass	Pass	IEC 60811-1-4
Cut-Resistance Test		Pass	Pass	EN 50618
Halogen Content, PPM		0	0	IEC 60754
PH (min)		5.6	5.8	IEC 60754
Conductivity (max), μS/mm		1.2	0.8	IEC 60754
Volume Resistivity, Ω*m		$3*10^{12}$	$1.5*10^{13}$	IEC 60093
Thermal Elongation 250℃*15min, %		45	50	IEC 60811-2-1
Permanent Deformation,%		5	5	IEC 60811-2-1
Acid and Alkali Immersion Test, ℃*Hs		23*168		IEC 60811-2-1
Tensile Strength after Testing, Mpa		12.1		
Elongation@Break after Testing, %		180		
Ozone Resistance Test, 40℃*72Hs		Pass	Pass	IEC 50396
Ultraviolet Resistance Test, 720Hs				UL 1581
Tensile Strength after Testing, Mpa		12.4		
Elongation at Break after Testing, %		192		

*All mechanical properties tested after irradiation.

Rail Transit LSZH Cable Materials

Product Name	Model	Rec. Irradiation Dose
125℃ TB Standard Rail Transit Sheathing Compound	EPC9253-T	12~15MRad
125℃ GB Standard Rail Transit Sheathing Compound	EPC9253-G	12~15MRad

Product Applications

EPC9253-T complies with TB 1484.1-2007 Group B Class III, and is used as sheath material for oil-resistant railway locomotive cables.

EPC9253-G meets GB/T 12528-2008 YJ-125, and is used as sheath material for oil-resistant rail transit vehicle cables.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC9253 can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC9253 natural material can be colored , full series masterbatches available.

Product Performance

Test Item		EPC9253-T	EPC9253-G	Test Method
Density, g/cm³		1.50	1.51	ISO 1183-1
Melt Index, g/10min		5.2	4.4	ISO 1133, (b)
Tensile Strength, MPa		12.4	11.8	IEC 60811-1-1
Elongation at Break, %		200	190	IEC 60811-1-1
Aging Test, ℃*Hs		158*168		IEC 60811-1-2
Tensile Strength after Aging, Mpa		13.8	13.1	
Elongation at Break after Aging, %		171	167	
Oxygen Index, %		33	32	ISO 4589-2
Smoke Density	Flaming	66	63	ASTM E-662
	Nonflaming	192	190	
Toxicity Index		6.2	5.9	EN 50305
Hardness, SHA		97	97	ASTM D2240
High-Temp. Stress Test , ℃*Hs		--	125*4	IEC 60811-3-1
Thermal Deformation, %		--	28	
Low-Temp. Winding @-40℃		Pass	Pass	IEC 60811-1-4
Low-Temp. Tensile Test @-40℃, %		44	--	IEC 60811-2-1
Thermal Impact@150℃		--	--	IEC 60811-3-1
Halogen Content, PPM		0	0	IEC 60754
PH (min)		5.8	6.0	IEC 60754
Conductivity (max), μS/mm		1.1	1.2	IEC 60754
Volume Resistivity, Ω*m		$1.4*10^{12}$	$1.5*10^{12}$	IEC 60093
Thermal Elongation 200℃*15min, %		30	35	IEC 60811-2-1
Permanent Deformation,%		5	5	IEC 60811-2-1
Oil Immersion Test, ℃*Hs		100*70	100*70	IEC 60811-2-1
Tensile Strength after Oil Immersion, Mpa		8.8	9.0	
Elongation@Break after Oil Immersion, %		158	161	
Immersion Fuel Oil Test, ℃*Hs		70*168	70*168	IEC 60811-2-1
Tensile Strength after Oil Immersion, Mpa		9.0	8.9	
Elongation at Break after Oil Immersion, %		155	159	
Ozone Resistance Test (Concentration 0.025~0.030%)		25℃*24H	25℃*3H	GB/T 2951.5
		Pass	Pass	
Ph Resistance Test, 23℃*168H		--	--	EN 50305

*All mechanical properties tested after irradiation.

EU Standard Rail Transit LSZH Cable Materials

Product Name	Model	Rec. Irradiation Dose
105℃ Irradiation Cross-Linked Flame Retardant Insulation Compound for EU Standard Locomotive Cables	EPC9052	10~12MRad
	EPC9052-I	10~12MRad
	EPC9052-II	10~12MRad
	EPC9052-M	10~12MRad
	EPC9052-MM	10~12MRad

Product Applications

EPC9052 meeets the requirements of non-oil-resistant insulating materials EI105 and EI110 in EN50264.

EPC9052-I meets the requirements of single mineral oil-resistant insulating materials EI101 and EI102 in EN50264.

EPC9052-II meets the requirements of dual oil-resistant materials EI103 and EI104 in EN50264.

EPC9052-M meets the requirements of single mineral oil-resistant sheathing materials EM101 and EM102 in EN50264.

EPC9052-MM meets the requirements of dual oil-resistant sheathing materials EM103 and EM104 in EN50264.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC9052 can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC9052 natural material can be colored，full series masterbatches available.

Product Performance

Test Item		EPC9052	EPC9052-I	EPC9052 -II	EPC9052 -M	EPC9052 -MM	Test Method
Density, g/cm³		1.56	1.56	1.56	1.56	1.56	ISO 1183-1
Melt Index, g/10min		3.1	3.0	3.0	3.0	3.0	ISO 1133, (b)
Tensile Strength, MPa		13.1	13.0	12.9	13.3	12.9	IEC 60811-1-1
Elongation at Break, %		180	183	181	185	190	IEC 60811-1-1
Aging Test, ℃*Hs		120*240					IEC 60811-1-2
Tensile Strength after Aging, Mpa		14.2	14.3	14.7	14.9	14.4	
Elongation at Break after Aging, %		170	171	168	176	168	
Oxygen Index, %		34	34	34	34	34	ISO 4589-2
Smoke Density	Flaming	47	48	55	50	48	ASTM E-662
	Nonflaming	155	158	168	148	152	
Toxicity Index		2.9	2.8	2.9	2.8	2.8	EN 50305
Hardness, SHA		96	96	96	96	96	ASTM D2240
Low-Temp. Winding @-25℃		Pass	Pass	Pass	Pass	Pass	IEC 60811-1-4
Low-Temp. Tensile Test, %		42@ -25℃	43@ -25℃	45@ -25℃	33@ -40℃	36@ -40℃	IEC 60811-2-1
Thermal Impact@150℃		Pass	Pass	Pass	Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	0	0	0	0	IEC 60754
PH (min)		6.1	6.1	6.1	6.1	6.1	IEC 60754
Conductivity (max), μS/mm		1	1	1	1	1	IEC 60754
Volume Resistivity, Ω*m		$1.5*10^{12}$	$1.2*10^{12}$	$1.9*10^{12}$	$2.2*10^{12}$	$1.7*10^{12}$	IEC 60093
Thermal Elongation 200℃*15min, %		25	25	25	25	25	IEC 60811-2-1
Permanent Deformation,%		5	5	5	5	5	IEC 60811-2-1
Oil Immersion Test, ℃*Hs		--	100*24	100*24	100*24	100*24	IEC 60811-2-1
Tensile Strength after Oil Immersion, Mpa		--	10.0	10.0	10.0	10.0	
Elongation at Break after Oil Immersion, %		--	221	221	221	221	
Immersion Fuel Oil Test, ℃*Hs		70*168	70*168	70*168	70*168	70*168	IEC 60811-2-1
Tensile Strength after Oil Immersion, Mpa		--	--	9.7	--	9.7	
Elongation@Break after Oil Immersion, %		--	--	203	--	203	
Ozone Resistance Test (Concentration 0.025~0.030%)		25℃*3H	25℃*3H	25℃*3H	25℃*3H	25℃*3H	GB/T 2951.5
		Pass	Pass	Pass	Pass	Pass	
Ph Resistance Test, 23℃*168H		Pass	Pass	Pass	Pass	Pass	EN 50305

*All mechanical properties tested after irradiation.

Naval Vessel LSZH Flame Retardant Cable Materials

Product Name	Model	Rec. Irradiation Dose
Thermoplastic LSZH Marine Cable Compound	EPC6907	--
105℃ Irradiation Cross-Linked LSZH Marine Cable Compound	EPC9052	10~12MRad
Irradiation Cross-Linked LSZH Military-Grade Oil-Resistant Compound	EPC9555	10~12MRad
Irradiation Cross-Linked LSZH Anti-Fungus Military-Grade Oil-Resistant Compound	EPC9555-FM	10~12MRad

Product Applications

EPC6907 meets the requirements of SHF1 products in IEC60092-359.

EPC9052 meets the requirements of SHF2 products in IEC60092-359.

EPC9555 meets the requirements of sheath products in GJB1916-94.

EPC9555-FM meets the requirements of sheath products in GJB1916-94 as well as the requirements of anti-fungal in GJB150.10A.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC6907, EPC9052, EPC9555 can be produced on PVC/PE extruders.

Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC6907, EPC9052, EPC9555 natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC6907	EPC9052	EPC9555	EPC9555-FM	Test Method
Density, g/cm³		1.48	1.49	1.50	1.50	ISO 1183-1
Melt Index, g/10min		7.1	5.9	5.1	5.1	ISO 1133, (b)
Tensile Strength, MPa		12.6	12.1	11.1	11.1	IEC 60811-1-1
Elongation at Break, %		220	230	230	230	IEC 60811-1-1
Aging Test, ℃*Hs		100*168	120*168	136*168	136*168	IEC 60811-1-2
Tensile Strength after Aging, Mpa		14.2	14.0	13.0	13.0	
Elongation at Break after Aging, %		191	200	185	185	
Tear Strength, N/mm		--	--	7.5	7.5	GB/T 529
Oxygen Index, %		35	34	32	32	ISO 4589-2
Smoke Density	Flaming	56	66	--		ASTM E-662
	Nonflaming	190	198	--		
Toxicity Index		1	1	2	2	NES 713
Smoke Index		--	--	24	24	GJB 1916
Hardness, SHA		96	95	95	95	ASTM D2240
High-Temp. Stress Testing, ℃*Hs		80*4	--	--	--	IEC 60811-3-1
Thermal Deformation, %		10	--	--	--	
Low-Temp. Impact @-25℃		Pass	Pass	Pass	Pass	IEC 60811-1-4
Thermal Impact@150℃		Pass	Pass	Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	J	0	0	IEC 60754
PH (min)		6.2	6.0	6.1	6.1	IEC 60754
Conductivity (max), μS/mm		0.8	1.2	1.0	1.0	IEC 60754
Volume Resistivity, Ω*m		$1.3*10^{12}$	$1.5*10^{12}$	$2.1*10^{12}$	$2.1*10^{12}$	IEC 60093
Thermal Elongation 200℃*15min, %		--	40	35	35	IEC 60811-2-1
Permanent Deformation,%		--	5	5	5	IEC 60811-2-1
Oil Immersion Test (ASTM No. 2 Oil), ℃*Hs		--	100*24	121*18	121*18	IEC 60811-2-1
Tensile Strength after Oil Immersion, Mpa		--	9.6	9.0	9.0	
Elongation@Break after Oil Immersion, %		--	185	180	180	
Weather-resistant aging, xenon arc light				1000H	1000H	IEC 60811-2-1
Tensile Strength, Mpa		--	--	13.0	13.0	
Elongation at Break, %		--	--	185	185	
Mold Growth Level					Level 0	GJB 150.10A

*All mechanical properties tested after irradiation.

New Energy Vehicle (NEV) LSZH Cable Materials

Product Name	Model	Rec. Irradiation Dose
NEV Internal High-Voltage Wire Compound	EPC9258-H	10~12MRad
NEV Charging Pile Cable Compound	EPC9258-C	10~12MRad
Charging Pile TPE Insulation Compound	STCE68501	
Charging Pile TPE Sheathing Compound	STCE68001	

Product Applications

EPC9258-H meets ISO 6722C standard, suitable for NEV internal high-voltage wires.
EPC9258-C meets 2Pfg1908 and CQC1103 standards, suitable for NEV charging pile cables.
STCE68501 and STCE68001 meet 2Pfg1908 and CQC1103 standards, suitable for lighter and softer charging pile cables.

Recommended Extrusion Process Temperature

EPC9258:

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

STCE68xxx:

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	170°C	180°C	180°C	180°C	180°C	190°C	190°C	190°C

EPC9258 & STCE68 series can be produced on PVC/PE extruders.
Melt temperature: The extrusion temperature shall be maintained within a tolerance of ±10℃.
Screw & head: Low compression ratio (CR 1:1.2) recommended.
For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC9258 & TPE9081 natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC9258-H	EPC9258-C	STCE68501	STCE68001	Test Method
Density, g/cm³		1.38	1.38	1.02	1.08	ISO 1183-1
Melt Index, g/10min		9.5 (150℃*21.6kg)	9 (150℃*21.6kg)	7.6 (230℃*10kg)	8.6 (230℃*10kg)	ISO 1133, (b)
Tensile Strength, Mpa		10.2	13.3	12.9	12.5	IEC 60811-1-1
Elongation at Break, %		280	210	401	413	IEC 60811-1-1
Tear Strength, N/mm		--	--	25.2	25.6	
Aging Test, ℃*Hs		158*240	158*240	136*168	136*168	IEC 60811-1-2
Tensile Strength after Aging, Mpa		12.1	15.8	11.4	10.8	
Elongation at Break after Aging, %		250	177	365	372	
Oxygen Index, %		31	32	26	26	ISO 4589-2
Thermal Shrinkage 130℃*1H, %		--	--	1.8	1.6	
Hardness, Shore A		86	85	86	81	ASTM D2240
Smoke Density	Flaming	58	66	--	--	ASTM E-662
	Nonflaming	180	189	--	--	
Toxicity Index		1	1	--	--	NES 713
High-Temp. Stress Test , ℃*Hs		120*4	120*4	90*1	90*1	IEC 60811-3-1
Thermal Deformation, %		22	20	32	32	
Low-Temp. Winding@-40℃		Pass	Pass	Pass	Pass	IEC 60811-1-4
Thermal Impact 150℃*1H		No Crack	No Crack	No Crack	No Crack	
Halogen Content, PPM		0	0	0	0	IEC 60754
Flammability		V0	V0	V0	V0	
PH (min)		6.0	6.1	--	--	IEC 60754
Conductivity (max), μS/mm		0.9	0.8	--	--	IEC 60754
Volume Resistivity, Ω*m		$1.7*10^{12}$	$1.5*10^{12}$	$1.2*10^{14}$	$3.5*10^{14}$	IEC 60093
Thermal Elongation 200℃*15min, %		60	55	--	--	IEC 60811-2-1
Permanent Deformation, %		5	5	--	--	IEC 60811-2-1
Gasoline Resistance Test (23℃*20Hs)		The Variation in the outer diameter of the finished cable shall not exceed 15%.				JASO D618
Diesel Endurance Test (23℃*20Hs)						JASO D618
Mineral Oil Resistance Test (50℃*20Hs)						JASO D618
Acid&Alkali Resistance Test 23℃x168h		Pass	Pass	Pass	Pass	GB/T2951.21
Hydrolysis Resistance Test 80℃x168h		Pass	Pass	Pass	Pass	GB/T2951.21
Heat Resistance Test, 175℃*6H		Pass	Pass	--	--	JASO D618

*All mechanical properties tested after irradiation.

Irradiated Cross-Linked LSZH Materials for Energy Storage Cable

Product Name	Model	Rec. Irradiation Dose
90℃ Irradiation Cross-Linked LSZH Flame Retardant Polyolefin Insulation Compound	EPC99010-I	12~15MRad
90℃ Irradiation Cross-Linked LSZH Flame Retardant Polyolefin Sheathing Compound	EPC99010-M	12~15MRad
125℃ Irradiation Cross-Linked LSZH Flame Retardant Polyolefin Insulation Compound	EPC92510-I	12~15MRad
125℃ Irradiation Cross-Linked LSZH Flame Retardant Polyolefin Sheathing Compound	EPC92510-M	12~15MRad

Product Applications

EPC99010-I and EPC99010-M offer low surface hardness, good acid & alkali resistance, ozone resistance and flame retardancy. They are used for 90℃ energy storage cables complying with TUV 2Pfg 2693.

EPC92510-I and EPC92510-M feature low surface hardness, excellent acid & alkali resistance, ozone resistance and flame retardancy. They are used for 125℃ energy storage cables meeting TUV 2Pfg 2693.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC99010 & EPC92510 can be produced on PVC/PE extruders.

Melt temperature: Melt temperature: ≤165℃, max 175℃.

Screw & head: Low compression ratio (CR 1:1.2) recommended.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Product Performance

Test Item		EPC99010-I	EPC99010-M	EPC92510-I	EPC92510-M	Test Method
Density, g/cm³		1.48	1.48	1.47	1.49	ISO 1183-1
Melt Index, g/10min		4.5	6.6	6.4	6.1	ISO 1133, (b)
Tensile Strength, Mpa		10.8	9.3	9.5	9.7	IEC 60811-1-1
Elongation at Break, %		200	220	215	210	IEC 60811-1-1
Aging Test, ℃*Hs		135*168	120*168	158*168		IEC 60811-1-2
Tensile Strength after Aging, Mpa		12.2	11.1	10.9	11.2	
Elongation at Break after Aging, %		177	190	191	181	
Salt Fog Test, ℃*Hs (Unnecessary)		35*336				IEC 60068-211
Tensile Strength after Aging, Mpa		9.1	8.8	8.9	9.0	
Elongation at Break after Aging, %		175	188	188	181	
Oxygen Index, %		31	30	31	30	ISO 4589-2
Hardness, SHA		86	85	85	85	ASTM D2240
Smoke Density	Flaming	55	63	66	52	ASTM E-662
	Nonflaming	207	210	205	213	
Thermal Shrinkage (158℃*1H), %		--	--	1.6	1	IEC 60811
High-Temp. Stress Test , ℃*Hs		100*1	--	--	--	IEC 60811-3-1
Thermal Deformation, %		21	--	--	--	
Low-Temp. Winding@-40℃		Pass	Pass	Pass	Pass	IEC 60811-1-4
Low-Temp. Elongation Rate, %		35%	37%	--	--	
Halogen Content, PPM		0	0	0	0	IEC 60754
PH (min)		5.6	6.4	5.6	5.8	IEC 60754
Conductivity (max), μS/mm		1	0.2	1.2	0.8	IEC 60754
Volume Resistivity, Ω*m		$2*10^{12}$	$3*10^{12}$	$4*10^{12}$	$2.5*10^{12}$	IEC 60093
Thermal Elongation 250℃*15min, %		40	100	45	60	IEC 60811-2-1
Permanent Deformation, %		5	5	5	5	IEC 60811-2-1
Acid&Alkali Immersion Test, ℃*Hs)		23*168				IEC 60811-2-1
Tensile Strength after Testing, Mpa		8.8	8.1	7.9	8.0	
Elongation@Break after Testing, %		179	188	187	185	
Ozone Resistance Test, 25℃*4Hs		Pass	Pass	--	--	IEC 50396
Tensile Strength after Testing, Mpa		9.0	7.8	8.0	9.1	EN 50289-4-17
Elongation at Break after Testing, %		177	189	189	183	

*All mechanical properties tested after irradiation.

Polyethylene Cable Sheathing Materials

Product Name	Model
Black LLDPE Sheathing Compound	LDH
Black HDPE Sheathing Compound	GH

Product Applications

LDH meets GB/T 15065-2009 for black LLDPE sheathing material.

GH meets GB/T 15065-2009 for black HDPE sheathing material.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	150°C	170°C	185°C	195°C	200°C	200°C	200°C	200°C

LDH/GH needs to be produced on a PE extruder.

For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Product Performance

Test Item	LDH	GH	Test Method
Density, g/cm³	0.935	0.955	ISO 1183-1
Melt Index, g/10min	0.3	0.7	GB/T2951.41
Tensile Strength, MPa	28.5	29.7	IEC 60811-1-1
Elongation at Break, %	800	65	IEC 60811-1-1
Low-temp. Elongation at Break, %	45	45	GB/T2951.14
Low-temp. Impact Embrittlement Temperature -76℃ Breakage Rate, pcs	0/10	0/10	GB/T 5470
Environmental Stress Cracking Resistance F0, H	> 500	> 500	GB/T2951.41
Oxidation Induction Period at 200℃, min	80	80	GB/T 2951.42
Carbon Black Content, %	2.55	2.55	GB/T 2951.41
Carbon Black Dispersion	1	1	GB/T 18251
Dielectric Strength, (MV/m)	33.5	32.5	GB/T 1408
Volume Resistivity, (Ω*m)	$6.1*10^{14}$	$4.5*10^{14}$	GB/T 1410
Dielectric Constant	2.45	2.43	GB/T 1409

*The data listed in the table above are typical values and are provided for the user's reference.

Long-Life Irradiation Cross-Linked LSZH Flame Retardant Cable Compound for Building Applications Up to 750V

Product Name	Model	Rec. Irradiation Dose
125℃ Irradiation Cross-Linked Inner Insulation Compound	XLPE_01	10~12MRad
125℃ Irradiation Cross-Linked Outer Insulation Compound	EPC9505	10~12MRad

Product Applications

XLPE_01 can meet the requirements for 125℃ inner insulation material products as stipulated in JG/T 411.

EPC9505 can meet the requirements for 125℃ external insulation material products as stipulated in JG/T 411.

Recommended XLPE_01 Extrusion Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	120°C	190°C	225°C	225°C	220°C	225°C	225°C	225°C

Recommended EPC9505 Extrusion Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

XLPE_01 recommends split or PVC screws. EPC9505 recommends low-compression LSZH special screws. For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

XLPE_01/EPC9505 natural material can be colored, full series masterbatches available.

Product Performance

Test Item		XLPE_01	EPC9505	Test Method
Density, g/cm³		0.95	1.53	ISO 1183-1
Melt Index, g/10min		0.2 (190*2.16)	3.5	ISO 1133, (b)
Tensile Strength, Mpa		25	12.1	IEC 60811-1-1
Elongation at Break, %		650	225	IEC 60811-1-1
Aging Test, ℃*Hs		158*168		IEC 60811-1-2
Tensile Strength after Aging, Mpa		28.3	14.0	
Elongation at Break after Aging, %		600	200	
Aging Test, ℃*Hs		180*168		IEC 60811-1-2
Tensile Strength after Aging, Mpa		17.5	9.7	
Elongation at Break after Aging, %		580	150	
Oxygen Index, %		--	35	ISO 4589-2
Smoke Density	Flaming	--	66	ASTM E-662
	Nonflaming	--	198	
Low-Temp. Impact@-25℃		Pass	Pass	IEC 60811-1-4
Halogen Content, PPM		0	0	IEC 60754
PH (min)		6.2	6.0	IEC 60754
Conductivity (max), μS/mm		0.8	1.2	IEC 60754
Volume Resistivity, Ω*m		$1.3*10^{14}$	$1.5*10^{12}$	IEC 60093
Dielectric Strength, MV/m		35	25	GB/T 1408
Toxicity Index		2.8	3.5	EN50305
Thermal Elongation, 200℃*15min		--	40	IEC 60811-2-1
Permanent Deformation, %		--	5	IEC 60811-2-1

*All mechanical properties tested after irradiation.

B1 Grade Flame Retardant LSZH Cable Materials

Product Name	Model
LSZH Cable Material for B1 Grade Flame Retardant Communication Cables	EPC6926
LSZH Sheath Material for B1 Grade Flame Retardant Cables	EPC6928
LSZH Oxygen Barrier Material for B1 Grade Flame Retardant Cables	EPC6929
105℃ Irradiation Cross-Linked LSZH Material for B1 Grade Flame Retardant Cables	EPC9054

Product Applications

EPC6926 features excellent flame retardancy and low heat release, suitable for thin-wall communication cables.

EPC6928 offers good flame retardancy and low heat release, ideal for power cable sheaths.

EPC6929 provides good flame retardancy, low heat release and high charring rate, used as power cable oxygen barrier material.

EPC9054 shows good flame retardancy, low heat release and excellent heat resistance after cross-linking, suitable for cross-linked B1 grade flame-retardant cables.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	130°C	140°C	145°C	150°C	155°C	160°C	165°C

Melt temperature: Melt temperature: ≤165℃, max 175℃.
Screw & head: Low compression ratio (CR 1:1.2) recommended.
For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

LSZH cable materials for B1-class flame retardant cables can be colored. Our company can provide a full range of masterbatch products to meet the coloring requirements of the material.

Product Performance

Test Item		EPC6926	EPC6928	EPC6929	EPC9054	Test Method
Density, g/cm³		1.48	1.58	1.62	1.55	ISO 1183-1
Melt Index, g/10min		2.1	1.5	3.6	3.5	ISO 1133, (b)
Tensile Strength, Mpa		11.6	11.2	8.2	12.2	IEC 60811-1-1
Elongation at Break, %		180	190	60	175	IEC 60811-1-1
Aging Test, ℃*Hs		100*168			136*168	IEC 60811-1-2
Tensile Strength after Aging, Mpa		13.2	13.7	--	14.6	
Elongation at Break after Aging, %		151	169	--	150	
Oxygen Index, %		48	38	43	38	ISO 4589-2
Smoke Density	Flaming	97	54	43	43	ASTM E-662
	Nonflaming	260	201	187	187	
Hardness, SHA		97	96	95	97	ASTM D2240
High-Temp. and High Pressure Test, ℃*Hs		90*4				IEC 60811-3-1
Thermal Deformation, %		20	28	–	–	
Low Temp. Impact@-25℃		Pass	Pass	--	--	IEC 60811-1-4
Thermal Impact@130℃		Pass	Pass	--	--	IEC 60811-3-1
Halogen Content, PPM		0	0	0	0	IEC 60754
PH (min)		6.2	6.2	6.4	5.8	IEC 60754
Conductivity (max), μS/mm		2.8	0.8	0.8	0.9	IEC 60754
Volume Resistivity, Ω*m		$1.3*10^{12}$	$3*10^{12}$	--	$3*10^{12}$	IEC 60093

Low Dielectric Constant LSZH Flame Retardant Cable Materials

Product Name	Model
Low Dielectric Constant LSZH Flame Retardant Sheathing Compound	EPC6927
Low Dielectric Constant LSZH Flame Retardant Sheathing Compound	EPC6925

Product Applications

EPC6927 and EPC6925 feature excellent flame retardancy, processability, and a relatively low dielectric constant, making them suitable for the manufacture of high-frequency signal cables for long-distance transmission.

Recommended Extrusion Process Temperature

Zone Temperature								
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Neck	Head	Mould
Temperature	100°C	110°C	125°C	135°C	150°C	155°C	160°C	165°C

EPC69 series can be produced on PVC/PE extruders.
Melt temperature: Melt temperature: ≤165℃, max 175℃.
Screw & head: Low compression ratio (CR 1:1.2) recommended.
For special extruders or applications, please contact our company for more process information.

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Coloring

EPC69 series natural material can be colored, full series masterbatches available.

Product Performance

Test Item		EPC6927	EPC6925	Test Method
Density, g/cm³		1.51	1.37	ISO 1183-1
Melt Index, g/10min		6.5	2.5	ISO 1133, (b)
Tensile Strength, Mpa		12.5	12.8	IEC 60811-1-1
Elongation at Break, %		220	260	IEC 60811-1-1
Aging Test, ℃*Hs		110*168	110*168	IEC 60811-1-2
Tensile Strength after Aging, Mpa		14.2	14.5	
Elongation at Break after Aging, %		206	220	
Oxygen Index, %		30	30	ISO 4589-2
Smoke Density	Flaming	58	75	ASTM E-662
	Nonflaming	198	248	
Hardness, SHA		98	98	ASTM D2240
High-Temp. and High Pressure Test, ℃*Hs		90*4	90*4	IEC 60811-3-1
Thermal Deformation, %		10	23	
Low Temp. Impact@-25℃		Pass	Pass	IEC 60811-1-4
Thermal Impact@130℃		Pass	Pass	IEC 60811-3-1
Halogen Content, PPM		0	0	IEC 60754
PH (min)		6.2	6.0	IEC 60754
Conductivity (max), μS/mm		0.8	1.2	IEC 60754
Dielectric Constant		3.00	2.82	ASTM D150
Dielectric Loss Factor, tgδ		0.0040	0.0063	ASTM D150
Volume Resistivity, Ω*m		$1.3*10^{13}$	$1.8*10^{13}$	IEC 60093

Functionalized Masterbatch

Product Name	Model
Anti-rat function masterbatch	MB401
Anti-termite function masterbatch (Group method)	MB402
Anti-termite function masterbatch (Knockdown method)	MB403
Anti-mouse and anti-termite functional masterbatch	MB404

Product Applications

MB401, Polyethylene-based anti-rodent masterbatch. 4% addition gives >98.5% protection rate. Effect varies by substrate.

MB402, Polyethylene-based anti-termite masterbatch. 4% dosage meets GB/T 2951.38 against domestic termites. Effect varies by material.

MB403, Polyethylene-based anti-termite masterbatch. 4% addition gives KT50 ≤ 250 min against domestic termites. Performance varies by substrate.

MB404, Polyethylene-based compound masterbatch (anti-rodent + anti-termite). 4% addition provides obvious dual protection. Effect varies by substrate.

Major Parameter

	MB401	MB402	MB403	MB404	Test Method
Appearance	Light yellow to brown, uniform granules	White to grey, uniform granules	White to grey, uniform granules	Light yellow to brown, uniform granules	
Size	D=2.5-3.0mm L=3.0±1.2mm	D=2.5-3.0mm L=3.0±1.2mm	D=2.5-3.0mm L=3.0±1.2mm	D=2.5-3.0mm L=3.0±1.2mm	
Melt Index, g/10min, 190°C*5kg	≥2.0	≥2.0	≥2.0	≥2.0	ISO 1133
Density, g/cm³	1.34	1.34	1.34	1.35	ISO 1183-1

Drying

Materials are packed in aluminum-plastic bags or cartons. No extra drying is needed if packaging is intact. For long-term storage in humid conditions, dry at 70℃ for 4 hours in a dehumidifying dryer.

Processing Precautions

1. Wear protective gloves and safety goggles at all times during operation.
2. The extrusion temperature must not exceed 230°C.
3. Equip local or general ventilation facilities to reduce odor emission during processing.
4. In case of skin direct contact, wash the contaminated skin immediately with soap and clean water.

Masterbatch Product Series

Product Brief Introdution

Opta specializes in mid-to-high-end ordinary and functional masterbatches. With a professional R&D team, advanced imported equipment, and premium raw materials from Bayer, BASF, Clariant, and Ciba, we develop high-performance products compliant with REACH and RoHS.

Our high-concentration, low-addition masterbatches are compatible with PE, PP, ABS, PA, EVA, PC, PVC, TPE, PET, etc., widely used in cables, packaging, medical, home appliances, and automobiles.

We also offer anti-rodent, anti-termite, anti-UV, anti-static, and other functional masterbatches, with customization available.



Color Masterbatches for Wires and Cables

Product Brief Introdution

Opta has long manufactured color masterbatches for cables (electronic, communication, network, optical, etc.). Features: low addition ratio, even dispersion, no migration, breakdown, or color spots. Customizable for PE, PP, PA, PVC, TPU, TPE, PET, etc., with options for halogen-free, low-halogen, or UV-resistant.

Product Specifications and Technical Indicators						
Appearance	Circular Cylinder (φ2.5x3mm)	Acid&Alkali Resistance	Level 3-5	Colour Difference	Internal Control △E≤1.0	Environmental Protection
Weather Resistance	Level 5-8	Migration Resistance	Level 4-5	Moisture Contant	≤0.15%	Fully Industry Compliant

Color masterbatches for food and medical packaging

Product Brief Introdution

Opta' s masterbatches offer superior dispersion, heat&weather resistance, vivid color, good plasticity, and high gloss. Custom colors available. Widely used in packaging (bottles, caps, films) and medical tubes, complying with GB4806.7-2016 and FDA food-grade standards.

Product Specifications and Technical Indicators						
Appearance	Circular Cylinder (φ2.5x3mm)	Acid&Alkali Resistance	Level 3-5	Colour Difference	Internal Control △E≤1.0	Environmental Protection
Weather Resistance	Level 5-8	Migration Resistance	Level 4-5	Moisture Contant	≤0.25%	Fully Industry Compliant

Engineering Plastic Color Masterbatch

Product Brief Introdution

Opta's color masterbatches for home appliance & automotive industries. Strict raw material control, custom for PP, ABS, HIPS, PC, PC/ABS, PA, etc. Features: stable color, no impact on base properties, excellent anti-aging, anti-yellowing, and thermal stability.

Product Specifications and Technical Indicators						
Appearance	Circular Cylinder (φ2.5x3mm)	Acid&Alkali Resistance	Level 3-5	Colour Difference	Internal Control △E≤1.0	Environmental Protection
Weather Resistance	Level 5-8	Migration Resistance	Level 4-5	Moisture Contant	≤0.15%	Fully Industry Compliant

Engineering Plastic Color Masterbatch

Product Brief Introdution

Opta masterbatches: superior dispersion, no color spots, vivid hues, high light fastness, excellent processability, smooth texture, great weather resistance. Rich color options & full customization available.

Product Specifications and Technical Indicators					
Appearance	Circular Cylinder(φ2.5x3mm)	Acid&Alkali Resistance	Level 3-5	Colour Difference	Internal Control △E≤1.0
Weather Resistance	Level 6-8	Migration Resistance	Level 4-5	Moisture Contant	≤0.15%
Dispersity	No color spots, no color stripes	Environmental Protection	Fully Industry Compliant		

Thermoplastic Flame Retardant TPE Cable Materials

Product Name	Model
TPE Sheath Material for Electronic Wires and Data Cables	STCE58501
TPE Sheath Material for Electronic Wires and High-Voltage Wires in Vehicles	STCE59801
TPE Sheath Material for Charging Piles	STCE68001
TPE Insulating Material for Charging Piles	STCE69001

Product Applications

STCE58501: Features excellent processability, flame retardancy and resilience with smooth hand feel. Cables made from this material can pass the VW-1 flammability test.

STCE59801: Delivers outstanding heat resistance and electrical insulation performance, meeting material specifications for electronic wires and in-vehicle high-voltage cables.

STCE68001: Boasts excellent crack resistance, mechanical strength as well as resistance to acids, alkalis and solvents. Compliant with CQC1103 standard, it is applicable for outer sheaths of charging piles.

STCE69001: Provides superior heat resistance and insulating properties alongside favorable processability, suitable as insulating material for charging piles.

Recommended Extrusion Temperature

Zone Temperature							
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Neck	Head	Eye Mould
Temperature	170±10	180±10	190±10	200±10	200±10	190±10	190±10

Note: The specific temperature setting should be based on the smoothness of the surface of the wire and cable under a certain drawing speed.

Packaging

25kg per bag, inner PE bag and outer kraft paper bag. Outer packaging shall be marked with product name, model, weight, batch number, color, production date and supplier information.

Transportation & Storage

Keep away from sunlight and rain during transit. Store in clean, dry and ventilated places.

Notice:

If stored over 3 months under ≤30℃ and humidity ≥60%, bake at 80-90℃ for over 2 hours prior to use.

Product Performance

Test Item	STCE58501	STCE59801	STCE68001	STCE69001	Test Method
Density, g/cm³	1.04	1.03	1.02	1.02	ASTM D792
Melt Index, g/10min	2.5	1.8	5.7	5.9	ASTM D1238
Tensile Strength, Mpa	13.5	15.8	12.5	14	ASTM D412
Elongation at Break, %	350	320	550	550	ASTM D412
Thermal Impact@130℃	No Cracking	No Cracking	No Cracking	No Cracking	IEC60811-3-1
Low Temp. Impact(-40℃)	No Cracking	No Cracking	No Cracking	No Cracking	IEC60811-1-4
Aging Test	113℃×168H		136℃×168H		ASTM D573
Tensile Strength after Aging, Mpa	12.8	16.0	12	13.5	
Elongation at Break after Aging, %	335	310	480	495	
Flammability (4.0mm)	V0	V0	V1	V1	UL-94
Hardness, Shore A	85	98	80	90	ASTM D2240
Volume Resistivity, Ω*cm	3.8×10^{16}	2.5×10^{16}	4.3×10^{16}	4.1×10^{16}	IEC 60093

Thermoplastic Non-Flame-Retardant TPE Cable Material

Product Name	Model
TPE Outer Sheathing for Headphone Cables and Data Cables	STCE27501
TPE Sheath Material for Electronic Wires and High-Voltage Wires in Vehicles	STCE28501

Product Applications

STCE27501 features excellent processing performance, resilience, high tensile strength and elongation at break, with a fine hand feel. It can replace PVC in various products such as headphone wires.

STCE28501 boasts outstanding resilience, mechanical properties and processability, and is suitable for sealing strip products.

Recommended Extrusion Temperature

Zone Temperature							
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Neck	Head	Eye Mould
Temperature	160±10	170±10	180±10	190±10	190±10	180±10	180±10

Note: The specific temperature setting should be based on the smoothness of the surface of the wire and cable under a certain drawing speed.

Packaging

25kg per bag, inner PE bag and outer kraft paper bag. Outer packaging shall be marked with product name, model, weight, batch number, color, production date and supplier information.

Transportation & Storage

Keep away from sunlight and rain during transit. Store in clean, dry and ventilated places.

Notice:

If stored over 3 months under ≤30℃ and humidity ≥60%, bake at 80-90℃ for over 2 hours prior to use.

Product Performance

Test Item	STCE27501	STCE28501	Test Method
Density, g/cm³	1.00	1.00	ASTM D792
Melt Index, g/10min	8.5	6	ASTM D1238
Tensile Strength, Mpa	16	18.5	ASTM D412
Elongation at Break, %	650	650	ASTM D412
Thermal Impact@130℃	No Cracking	No Cracking	IEC60811-3-1
Low Temp. Impact(-40℃)	No Cracking	No Cracking	IEC60811-1-4
Hardness, Shore A	75	85	ASTM D2240

Thermoplastic TPE Injection Molding Material

Product Name	Model
TPE Injection Molding Material for Electronic Products	STCE88001
TPE Injection Molding Material for Sealing Rings and Plugs	STCE48001
TPR Injection Molding Material for Toys	STCR46501

Product Applications

STCE88001 has superior flame retardancy and insulation, reaching UL-94 V0 grade, ideal for data cables, power cords and plugs.

STCE48001 features great processability, suitable for sealing rings and handle overmolding.

STCR46501 is cost-effective with wide uses, applicable for overmolding and injection molded toys.

Recommended Extrusion Temperature

Zone Temperature					
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Mould Head
Temperature	170±10	180±10	190±10	200±10	200±10

Note: The specific temperature setting should be based on the smoothness of the surface of the wire and cable under a certain drawing speed.

Packaging

25kg per bag, inner PE bag and outer kraft paper bag. Outer packaging shall be marked with product name, model, weight, batch number, color, production date and supplier information.

Transportation & Storage

Keep away from sunlight and rain during transit. Store in clean, dry and ventilated places.

Notice:

If stored over 3 months under ≤30℃ and humidity ≥60%, bake at 80-90℃ for over 2 hours prior to use.

Product Performance

Test Item	STCE88001	STCE48001	STCR46501	Test Method
Density, g/cm³	1.05	1.00	1.03	ASTM D792
Melt Index, g/10min	15	18	45	ASTM D1238
Tensile Strength, Mpa	8.3	9.5	9.3	ASTM D412
Elongation at Break, %	380	450	500	ASTM D412
Hardness, Shore A	80	80	65	ASTM D2240
Flammability (4.0mm)	V0	--	--	UL-94

Thermoplastic FRPP Cable Material

Product Name	Model
Low-Halogen FRPP Material for Electronic Wires and High-Voltage Wires in Vehicles	STCP52501
Low-Halogen FRPP Material for High-Voltage Cables in Vehicles	STCP52502
Halogen-Free FRPP Material for Electronic Wires and High-Voltage Wires in Vehicles	STCP52601

Product Applications

STCP52501 is 125°C-resistant automotive wire insulation. It passes 152±3℃ 240h IEC thermal aging test without crosslinking, features good processability and flame retardancy, and meets ISO6722:2006 Type C wire standards.

STCP52502 boasts great heat and scratch resistance, tailored for 125°C thin automotive wire insulation.

STCP52601 is halogen-free with superb heat resistance, insulation and easy processability, suitable for eco-friendly automotive electronic and high-voltage wire insulation.

Recommended Extrusion Temperature

Zone Temperature							
Zone	Zone 1	Zone 2	Zone 3	Zone 4	Neck	Head	Eye Mould
Temperature	170±10	180±10	190±10	200±10	200±10	190±10	190±10

Note: The specific temperature setting should be based on the smoothness of the surface of the wire and cable under a certain drawing speed.

Packaging

25kg per bag, inner PE bag and outer kraft paper bag. Outer packaging shall be marked with product name, model, weight, batch number, color, production date and supplier information.

Transportation & Storage

Keep away from sunlight and rain during transit. Store in clean, dry and ventilated places.

Notice:

If stored over 3 months under ≤30℃ and humidity ≥60%, bake at 80-90℃ for over 2 hours prior to use.

Product Performance

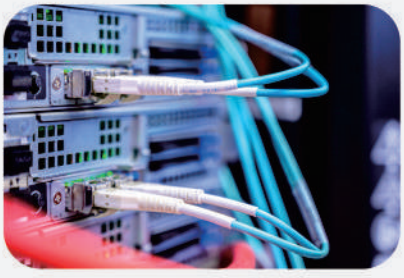
Test Item	STCP52501	STCP52502	STCP52601	Test Method
Density, g/cm³	1.15	1.15	1.05	ASTM D792
Melt Index, g/10min	2.5	11	3.5	ASTM D1238
Tensile Strength, Mpa	22	16	15	ASTM D412
Elongation at Break, %	550	650	550	ASTM D412
Thermal Impact@130℃	No Cracking	No Cracking	No Cracking	IEC60811-3-1
Low Temp. Impact(-40℃)	No Cracking	No Cracking	No Cracking	IEC60811-1-4
Aging Test	158℃×168H			ASTM D573
Tensile Strength after Aging, Mpa	21.5	15	14.3	
Elongation at Break after Aging, %	520	590	500	
Flammability (4.0mm)	V0	V0	V1	UL-94
Oxygen Index, %	24	23	23	GB/T 2406.1-2008
Hardness, Shore A	68	55	70	ASTM D2240
Volume Resistivity, Ω*cm	2.8×10^{16}	3.3×10^{16}	3.5×10^{16}	IEC 60093

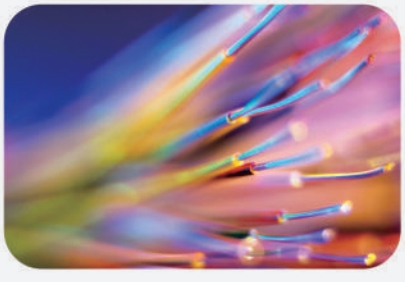


APPLICATION FIELD



















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Opta New Materials (Jiangsu) Co., Ltd.

Add：No. 80, Jingang Avenue, Zhenjiang New Area,
Zhenjiang City, Jiangsu Province

Tel：+86 0511 83816526

Fax：+86 0511 83816519

Website：www.optachem.com

