

Radiation cross-linkable, flame retardant compound

<p>■ Compound class Insulation / sheathing</p> <p>■ Standards SAE J1128 TXL, GXL and SXL; UL 3289, 3321</p> <p>■ Operating temperature [C°] -55 to 150</p> <p>■ Typical applications <i>Motor lead wires for coil connections, class F motors and transformers, pumps, solenoids, Internal wiring of appliances, sensor wires, flexible battery cables and wire insulation of low voltage multicore cables for road vehicles.</i></p>	<p>■ Compound category</p> <p>SAE J1127 STX and SGX CSA AWM I A/B</p> <p>■ Oil resistance level ★★★</p>	<p>■ Flame retardant Halogenated</p> <p>CSA CL 1251, 1503</p>
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General Applications

Automotive

■ **Features**

Flame retardant	Flexible at low temperatures	Oil resistant
Abrasion resistant	High temperature resistant	Flexible
Low smoke		

PHYSICAL PROPERTIES

Physical properties	Unit	Typical value	Test method
Density*	g/cm ³	1.25	DIN EN ISO 1183-1A
Hardness*	Shore D	50	DIN ISO7619-1
Abrasion	Cycles	150	DIN ISO7619-1

MECHANICAL PROPERTIES

Thermoplastic / Before cross-linking **	Unit	Typical value	Test method
Tensile strength	N/mm ²	16	IEC 60811-501
Elongation at break	%	340	IEC 60811-501

THERMAL PROPERTIES ***

■ Low temperature tests	Unit	Typical value	Test method
Elongation at break at -55°C	%	>30	IEC 60811-505
■ Hot set test at 200°C / 15min / 0,2MPa	Unit	Typical value	Test method
Elongation under load	%	40	IEC 60811-507
Residual elongation	%	<10	IEC 60811-507

ELECTRICAL PROPERTIES*

■ Major electrical properties	Unit	Typical value	Test method
Volume resistivity	Ω cm	10^{15}	IEC 60167
Dielectric strength	kV/mm	25	DIN EN 60243-1
Dielectric constant at 50Hz 20°C	-	3.1	IEC 250

BURNING PROPERTIES*

■ Main burning properties	Unit	Typical value	Test method
IEEE	-	Pass	Std. 383-1974
UL	-	Pass	UL 224

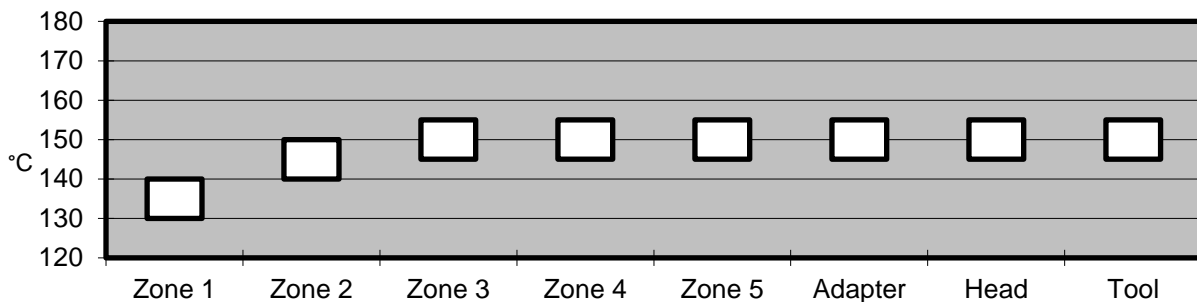
* pressed plaques

** extruded tapes

*** cross-linked plaques or tapes

PROCESSING GUIDE

<ul style="list-style-type: none"> ■ Screw configuration ■ Screw cooling ■ Screen pack ■ Extrusion dies ■ Die opening ■ Temperature profile extruder 	<p>Barrier type screw (BM) having high flights and a L/D-ratio > 24:1</p> <p>For high line speeds, cooling the screw to around 80°C can be very effective although this could lead to pulsation</p> <p>40/60/80/40 mesh</p> <p>Pressure or tube. For pressure extrusion, normal dies are recommended.</p> <p>Die opening approximately slightly below the required OD of the wire.</p> <p>The profile shown below may vary slightly depending on extruder type, head design & output.</p>
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<ul style="list-style-type: none"> ■ Maximum mass temperature ■ Conductor pre-heating ■ Wire/conductor ■ Quenching ■ Drying ■ Recommended colour master batches 	<p>160 - 170°C</p> <p>Preheating not required, but may positively influence elongation at break</p> <p>Bare copper / Tin-coated</p> <p>Cool with 60°C-80°C water in first cooling compartment</p> <p>Pre-dry at 60°C during 4 hrs.</p> <p>Well dispersed EVA master batch 0,5-1,0%. For black jacket applications, UV resistance can be obtained by adding a higher level of master batch depending on requirements and type of carbon black master batch used.</p>
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CROSS-LINKING INFORMATION

<ul style="list-style-type: none"> ■ Recommended radiation dose 	<p>120 kGy</p>
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STORAGE INFORMATION

<ul style="list-style-type: none"> ■ Form & packaging ■ Shelf life 	<p>Pellets in sizes 2.8mm & 5.5mm Moisture-resistant bags (25kg) & octabins (alu-innerliner, max. 1250kg)</p> <p>1 year after production</p>
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