

**Product Information:**

SX-4R is thermoplastic halogen free, flame retardant and low smoke emission compound with UV resistance for cable insulation and sheathing. It is used for flexible sheathing and bedding cables where resistance to ionizing radiation is required in power, signal and telecommunications cables.

The properties of this compound comply with the requirements of TS HD 604 S1 type M1, EN 50363-7 type T17, IEC 60502 ST8, VDE 0207 Part 24 type HM2-HM4, BS 7655 type LTS1 – LTS2 & LTS3 – LTS4, EN 50290-2-27, UNE 21123-4:2010 – ANNEX A-Table1 type DMZ-E, IEC 60092-360 type SHF1, IEC 60544-2, IEC 60544-4 Thermoplastic, Type XY, Radiation index 6,0 (4.8 kGy/h, 1 mm).

**Product Data:**

Property	Test Method	Unit	Value
<b>Physical Properties</b>			
Melt Flow Rate (150°C-21,6 kg)	ASTM D 1238	gr/10 min	3,5
Specific Weight (23°C)	ASTM D-792	gr/cm <sup>3</sup>	1,52
Hardness	ISO 868	Shore D	50
<b>Mechanical Properties</b>			
Tensile Strength	ISO 527	Mpa	13
Elongation at Break	ISO 527	%	200
Heat Ageing (100 °C, 168 h)	IEC 60811		
Δ Strength		%	-30
Δ Elongation		%	±40
Tear Strength	ASTM D 1938	N/mm	7
Hot Pressure Test at 70 °C	IEC 60811-508	%	<50
Cold Flex	ISO 458-2	°C	-20±2
Cold Bend (-15 °C±2 °C)	IEC 60811-504	-	No Cracks
Cold Elongation (-15 °C±2 °C)	IEC 60811-505	-	30 Min.
Cold Impact (-25 °C±2 °C)	IEC 60811-506	-	Pass
<b>Chemical Properties</b>			
Halogen Content	EN 60754-1	%	0
pH	IEC 60754-2	-	>4.3
Conductivity	IEC 60754-2	μS/mm	<10
Water Absorption	IEC 60811	mg/cm <sup>2</sup>	<5.0
LOI	ISO 4589	%	39
Smoke Density	EN-61034	% transmittance	>80
Volume Resistivity 20 °C (Alternating Polarity Method)	ASTM D257 Electrodes	Ω.cm	1.10 <sup>15</sup>
<b>Other Properties</b>			
Oil IRM 902 oil (70 °C, 4 h)	IEC 60811-404		
Δ Strength		%	10
Δ Elongation		%	9
Radiation index	IEC 60544		6

**KABKOM KİMYA SANAYİ VE TİCARET A.Ş.**

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**Determination of the effects of ionizing radiation (IEC 60544-4 & IEC 60544-2)**

Dose MGy	Dose Rate kGy/h	Traction		Hardness Shore A	Hardness Shore D
		Strength R MPa	Elongation E %		
0	0	15,84	200	112,5 HA	58 HD
0.2	4.8	15,34	170	111 HA	59 HD
0.5	4.8	14,45	154	113 HA	60 HD
1	4.8	14,45	101	115 HA	63 HD
3	35	14,25	80	120 HA	68HD

The critical value limit specified in the IEC 60544-4 and IEC 60544-2 has been reached at 1 MGy for SX-4R. Radiation index is:6

**Processing:**

Extrusion Temperatures: 115 °C–125 °C–130 °C –135°C –145°C–155 °C (Processing with Die Plate 40 Mesh Filter)

Extrusion Temperatures: 120 °C–125 °C–135 °C –145°C –155°C–165 °C (Processing without Die Plate and Filter)

**Packaging:**

It is packaged as 25 kg in aluminum bags.

**Storage&Handling:**

SX-4R should be stored in a manner that avoids direct exposure to sunlight and heat (T<30°C). This compound should be used within 6 months after its production date. After this time it's necessary to dry the material before extrusion.

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