

## SX-4D1

## Halogen Free Flame Retardant Cable Compounds

### Product Information:

SX-4D1 is thermoplastic halogen free, flame retardant and low smoke emission compound, for cable insulation and sheathing. It can be used for the production of energy, signal and control cables.

SX-4D1 is a halogen-free flame retardant charcoal forming compound that improves drip behavior and crust formation as well as flame retardant properties.

The properties of this compound comply with the requirements of,

TS HD 604 S1 type M1-M16

VDE 0207 Part 24 type HM2

VDE 0250 Part 215 type HM5

### Product Data:

Property	Test Method	Unit	Value
<b>Physical Properties</b>			
Melt Flow Rate (150°C-21,6 kg)	ASTM D 1238	g/10 min	4,5
Density (23°C)	ASTM D-792	g/cm <sup>3</sup>	1,56
Hardness	ISO 868	Shore D	54
<b>Mechanical Properties</b>			
Tensile Strength	ISO 527	MPa	12
Elongation at Break	ISO 527	%	180
Heat Ageing (100 °C, 168 h)	IEC 60811		
Δ Strength		%	-30
Δ Elongation		%	±40
Tear Strength	ASTM D 1938	N/mm	4
Hot Pressure Test at 80 °C	IEC 60811	%	<50
Cold Flex	ISO 458-2	°C	-18±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 (-15 °C±2 °C)	IEC 60811-506	-	Pass
<b>Chemical Properties</b>			
Halogen Content	EN 60754-1	%	<0,5 Max.
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	%	46
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

### 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 1250 kg in octabin.

### Storage&Handling:

SX-4D1 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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