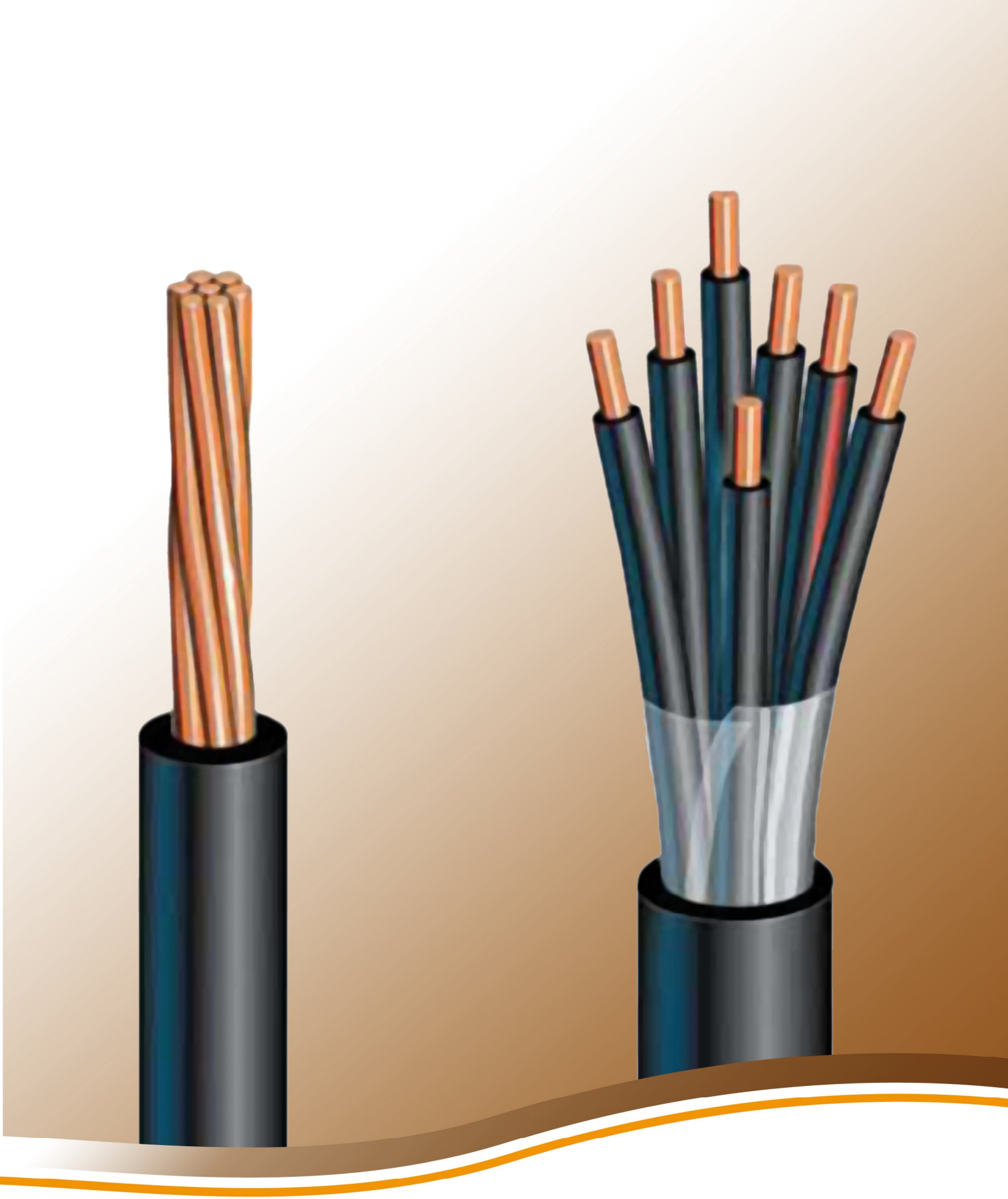

Crosslinkable Elastomers for Cables

Fainplast compounds

Description

This is a range of flame retardant, crosslikable by Sioplas method, elastomers for cable applications suitable for sheathing or insulation of electrical cables with high flexibility, resistance to harsh weather conditions, oils and hydrocarbons.

Product range

Properties	Test method	Unit	CTX 65	CTX 70/S	CTX 80
Description			Sheathing EN 50363 EM2,EM5	Insulation EN 50363 EI4	Insulation EN 50363 EI4
Density	ISO 1183	gr/cm3	1,29	1,21	1,17
Hardness at 15"	ISO 868	Shore A	62	68	80
Tensile strength at break (v = 50 mm/min)	ISO 527	N/mm2	14	11	12
Elongation at break (V = 50 mm/min)	ISO 527	%	710	650	700
Limited Oxygen Index	ISO 4859	% O_2	28	-	-
Cold Flex	ISO 458	°C	-60	-	-
Ageing in Oil IRM 902 (24hours @ 100°C)					
Variation of tensile strength	EN 60811-1-2	%	-15	-10	-
Variation of Elongation at break	EN 60811-1-2	%	-2	8	-
Enviromental stress cracking (3mm at 50°C in 10% IGEPAL)	EN 60811-4-1	h	>1000	-	-
Hot pressure test at 90°C	IEC 60811	%	<50	<50	<50

Processing

The grafted silane compound must be dry blended with a crosslinking catalyst master batch **(4-5% of ALOCAT 4HT),** and then can be extruded on a traditional single screw extruder.
A temperature profile for thsi reactive extrusion is given below, temperatures are however indicative, and may depend on the equipment design used.

Zone 1	Zone 2	Zone 3	Zone 4	Collar	Head	Die
140°C	140°C	145°C	145°C	150°C	155°C	155°C

The extrudate is most of the time cooled down at ambient conditions or into a water bath, which provides the moisture necessary for crosslinking. The reaction is fast but diffusion of moisture in the material is a limiting factor. For this reason, hot water bath or low pressure steam autoclave can be used to speed up crosslinking.
Generally speaking curing time is insulation thickness dependant, for example a 1mm wall section may take 4-6 hours in extreme moisture conditions. In case of self curing, time depends on the specific ambient temperature and humidity.

Storage

The grafted compound must be stored at ambient temperature (not exceeding 30°C) in moisture resistant bags, in order to avoid exposure to sunlight and water absorption. The crosslinkable product should be used within three months from the production date and within few hours if the bags are opened. After this deadline it's necessary to dry the material.

Packaging

Available in 25 Kg or bigger moisture resistant aluminum bags .

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