

## TECHNICAL INFORMATION

### CTX 65

**Description:** This product is a flame retardant silane grafted compound for cable applications, **Cross-linkable** by heat and moisture by previous addition of a suitable catalyst masterbatch (SIOPLAS method).

**Application:** Sheathing of electrical cables with high flexibility, resistance to harsh weather conditions, oils and hydrocarbons.

**Standard:** EN 50363-2-1 type EM2, EN 50363-2-2 type EM5.

**Technical characteristics after the crosslinking process:**

Property	Test method	Unit	Tolerance	Value
Density (natural colour)	ISO 1183	gr/cm <sup>3</sup>	± 0,02	1.29
Hardness Shore "A" 15"	ISO 868	point	± 2	62
Tensile strength	ISO 527	N/mm <sup>2</sup>	≥	14
Elongation at break	ISO 527	%	≥	710
Limited Oxygen Index	ISO 4859	% O <sub>2</sub>	± 1	28
Cold flex	ISO 458	°C	± 2	- 60

#### Sunlight resistance

Property	Test method	Unit	Tolerance	Value
Variation of tensile strength	ISO 527 EN 60811-1-2 UL 1581	%	\	- 10
Variation of elongation at break	ISO 527 EN 60811-1-2 UL 1581	%	\	- 3

#### Environmental Stress-Cracking

Property	Test method	Unit	Tolerance	Value
Condition A, 50°C, 3 mm, 100% Igepal, moulded plate.	EN 60811-4-1	\	\	> 48 H
Condition B, 50°C, 3 mm, 100% Igepal, moulded plate.	EN 60811-4-1	\	\	> 1000 H

#### Ageing 24 H at 100 °C in OIL IRM 902

Property	Test method	Unit	Tolerance	Value
Variation of tensile strength	ISO 527 EN 60811-1-2	%	\	- 15
Variation of elongation at break	ISO 527 EN 60811-1-2	%	\	- 2

**Notes:** the description contained herein are provided to customers as a general information for the purposes the product is intended for. These reflect FAINPLAST knowledge at the time of publication. By the information contained here in FAINPLAST won't release any warranty and/or give any suggestion on the use of the product, or grant any franchise on existing patents. The end-user, transformer shall always check the specific suitability of the product for the purposes it is intended for and its compatibility with process specifications. This document does not form part of any contract with customer.

### Ageing 18 H at 121 °C in OIL IRM 902

Property	Test method	Unit	Tolerance	Value
Variation of tensile strength	ISO 527 EN 60811-1-2	%	\	- 25
Variation of elongation at break	ISO 527 EN 60811-1-2	%	\	- 12

### Ageing 240 H at 100 °C in AIR

Property	Test method	Unit	Tolerance	Value
Variation of tensile strength	ISO 527 EN 60811-1-2	%	\	+ 20
Variation of elongation at break	ISO 527 EN 60811-1-2	%	\	- 6

### Ageing 168 H at 136 °C in AIR

Property	Test method	Unit	Tolerance	Value
Variation of tensile strength	ISO 527 EN 60811-1-2 UL 1581	%	\	- 2
Variation of elongation at break	ISO 527 EN 60811-1-2 UL 1581	%	\	- 10

The typical values reported in the table have been obtained from measurements made on extruded samples or pressed plates

#### Processing

The grafted silane compound is dry blended in a separate step with a crosslinking catalyst master batch (**4-5% of ALOCAT 2**), in a traditional single screw extrusion process.

A temperature profile for the reactive extrusion is given below, are however indicative, and may depend on the equipment design used.

Zone 1	Zone 2	Zone 3	Zone 4	Collar	Head	Die
135	135	140	145	150	155	155

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** : is available in 25 Kg or bigger aluminum bags.

For further information please contact [info@fainplast.com](mailto:info@fainplast.com)

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