CABLOSAM®: Woven Glass Backed Grades.

366.19-10 **366.19-85**
366.21-10 **366.20-80**
366.19-80

General

Cablosam® products are a range of flexible silicone elastomer impregnated micapaper (Samica®) tapes reinforced with a flexible backing material.

The products described in this data sheet have woven glass backing.

Cablosam® 366.19-10 and 366.21-10 are based upon muscovite Samica®.

Grades 366.19-80, 366.19-85 and 366.20-80 are based upon phlogopite Samica®.

Other ranges, with film backing, are described in a separate Cablosam® data sheet.

Application

Cablosam® woven glass backed grades have been developed for use as a key component of the electrical insulation system of fire resistant and fire survival cables.

Under fire conditions Cablosam® converts to a fused insulating coating providing a flame and heat barrier, whilst maintaining circuit integrity.

The thickness range available allows the selection of the most effective grade for strand and cabled strand insulation from control cables, and industrial cables to power cables wherever a fire resistant quality is required.

Main Characteristics

Cablosam® grades are very flexibile, and may be applied at high speed permitting economic production of insulated strand.

Cablosam® is available in both muscovite and phlogopite grades of Samica to meet specifications on a world wide basis.

All Cablosam® products are entirely halogen free, nor do they contain any phosphorous, sulphur or heavy metals and present no enviromental problems following exposure to fire.

Cables containing Cablosam® as a vital component of the insulation of fire survival cables, are known to meet fire test requirements to all international standards.

e.g. IEC 60331, BS 6387, DIN 4102.

Processing

Cablosam® tapes are most frequently applied direct, at high speed, onto the bare wire strand or cabled conductor, always with the woven glass to the outside after application.
The extent of the overlapping (registration), and the total amount of mica (Samica®), is selected according to the needs of the particular fire test and the choice of the other insulation materials within the cable.

Construction and Characteristics of woven glass backed Cablosam® :

with muscovite mica	Unit	366.19-10	366.21-10	Test Norm
Thickness	mm	0.18 ± 0.03	0.12 ± 0.02	IEC 60371-2
Total weight unit area	g/m²	215 ± 20	130 ± 13	IEC 60371-2
Weight : Samica® Woven glass bonding agent	 g/m² g/m² g/m²	 120 ± 7 23 ± 2 72 ± 10	 75 ± 4 23 ± 2 32 ± 5	 IEC 60371-2 IEC 60371-2 IEC 60371-2
	%	34	25	
Tensile strength	N/cm	≥ 80	≥ 80	IEC 60371-2
Stiffness	N/m	≤ 55	≤ 30	IEC 60371-2
Breakdown voltage	kV	≥ 2.0	≥ 1.0	IEC 60371-2

with phlogopite mica	Unit	366.19-80	366.19.85	366.20-80	Test Norm
Thickness	mm	0.11 ± 0.02	0.13 ± 0.02	0.10 ± 0.02	IEC 60371-2
Total weight unit area	g/m²	160 ± 14	170 ± 15	131 ± 12	IEC 60371-2
Weight : Samica® Woven glass bonding agent	 g/m² g/m² g/m²	 120 ± 6 23 ± 2 17 ± 5	 120 ± 6 32 ± 3 18 ± 4	 90 ± 5 23 ± 2 18 ± 4	 IEC 60371-2 IEC 60371-2 IEC 60371-2
	%	11	11	13	IEC 60371-2
Tensile strength	N/cm	≥ 80	≥ 120	≥ 80	IEC 60371-2
Stiffness	N/m	≤ 40	≤ 60	≤ 40	IEC 60371-2
Breakdown voltage	kV	≥ 1.2	≥ 1.2	≥ 1.2	IEC 60371-2

Properties

Tests on Cablosam® products, other than for incoming goods inspection tests to verify the construction, are of limited value as the essential properties are those of the tape after application, and the cable processing.

Similar Products

Cablosam® is available with polyethylene film backing replacing the woven glass.
The film backed grades are thinner than woven glass backed Cablosam®, see the VRI data sheet : Cablosam® Film Backed Grades. 315.60-01, 315.64-03 / 04 / 05.

Mode of Supply

Cablosam® grades are supplied as pancake rolls on 76mm centres with an outside diameter of 290mm, from 4mm width upwards.
The length depends upon the grade thickness and always exceeds 500m.

Joint free rolls may be supplied upon request, in which case some shorter length rolls than standard may be supplied.

Longer length rolls are available on cross wound spools. As the spool dimensions are standard, the length of Cablosam® on the spool is dependent upon both grade and tape width.
Typically, 4mm wide tape has approx 4000m on a cross wound spool.

VRI offer the service of supplying pre-insulated strand to customers specifications, including fine wire strand.

Storage and Shelf Life

Cablosam® products should be stored in cool, clean, dry conditions in their original packing, in which case a shelf life of 1 year applies at 20°C ± 5°C.
If Cablosam® is kept in a cool store at approx 5°C, the tape should be allowed to increase in temperature to ambient 18°C - 23°C temperature before application.

Health and Safety

Cablosam® is non toxic. We recommend however, that good works hygiene practice, including thorough hand washing and the use of barrier and cleansing creams is adopted.

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