

CABLOSAM[®] : Film Backed Grades

315.60-01 **315.64-03**
 315.64-04
 315.64-05

General

Cablosam[®] 315.60-01 and 315.64 - 03/04/05 series are flexible silicone elastomer impregnated micapaper (Samica[®]) products backed with polyethylene film.

Cablosam[®] 315.60-01 is based upon muscovite Samica[®].

Cablosam[®] 315.64-03/04/05 series products are based upon phlogopite Samica[®]

Applications

Cablosam[®] PE film backed products have been developed to meet the specific needs of the cable industry, particularly in the sectors of control and signal cables for fire resistant and fire survival applications.

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

Main Characteristics

Cablosam[®] PE grades are extremely flexible tapes which are also thinner than the woven glass backed Cablosam[®] grades.

Cablosam[®] PE insulated strand has a smooth even surface ideal as a base for later extrusion processes.

Cablosam[®] PE is halogen free and contains no phosphorous, sulphur or heavy metals and presents no environmental problems after exposure to fire.

Fire Survival Cables containing Cablosam[®] PE as a component of the insulation system are known to meet international fire test standards such as IEC 60331 and BS 6387.

Processing

Cablosam[®] PE tapes are most often applied at high speed onto the bare wire strand or cabled conductor always with the film to the outside after application.

The extent of the overlapping (registration) and the total amount of mica (Samica[®]) is selected according to the requirements of the particular fire test and the choice of the other insulation materials within the cable.

Construction and Characteristics of film backed Cablosam[®] :

with muscovite mica	Unit	315.60-01	Test Norm
Thickness	mm	0.080 ± 0.02	IEC 60371-2
Total weight unit area	g/m ²	92 ± 8	IEC 60371-2
Weight :			
Samica [®]	g/m ²	50 ± 4	IEC 60371-2
Polyethylene film	g/m ²	24 ± 2	IEC 60371-2
bonding agent	g/m ²	18 ± 50	IEC 60371-2
	%	20	
Tensile strength	N/cm	= 80	IEC 60371-2
Stiffness	N/m	= 30	IEC 60371-2
Breakdown voltage	kV	= 5.0	IEC 60371-2

with phlogopite mica	Unit	315.64-03	315.64-04	315.64-05	Test Norm
Thickness	mm	0.09 ± 0.02	0.11 ± 0.02	0.13 ± 0.02	IEC 60371-2
Total weight unit area	g/m ²	129 ± 12	162 ± 14	206 ± 18	IEC 60371-2
Weight :					
Samica [®]	g/m ²	90 ± 5	120 ± 6	160 ± 10	IEC 60371-2
Polyethylene film	g/m ²	24 ± 3	24 ± 3	24 ± 3	IEC 60371-2
bonding agent	g/m ²	15 ± 4	18 ± 5	22 ± 5	IEC 60371-2
	%	12	11	11	IEC 60371-2
Tensile strength	N/cm	= 80	> 80	= 80	IEC 60371-2
Stiffness	N/m	= 50	= 60	= 80	IEC 60371-2
Breakdown voltage	kV	= 5.0	= 5.0	= 5.0	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 woven glass backing replacing the polyethylene film.
The woven glass grades are slightly thicker than polyethylene film backed Cablosam[®], see the VRI data sheet: Cablosam[®] Woven Glass Backed Grades.

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 2 years 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.
