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Product name	AT7	AT9
General description	A lead free PVC Electrical Insulation tape coated with cross-linked solvent based rubber resin adhesive.	A PVC tape coated with a non-staining transparent, aggressive and cross- linked solvent based rubber – resin adhesive.
	- Flame retardant	- Flame retardant
	- Self-extinguishing	
	- Easy tear	- Self-extinguishing
	- Flexible	- Flexible
	- Conformable to awkward shapes	- Conformable to awkward shapes
	- Water resistant	- Water resistant
	- Good abrasion resistance	- Good abrasion resistance
	- UV resistant	- UV resistant
	- Non-corrosive adhesive	- Non-corrosive adhesive
J G G (D		- Easy unwind
		- High level of adhesion
Specifications	Certification* to the following standards may be available on request. BS EN 60454-3-1/Type 2 (Formerly BS 3924) and BS 4J10: 1991. *Standard charge for certificate: £25.00	Certification* to the standard below may be available on request. BS EN 60454-3-1/Type 2 (Formerly BS 3924).
Technical data	Thickness: 0.13mm	Thickness: 0.13mm
	Breaking Load: 26 N/cm	Breaking Load: 26 N/cm
	Elongation: 180%	Elongation: 180%
	Adhesion Steel: 2.4 N/cm Self: 2.1 N/cm	Adhesion Steel: 2.5 N/cm Self: 2.3 N/cm
	Water Extract: pH 6.8	Water Extract:
	Conductivity Max: 2mS/m	pH: 6.8 Conductivity: Max. 1.5 mS/m
	Electrical Properties	Flame Retardancy: Self extinguishing
	B/down Voltage: 8.0 kV 1 Min Proof Test: 6.0 kV	RoHS Compliant: Yes
	Insulation Resistance: 1011 Ohms Cu Corrosion: No Staining	Service Temperature: 0°C to +70°C
	Flame Retardancy: Self extinguishing	Application Temperature: 0°C to +40°C
	RoHS Compliant: Yes	Storage Temperature: +12°C to +25°C
	Service Temperature: -5°C to +70°C	
	Application Temperature: 0°C to +40°C	
	Storage Temperature: +12°C to +25°C	*Standard charge for certificate: £25.00









Product name	AT77	AT8
General description	General Description A PVC film coated with an aggressive, cross – linked solvent based rubber – resin adhesive.	A heavy duty plasticised PVC film coat- ed with an aggressive cross – linked solvent based rubber – resin adhesive.
	- Flame retardant	- Excellent conformability, particularly to uneven surfaces
	- Self-extinguishing	- Specially formulated PVC prevents lifting
	- Good low temperature performance - Flexible	- Water resistant
	- Conformable to awkward shapes	- Good abrasion resistance
	- Good abrasion resistance	- UV resistant - Very aggressive, non-corrosive
	- Good resistance to ageing	adhesive
	- UV resistant - Non-corrosive adhesive	- Can be walked on immediately after application
		- Suitable for indoor and outdoor use
		- Can be applied by hand or machine
CHR -		- Colours and widths in accordance with the Sports England Guidance Notes
Specifications	Certification* to the following standards may be available on request, BS EN 60454-3-1/Type 6 (Formerly BS 3924).	-
Technical data	Thickness: 0.19mm	Thickness: 0.14mm
	Breaking Load: 30 N/cm	Breaking Load: 26 N/cm
	Elongation: 250%	Elongation at Break: 150%
	Adhesion Steel: 2.6 N/cm Self: 2.5 N/cm	Adhesion Steel: 3.5 N/cm Self: 2.5 N/cm
	Moisture Vapour Permeability: 40g/m2/24 hrs	Water Extract: pH: 6.0 to 8.0 Conductivity: Max. 2.5 mS/m
	Flame Retardancy: Self extinguishing	RoHS Compliant: Yes
	Breakdown Voltage: 10 kV	Service Temperature: 0°C to +60°C
	RoHS Compliant: Yes	Application Temperature: +5°C to +40°C
	Service Temperature: -18ºC to +80ºC	Storage Temperature: +12°C to +25°C
	Application Temperature: -10°C to +80°C	Storage remperature. 12°C to 723°C
	Storage Temperature: +12°C to +25°C	
	*Standard charge for certificate: £25.00	*Standard charge for certificate: £25.00











Product name	AT8H	AT10
General description	A heavy duty plasticised PVC film coated with an aggressive cross – linked sol- vent based rubber – resin adhesive.	Heavy duty PVC film coated with an anti-corrosive, aggressive cross – linked solvent based rubber - resin adhesive.
	- Excellent conformability, particularly to uneven surfaces	- Flame retardant
	- Specially formulated PVC prevents	- Self-extinguishing
	lifting	- Flexible
	- Flexible	- Conformable to awkward shapes
	- Water resistant	- Water resistant
	- Good abrasion resistance	- High abrasion resistance
	- UV resistant	- UV resistant
	- Non-corrosive adhesive	- Non-corrosive adhesive
	- High level of adhesion	- Heavy duty
	- Can be applied by hand or machine	
STATE (D)	- Can be walked on immediately after application	
	- Suitable for indoor and outdoor use	
Specifications	-	Certification* to the following standards may be available on request. BS EN 60454-3-1/Type 2 (Formerly BS 3924).
Technical data	Tape Thickness: 0.14mm	Thickness: 0.25mm
	Breaking Load: 26 N/cm	Breaking Load: 44 N/cm
	Elongation at Break: 150%	Elongation: 220%
	Adhesion Steel: 3.5 N/cm Self: 2.5 N/cm	Adhesion Steel: 3.3 N/cm Self: 3.0 N/cm
	Water Extract: pH: 6.0 to 8.0 Conductivity: Max. 2.5 mS/m	Moisture Vapour Permeability: 40g/m2/24 hrs
	RoHS Compliant: Yes	Water Extract: pH: 6.0 to 8.0
	Service Temperature: 0°C to +60°C	Conductivity: Max. 2.5 mS/m Breakdown Voltage: 10 kV
	Application Temperature: +5°C to +40°C	RoHS Compliant: Yes
	Storage Temperature: +12°C to +25°C	Service Temperature: -5°C to +80°C
		Application Temperature: +5°C to +40°C
\bigcirc		Storage Temperature: +12°C to +25°C
		*Standard charge for certificate: £25.00









Product name	AT30	AT42
General description	A polyethylene film coated with a clear, stable, solvent based rubber – resin adhesive.	A PVC film coated with a clear, aggressive, cross – linked solvent based rubber – resin adhesive.
	- Good low temperature performance	- Easy unwind
	- Easy unwind	- Flexible
	- Flexible	- Water resistant
	- Conformable to awkward shapes	- Good abrasion resistance
	- Water resistant	- Non-corrosive adhesive
	- Good abrasion resistance	- Good instant stick
	- Non-corrosive adhesive	
Specifications	Certification* to the following standards may be available on request. DEF STAN 81-145/1 (formerly DEF STAN 75-1).	_
Technical data	Thickness: 0.15mm	Thickness: 0.11 mm
	Breaking Load: 16 N/cm	Breaking Load: 19 N/cm
	Elongation at Break: 300%	Elongation: 170%
	Adhesion Steel: 3.5 N/cm Self: 2.2 N/cm	Adhesion Steel: 1.6 N/cm Self: 1.0 N/cm
	Moisture Vapour Permeability: 3g/m2/24 hrs	Unwind Adhesion: 2.0 N/cm
	RoHS Compliant: Yes	Moisture Vapour Permeability: 25g/m2/24 hrs
	Service Temperature: -40°C to +90°C	RoHS Compliant: Yes
	Application Temperature: 0°C to +40°C	Service Temperature: -5°C to +50°C
	Storage Temperature: +12°C to +25°C	Application Temperature: 0°C to +40°C
		Storage Temperature: +12°C to +25°C









Product name	AT121	AT123
General description	A close woven unbleached uncoated rayon cloth coated with a white, aggressive, pressure-sensitive, solvent free rubber-resin adhesive.	A close woven black rayon uncoated cloth coated with a transparent aggressive, pressure sensitive, solvent free rubber-resin adhesive.
	- Biodegradable	- High tack
	- Can be written on	- Very strong
	- Strong	- Can be written on
	- Conformable to awkward shapes	- Conformable to awkward shapes
	- Good abrasion resistance	- Good abrasion resistance
	- Non-corrosive adhesive	- Very good level of adhesion
<u>I</u> GO	- Can be used for veterinary purposes	
Specifications	Certification* to the following standards may be available on request. DEF STAN 81-145/2 (formerly DEF STAN 75-2/4).	_
Technical data	Thickness: 0.25 mm	Thickness: 0.25 mm
	Breaking Load: 75 N/cm	Breaking Load: 75 N/cm
	Elongation: 10%	Elongation: 10%
	Adhesion Steel: 3.5 N/cm Self: 3.0 N/cm	Adhesion Steel: 3.5 N/cm Self: 3.0 N/cm
	Water Extract: pH: 6.5 to 7.5 Chloride Max: 0.03% as NaCI Sulphate Max: 0.17% as Na2SO4	RoHS Compliant: Yes Service Temperature: -10ºC to +60ºC
	RoHS Compliant: Yes	Application Temperature: +10°C to +45°C
	Service Temperature: -10°C to +60°C	Storage Temperature: +12°C to +25°C
	Application Temperature: +10°C to +45°C	
	Storage Temperature: +12°C to +25°C	
	*Standard charge for certificate: £25.00	



Tapes







Product name	AT132	AT175
General description	A polycloth laminate waterproof gloss cloth tape coated with an aggressive pressure sensitive, solvent free rubber-resin adhesive.	A close woven black rayon uncoated cloth coated with a transparent aggressive, pressure sensitive, solvent free rubber-resin adhesive.
	- Very high tack, instant grab	- High tack
	- Easy tear	- Very strong
	- Consistent unwind	- Can be written on
	- Good abrasion resistance	- Conformable to awkward shapes
	- Water resistant finish	- Good abrasion resistance
	- Conformable to awkward shapes	- Very good level of adhesion
	- Non-corrosive adhesive	
ODD -		
Technical data	Thickness: 0.17 mm	Thickness: 0.17 mm
	Breaking Load: 35 N/cm	Breaking Load: 35 N/cm
	Elongation: 18%	Elongation: 18%
	Adhesion Steel: 4.0 N/cm Self: 3.0 N/cm	Adhesion Steel: 4.0 N/cm Self: 3.0 N/cm
	RoHS Compliant: Yes	RoHS Compliant: Yes
	Service Temperature: -50°C to +65°C	Service Temperature: -50°C to +65°C
	Application Temperature: +5°C to +45°C	Application Temperature: +5°C to +45°C
	Storage Temperature: +12°C to +25°C	Storage Temperature: +12ºC to +25ºC



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Product name	AT180	AT159
General description	A polythene extruded gloss cloth tape coated with an aggressive, pressure sensitive, solvent free rubber-resin adhesive.	A polythene extruded, matt cloth tape coated with an aggressive, pressure sensitive, solvent free rubber-resin adhesive.
	- Very long term outdoor exposure	- Easy tear and very easy unwind
	- Strong	- Conformable to awkward shapes
	- Conformable to awkward shapes	- Strong
	- Very good abrasion resistance	- Water resistant finish
	- Water resistant finish	- Good abrasion resistance
	- High tack	- Non-corrosive adhesive
	- Clean peel	- Aggressive adhesive
	- Can be written on	- Can be written on
(TATATA	- Non-corrosive adhesive	- Wide colour range
<u> </u>	- Wide colour range	
Specifications	Certification* to the following standard may be available on request. DEF STAN 81-145 2a.	-
Technical data	Thickness: 0.28 mm	Thickness: 0.28mm
	Breaking Load: 65 N/cm	Breaking Load: 46 N/cm
	Elongation: 30%	Elongation: 16%
	Adhesion Steel: 4.5 N/cm Self: 3.0 N/cm	Adhesion Steel: 4.0 N/cm Self: 2.4 N/cm
	Moisture Vapour Permeability: 20g/m2/24 hrs	Moisture Vapour Permeability: 20g/m2/24 hrs
	Water Extract:	RoHS Compliant: Yes
	pH: 6.0 to 8.0 Chloride Max: 0.04% as NaCl Sulphata Max: 0.20% as Na2SO4	Service Temperature: -50°C to +80°C
	Sulphate Max: 0.20% as Na2SO4 RoHS Compliant: Yes	Application Temperature: +10°C to +45°C
	Service Temperature: -50°C to +80°C	Storage Temperature: +12°C to +25°C
	Application Temperature: +10°C to +45°C	









Product name	AT160	AT163
General description	A polythene extruded matt cloth tape with a waterproof finish coated with an aggressive pressure sensitive, solvent free rubber-resin adhesive.	A polythene extruded gloss cloth tape coated with a thermosetting pressure sensitive, solvent free rubber-resin adhesive.
	- Very strong	- Thermosetting adhesive
	- Easy tear and unwind	- Good high and low temperature resistance
	- Conformable to awkward shapes	- Salt water resistant
	- Water resistant finish	- Water resistant finish
	- Good abrasion resistance	- Strong
	- Non-corrosive adhesive	- Good abrasion resistance
	- Can be written on	- Conformable to awkward shapes
	- Wide colour range	- High tack
		- Can be written on
		- Non-corrosive adhesive
Specifications	Certification* to the following standard may be available on request. DEF STAN 81-145 2a	-
Technical data	Thickness: 0.33 mm	Thickness: 0.30mm
	Breaking Load: 85 N/cm	Breaking Load: 70 N/cm
	Elongation: 8%	Elongation: 30%
	Adhesion Steel: 3.5 N/cm Self: 2.2 N/cm	Adhesion Steel: 7.4 N/cm Self: 3.2 N/cm
	Moisture Vapour Permeability: 35g/m2/24 hrs	Moisture Vapour Permeability: 25g/m2/24 hrs
	Water Extract: pH: 6.5 to 7.5	RoHS Compliant: Yes
	Chloride Max: 0.05% as NaCl Sulphate Max: 0.25% as Na2SO4	Service Temperature: -50°C to +110°C
	RoHS Compliant: Yes	Application Temperature: +5°C to +45°C
	Service Temperature: -50°C to +80°C	Storage Temperature: +12°C to +25°C
	Application Temperature: +10°C to +45°C	
	Storage Temperature: +12°C to +25°C	



Tapes







Product name	AT171	AT200
General description	A gloss polycloth laminate tape coated with an aggressive pressure sensitive, solvent free rubber-resin adhesive.	An Ultra Matt polythene extruded cloth tape coated with cable friendly, solvent free rubber-resin adhesive that is designed to peel from clean surfaces.
	 Easy tear and unwind Very high initial tack Good abrasion resistance Water resistant finish Conformable to awkward shapes Non-corrosive adhesive 	 designed to peel from clean surfaces. Ultra matt finish Flame retardant in situ Cable friendly clean peel adhesive Easy unwind very easy tear Wide colour range Can be written on Wide temperature range Water resistant in situ Good abrasion resistance Conformable to awkward shapes
<u>I</u> GO		- Non corrosive adhesive
Technical data	Thickness: 0.18 mm	Thickness: 0.26mm
	Breaking Load: 30 N/cm	Breaking Load: 40 N/cm
	Elongation: 15%	Elongation: 20%
	Adhesion Steel: 3.7 N/cm Self: 2.3 N/cm	Adhesion Steel: 4.5 N/cm Self: 2.6 N/cm
	Moisture Vapour Permeability: 25g/m2/24 hrs	RoHS Compliant: Yes
	RoHS Compliant: Yes	Service Temperature: -10°C to +80°C
	Service Temperature: -50°C to +65°C	Application Temperature: +10°C to +40°C Storage Temperature: +12°C to +25°C
	Application Temperature: +10°C to +45°C	
QL	Storage Temperature: +12°C to +25°C	



Tapes







Product name	AT208	AT293
General description	PVC Tape coated with cross – linked solvent based rubber- resin adhesive.	A polythene extruded gloss cloth tape coated with Surefire® thermosetting, solvent free rubber-resin adhesive.
	- Wide range of colours	- PRS10 approved
	- Water resistant in situ	- Unique Surefire® thermosetting
	- Easy unwind	adhesive
	- Easy tear	- Very high tack
	- Good abrasion resistance	- Good high and low temperature resistance
	- Conformable to awkward shapes	- Strong
	- Non-corrosive adhesive	- Can be written on
		- Excellent conformability to awkward shapes
		- Good abrasion resistance
		- Non-corrosive adhesive
		- Water resistant finish
CPR -		- Easy tear
Specifications	Certification to the following standards may be available on request BS EN 60454-3-1/Type 2	*Meets British Gas specification PRS10 issue 2
Technical data	Tape Thickness: 0.13 mm	Thickness: 0.28mm
	Breaking Load: 25 N/cm	Breaking Load: 75 N/cm
	Elongation at Break: 170%	Elongation: 30%
	Adhesion Steel: 2.3 N/cm Self: 2.0 N/cm	Adhesion Steel: 4.5 N/cm Self: 3.2 N/cm Aluminium: 4.4 N/cm
	Water Extract: pH: 7.2	RoHS Compliant: Yes
	Conductivity: Max. 2mS/m	Service Temperature: -50°C to +110°C
	Flame Retardancy: Self Extinguishing RoHS Compliant: Yes	Application Temperature: +5°C to +45°C
	Service Temperature: -5°C to +70°C	Storage Temperature: +12°C to +25°C
	Application Temperature: 0°C to +70°C	
	Storage Temperature: +12°C to +25°C	
	*Standard charge for certificate: £25.00	*Standard charge for certificate: £25.00









Product name	AT319	AT501
General description	A white PVC film coated on both sides with a clear aggressive synthetic rubber-resin adhesive interleaved with a white siliconised paper release liner. - Easy tear	A scrim reinforced 120 micron alumini- um foil and kraft paper laminate, coat- ed on the kraft side with a dispersion acrylic, pressure sensitive adhesive. The tape is backed with a strong polythene coated release paper.
	- Flexible	- Flame retardant and self- extinguishing
		- High and low temperature resistance
		- Easy unwind
		- Water resistant
IGO		- Scrim reinforced
Specifications	Certification* to the following standard may be available on request. DEF STAN 81-145 2a	Type test certificate* available to show conformance to BS476 Part 7 Category 1 Spread of Flame. Certification to the following standards may be available on request.
Technical data	Tape thickness (Excluding liner): 0.18mm	Thickness: 0.12 mm
	Release liner weight: 80gsm	Breaking Load: 60 N/cm
	Release liner thickness: 73 µm	Elongation: 5%
	Breaking Load: 18 N/cm	Adhesion Steel: 4.6 N/cm
	Elongation: 125%	Moisture Vapour Permeability:
	Adhesion to Steel Faced Side: 12.0 N/cm Unfaced Side: 12.0 N/cm	<1g/m2/24 hours RoHS Compliant: Yes
	RoHS Compliant: Yes	Service Temperature: -40°C to +110°C
	Service Temperature: 0°C to +70°C	Application Temperature: -20°C to +40°C
	Application Temperature: 0°C to +40°C	Storage Temperature: +12°C to +25°C
	Storage Temperature: +12°C to +25°C	









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Product name	AT502	AT566
General description	A 30 micron aluminium foil, coated one side with a dispersion acrylic, pressure sensitive adhesive. The tape is backed with a strong polythene coated release paper.	A polythene extruded gloss cloth tape coated with an aggressive, pressure sensitive, solvent free rubber-resin adhesive.
	- Flame retardant and self-extinguishing	- Very high resistance to outdoor exposure
	- Good high and low temperature resistance	- Strong
	- Easy unwind and tear	- Very good abrasion and puncture resistance
	- Water resistant	- Water resistant finish
	- Aggressive adhesive	- Conformable to awkward shapes
	- Excellent water vapour resistance	- High tack
		- Clean peel
		- Can be written on
All I		- Non-corrosive adhesive
Specifications	Test certificate* available to show this foil tape meets the requirements of the following specifications:	
	- BS476 Part 6 and Part 7 Category 1	-
	- Fire Class M1	
	- Class O	
Technical data	Thickness: 0.07 mm	Thickness: 0.28 mm
	Elongation: 5%	Breaking Load: 65 N/cm
	Adhesion to Steel	Elongation: 30%
	Faced Side: 3.6 N/cm Unfaced Side: 3.6 N/cm	Adhesion
	RoHS Compliant: Yes	Steel: 4.5 N/cm Self: 3.0 N/cm
	Service Temperature: -40ºC to +110ºC	Moisture Vapour Permeability:
	Application Temperature: -20°C to +40°C	20g/m2/24 hours
	Storage Temperature: +12ºC to +25ºC	Water Extract: pH: 6.5 to 7.5 Chloride Max: 0.04% as NaCI Sulphate Max: 0.20% as Na2SO4
		RoHS Compliant: Yes
		Service Temperature: -50°C to +80°C
		Application Temperature: +10°C to +45°C
		Storage Temperature: +12°C to +25°C







Product name	AT712	AT713
General description	A polythene extruded cloth tape coated with an aggressive, white pressure sensitive, solvent free rubber-resin adhesive.	A polythene extruded matt cloth tape coated with an aggressive, white pressure sensitive, solvent free rubber-resin adhesive.
	- Low halogen content	- Matt finish
	- Very easy tear	- Easy tear
	- Can be written on	- Conformable to awkward shapes
	- Clean peel	- Strong
	- pH neutral	- Water resistant finish
	- Water resistant finish	- Good abrasion resistance
	- Good abrasion resistance	- Non-corrosive adhesive
	- Conformable to awkward shapes	- Clean peel
	- Non-corrosive adhesive	- Can be written on
~		- Low halogen content
LIGO		
Specifications	Certification* to the following standards may be available on request. • NNC approved (White only). • EDF PMUC approved (White only). • Fire Class M1	-
Technical data	Tape Thickness: 0.27 mm	Tape Thickness: 0.27 mm
	Breaking Load: 41 N/cm	Breaking Load: 41 N/cm
	Elongation at Break: 18%	Elongation at Break: 18%
	Adhesion Steel: 6.0 N/cm Self: 3.5 N/cm	Adhesion Steel: 6.0 N/cm Self: 3.5 N/cm
	Moisture Vapour Permeability: 24g/m2/24 hours	Moisture Vapour Permeability: 24g/m2/24 hours
	Total Halides: 1000ppm max	Total Halides: 1000ppm max
	Total Sulphur: 1000ppm max	Total Sulphur: 1000ppm max
	RoHS Compliant: Yes	RoHS Compliant: Yes
	Service Temperature: -5°C to +70°C	Service Temperature: -5°C to +70°C
	Application Temperature: 0°C to +70°C	Application Temperature: 0°C to +70°C
\bigcirc	Storage Temperature: +12°C to +25°C	Storage Temperature: +12°C to +25°C
	*Standard charge for certificate: £25.00	



Tapes









Product name	AT1005	AT2000
General description	General Description A 28 micron polypropylene film coated with dispersion acrylic adhesive. - Excellent conformability to awkward shapes - Water resistant - Good abrasion resistance - Suitable for machine or hand applications	An aluminium oxide/silicon carbide abrasive grit bonded to a tough and durable PVC backing with a solvent based acrylic adhesive and paper release liner. - Anti slip - Water resistant - UV resistant - Easily applied - Helps you meet statutory Health and Safety regulations - Durable - For indoor and outdoor use
Technical data	Thickness: 0.054 mm Film Thickness: 0.03 mm Elongation: 110% Adhesion: 2.6 N/cm RoHS Compliant: Yes Service Temperature: -25°C to +70°C Application Temperature: +10°C to +40°C Storage Temperature: +12°C to +25°C	Thickness: 1.0 mm Breaking Load: 40 N/cm Elongation: 100% Adhesion Steel: 4.0 N/cm RoHS Compliant: Yes Service Temperature: -5°C to +50°C Application Temperature: +15°C to +40° Storage Temperature: +12°C to +25°C



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Tapes







Product name	AT3400	AT4003
General description	A PVC film coated with an aggressive cross – linked solvent based rubber- resin adhesive, which can be applied over a wide temperature range.	A single-sided woven glass, cloth tape with a silicone adhesive. - Extremely high temperature
	- Flame retardant	resistance.
	- Self-extinguishing	- High mechanical strength.
	- Excellent low and high temperature performance	- Flame retardant to UL 510. - Excellent resistance to acids and oils
	- Resistant to rapid temperature change	
	- Easy unwind	
	- Flexible	
	- Conformable to awkward shapes	
	- Water resistant	
~	- Good abrasion resistance	
(ATAA)	- UV resistant	
	- Non-corrosive adhesive	
Specifications	Certification* to the following standard may be available on request. BS EN 60454-3-1/Type 11 (Formerly BS 3924)	Recognised by UL (Test method UL.510) and conforms to EN 60454-3-8 Type 3*.
Technical data	Tape Thickness: 0.19 mm	Tape Thickness: 0.18 mm
	Breaking Load: 30 N/cm	Breaking Load: 280 N/cm
	Elongation at Break: 200%	Elongation at Break: 5%
	Adhesion Steel: 2.2 N/cm	Adhesion to steel: 2.8 N/cm
	Self: 2.0 N/cm	RoHS Compliant: Yes
	Moisture Vapour Permeability: 40g/m2/24 hours	Breakdown Voltage: 2.5 kV
	Flame Retardency: Self-extinguishing	Service Temperature: 0°C to +180°C
	Breakdown Voltage: 10 kV	Application Temperature: +10°C to +40°C
	RoHS Compliant: Yes	
	Service Temperature: -20°C to +105°C	
	Application Temperature: -10°C to +40°C	
\bigcirc	Storage Temperature: +12°C to +25°C	
	*Standard charge for certificate: £25.00	*Standard charge for certificate: £25.00









Product name	AT6000	AT6103
General description	A PVC tape, coated with a clear, stable, cross - linked solvent based rubber-resin adhesive.	A clear UV polythene film coated with a dispersion acrylic adhesive.
	- Easy Tear	- Matt finish - Excellent clarity once applied
	- Very easy unwind	- Easy tear
	- Can be unwound from the roll without stretching the tape	- Clean peel from most surfaces
	- Flexible	- UV & water resistant
	- Conformable to awkward shapes	- Easy to apply
	- Water resistant	- Conformable and flexible
	- High performance in adverse weather conditions	- Resists most common solvents
	- UV resistant	- Abrasion resistant
	- Good adhesion to a variety of surfaces including: glass, metal, Polythene, UPVC and wood	- Non-corrosive adhesive
	- Clean peel	
	- Can be used indoors and outdoors	
Technical data	Thickness: 0.11 mm	Thickness: 0.11 mm
	Elongation: 120%	Breaking Load: 25 N/cm
	Adhesion Steel: 2.0 N/cm Self: 0.6 N/cm	Elongation: 300% Adhesion Steel: 1.3 N/cm
	Unwind Adhesion: 2.0 N/25mm	RoHS Compliant: Yes
	RoHS Compliant: Yes	
	Service Temperature: -5°C to +60°C	Service Temperature: -40°C to +60°C
	Application Temperature: +5°C to +40°C	Application Temperature: 0°C to +40°C Storage Temperature: +12°C to +25°C
	Storage Temperature: +12ºC to +25ºC	Storage remperature. +12°C to +25°C
	*Standard charge for certificate: £25.00	



Kits







Product name	Industrial Social Distancing Kit	Retail Social Distancing Kit
Features	- Ready to use all in one pack	- Ready to use all in one pack
	 For an area of approx. 20,000 sq. feet (1850m2) Possibility to combine kits for larger areas Vivid colours for clear visual message Aggressive adhesive for better performance and durability 	 For premises such as small shops, post offices, garden centres, where purchases are made, usually with only one access point to the premises and less than 10 people on site. Possibility to combine kits for larger areas Vivid colours for clear visual message Aggressive adhesive for better performance and durability
Kit containment	 6 x rolls of 50mm x 33m AT8H Hazard Warning Tape yellow/black for marking boxes that could be used for marking out social distancing queues. 1xLarge 600mm dia floor graphic "Follow the route, keep 2m apart" sign that could be used to encourage good social distancing behavior at the start of a queuing area. 5x300mm dia "Wait here till person moves" floor graphics. 2xSheets of Social distance sticker sheets that could be used to encourage safe distancing. 3x50mm x 33m rolls of AT8 Lane Marking Tape yellow for marking out paths areas. 2x200mm dia One Way Arrow Symbol floor graphics that could be used at the start of one-way paths. 2x300mm dia No Pedestrians Symbol floor graphics that could be used at the 'no entry' end of a one-way path. 4x100mm dia One Way Arrow Symbol that could be used to mark out smaller one-way path. 3xA4 semi-rigid plastic General Covid measures signs. 5xA5 "Please use hand sanitiser before entering" stickers. 2xA4 "Minimise face to face contact" signs for use in areas where maintaining a 2m distance is not possible. 10xsmall "Disinfect surfaces regularly" stickers. 10 x small "Avoid touching unless necessary" stickers. 	 2xA4 semi-rigid plastic sign Social distancing measures for retail sign 1xA4 semi-rigid plastic sign "Please use hand sanitiser". 6x300mm dia. floor graphic "Wait here till the person in front moves". 3x50mm x 33m rolls of black/yellow tape for marking queues, boxes etc. 1xA4 semi-rigid plastic sign "No more than people in the premises at any one time" 1x300mm dia floor graphic "Do not stand in the doorway". 2xSheet of 6x 85mm dia. 2m distance symbols 'Maintain Social Distancing' stickers. 2x300mm dia floor graphic "Please wait here until called". 1x50mm x 33m rolls of yellow tape for marking queues, boxes etc. 2xA5 sticker "Use contactless where possible".



FAVIER

FAVIER

Sleevings

Sleevings

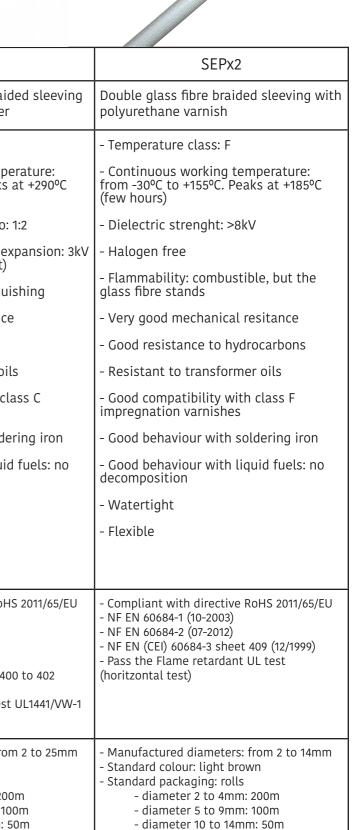
Product name	ТВА	SI
Description	Braided sleeving in basalt fibre untreated, non-impregnated	Braided sleeving in silica fibre untreated and non-impregnated
Characteristics	- Continuous working temperature: from -260°C to 560°C. Peaks at 600°C	- Continuous working temperature: +1050ºC. Peaks at +1200ºC
	- Fireproof	- Fireproof
	- Resistance to flame: non flammable	- Hihgly flexible
	- Low heat expansion coefficient	- Excellent resistance to radiation
	- Good flexibility	- Frays slightly when cut
$M \Omega_{\lambda}$	- Very high chemical resistance, especially to acid	- Low heat expansion coefficient
	- Good mechanical resistance	- Excellent thermal insulation properties
/////	- Low rate of moisture absorbtion	- Low density
/////	- Good thermal insulation properties	- Good behaviour with soldering iron: no retraction
	- Low density	- Very high chemical resistance,
///9	- Good behaviour with soldering iron: no retraction	especially to acid
	- Frays slightly when cut	
	- 100% recyclable	
Standards	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012)	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012)
Colours and packagings	- Manufactured diameters: 2mm hasta 50mm - Standard colour: khaki (natural) - Standard packaging: bobbins	- Manufactured diameters: from 1 to 50mm - Color standard: white (natural) - Acondicionamento standard: rolls
Chemical composition	- Si02, Al203, Mg0, Ca0, Fe0, Fe202, Fe203 - Asbestos free and halogen free guaranteed	- Silicon dioxide (Si02 94-96%) - Asbestos free guaranteed
Applications	⊗€₩₩₽€©	

Product name	SCS-E
Description	Expandable glass fibre braided coated with silicone rubber
Characteristics	- Temperature class: C
	- Continuous working temperat from -60°C to +250°C. Peaks at - (few hours)
	- Minimum expansion ratio: 1:2
	- Dielectric strenght after expa (other voltages on request)
R	- Flammability: self-extinguishi
	- Good mechanical resitance
	- Good resistance to UV
\sim	- Resistant to tranformer oils
	- Good compatibility with class impregnation varnishes
	- Good behaviour with solderin
	- Good behaviour with liquid fu decomposition
	- Halogen free
	- Watertight
	- Very flexible
Standards	- Compliant with directive RoHS 20

- Compliant with directive ROHS 201 - NF EN 60695-2-10 (05-2001) - NF EN 60695-2-11 (07-2001) - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012) - NF EN (CEI) 60684-3 sheets 400 to - (02/2003) - Pass the flame retardant test UL14 (vertical test)
 Manufactured diameters: from 2 to Standard colour: brick red Standard packaging: rolls diameter 2 to 4mm: 200m diameter 6 to 12mm: 100m diameter 14 to 20mm: 50m diameter 22 to 25mm: 30m











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leevings	

Product name	GES	TUBOTHANE
Description	Extruded silicone tube	Thermoplastic polyurethane extruded sleeving
Characteristics	 Continuous working temperature: from -50°C to +200°C Tearing resistance: 18 to 27N/mm (ASTM D 624 B) Elongation at break: 350 to 700% (DIN 53504) Resistance at break: 8 to 12N/mm2 (DIN 53504) Hardness: 40 to 80 SH A (DIN 53504) Density: 1,12 to 1,22 g/cm3 (EN ISO 1183-1 A) Not toxic for food products and physiological liquids Good resistance to: Atmospheric agents Ozone Low temperatures: keeps its flexibility Non-concentrated acids Bases Water and sea water Ethylene oxide: 100% during 3 days at 24°C Warm air up to 200°C 	 Temperature class: F Continuous working temperature: from -30°C to +155°C. Peaks at +185°C (few hours) Dielectric strenght: 8 to 15kV (depends on the thickness) Halogen free Good behaviour with the following products: mineral oil at 60°C alcohol 90° soda at 20% ethylene glycol trichlorethylene white spirit isopropanol Good mechanical resistance Good compatibility with Class F impregnation varnishes Self-extinguishing Watertight Flexible
Standards	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012) - NF EN 60684-3 sheets 121 a 124 (12/2003)	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012)
Colours and packagings	 Manufactured diameters: 0,6 to 60mm Standard colour: transparent Other colours: availables on request Standard packaging: rolls (on request: in bobins or cut according to wished size) 	 Manufactured diameters: from 0,8 to 10mm Standard colour: yellow Other colours: green, blue, red, black, orange, yellow Standard packaging: bobbins diameter 0,8 to 1,5mm: 300m diameter 2 to 6mm: 200m diameter 7 to 10mm: 100m
Applications		

Sleevings		
Product name	SCS THT	SCS HT
Description	Fibre glass braid with silicone varnish	Fibre glass braid with silicone varnish
Characteristics	- Continuous working temperature: from -60°C to +260°C	- Continuous working temperature: from -60°C to +260°C
	- Peaks at: - 30 min at 800°C - 15 min at 1100°C - 1 min at 1500°C	- Peaks at: - 30 min at 800°C - 15 min at 1100°C - 1 min at 1500°C
	- Good resistance to: - presence of flames - projection of metals or melting glass - occasional very high temperature - projection of vapour	- Good resistance to: - presence of flames - projection of metals or melting glass - occasional very high temperature - projection of vapour
$\mathcal{K}/ $	- Excellent flexibility at low temperatures	- Excellent flexibility at low temperatures
	- Slight swelling can be caused by hydrocarbons	- Slight swelling can be caused by hydrocarbons
$ \longrightarrow $	- Good resistance to UV	- Good resistance to UV
$\varphi $	- Asbestos free	- Asbestos free
	- Fireproof	- Self-extinguishing
	- Watertight	- Watertight
	- Halogen free	- Halogen free
Standards	 Compliant with directive RoHS 2011/65/EU F1 and I2 according to the standards NF F 16-101/16-102 and STM S-001 HL1, HL2 and HL3 according to the railway standard EN45545 Answer to the aeronautic norm SAE AS1072 Allow the harnesses producers to pass the norm SAE AS1055 NF EN 60695-2-10 (05-2001) NF EN 60695-2-11 (07-2001) NF EN 60684-1 (10-2003) NF EN 60684-2 (07-2012) NF EN (CEI) 60684-3 sheets 400 to 402 (02/2003) 	- Compliant with directive RoHS 2011/65/EU - HL1, HL2 and HL3 according to the railway standard EN45545 - Answer to the aeronautic norm SAE AS1072 - NF EN 60695-2-10 (05-2001) - NF EN 60695-2-11 (07-2001) - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012) - NF EN 60684-2 (07-2012) - NF EN (CEI) 60684-3 sheets 400 to 402 (02/2003)
Colours and packagings	- Manufactured diameters: from 6 to 152mm - Standard colour: brick red - Standard packagings: bobbins and rolls	- Manufactured diameters: from 4 to 50mm - Standard colour: brick red - Standard packagings: bobbins or rolls
Applications	⊗⊖₽®®€&₽ €	S⊖≥®®®&⊌↓ €





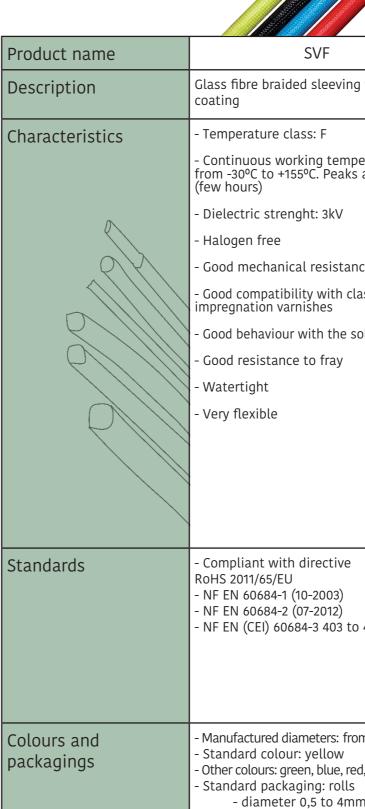
FAVIER

Sleevings



Product name	PVC	SE
Description	Glass fibre braided sleeving with PVC coating	Glass fibre braided sleeving
Characteristics	- Temperature class: B	- Temperature class: C
	- Continuous working temperature: from -20°C to +130°C. Peaks at +160°C	- Continuous working temperature: from -60°C to +450°C. Peaks at +550°C (few hours)
	- Dielectric streght: 3kV - Flammability: self-extinguishing	- Dielectric strenght: from 0.5kV to 1.5kV, depends on the thickness
\square	- Good mechanical resistance	- Flammability: non flamable
MO	- Resistant to transformer oils	- Low mechanical resistance
	- Good compatibility with class B impregnation varnishes	- Resistant to transformer oils
	- Good behaviour with liquid fuels: no decomposition	- Good compatibility with class C impregnation varnishes
/////9	- Watertight	- Good behaviour with the soldering iron: no retraction
	- Very flexible	- Good behaviour with liquid combustibles: no decomposition
/// 7		- Very flexible
		- Non watertight
Standards	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012) - NF EN (CEI) 60684-3 406 to 408 (02/2003)	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012)
Colours and packagings	 Manufactured diameters: from 0,5 to 14mm Standard colour: yellow Other colours: green, blue, red, black, orange, white Standard packaging: rolls diameter 0,5 to 4mm: 200m diameter 4,5 to 12mm: 100m diameter 14mm: 50m 	- Manufactured diameters: from 0,5 to 200mm - Standard colour: white - Standard packaging: rolls - diameter 0,5 to 4mm: 200m - diameter 5 to 12mm: 100m - diameter 14 to 20mm: 50m - diameter 22 to 100mm: 25m - diameter 100 to 200mm: 15m
Applications		$\textcircled{\begin{tabular}{c} \hline \begin{tabular}{c} \hline \begi$

Sleevings



- diameter 5 to 16mm
- diameter 18 to 26mn

Applications

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	13F7 AC UL		
g with acrylic	Glass fibre braided sleeving with acrylic coating		
	- Temperature class: F		
erature: at +180⁰C	- Continuous working temperature: from -30°C to +155°C.		
	- 60 days at 190°C (according to UL1441)		
	- 7kV minimum average, with no individual value below 5kv (according to UL1441)		
ass F	- Halogen free		
d55 F	- Good mechanical resistance		
oldering iron	- Good compatibility with class F impregnation varnishes		
	- Good behaviour with the soldering iron		
	- Good resistance to fray		
	- Watertight		
	- Very flexible		
	- Good oil resistance at 80ºC (according to UL1441)		
	- Pass the horizontal flame test (according to UL 1441)		
9 405 (12/2002)	- Compliant with directive RoHS 2011/65/EU - NF EN 60684-1 (10-2003) - NF EN 60684-2 (07-2012) - NF EN (CEI) 60684-3 403 at 405 (12/2002) - Homologation UL1441/CSA C22.2 Nº198.3 Grade A, acrylic coated fiberglass sleeving, 155°C, 600 Volts Oil resistance File No: UZFT2/8 - E503429		
om 0,5 to 26mm d, black, white m: 200m n: 100m m: 50m	 Manufactured diameters: from 0,5 a 25mm Standard colour: yellow Other colours: all colours Standard packaging: bobbins diameter 0,5 to 4,5mm: 200m diameter 5 to 14mm: 100m diameter 16 to 25mm: 50m 		



Sleevings

Sleevings		
Product name	SCS	SCS ALU
Description	Glass fibre braided sleeving coated with silicone rubber	Glass fibre braided sleeving coated with an aluminium silicone rubber
Characteristics	- Temperature class: C	- Temperature class: C
	- Continuous working temperature: from -60°C to +250°C. Peaks at +290°C (few hours)	- Continuous working temperature : from -60°C to +250°C. Peaks at +290°C (few hours)
	- Dielectric strenght: 1.5 to 15kV	- Flammability : self-extinguishing
\land	- Flammability: self-extinguishing	- Good mechanical resistance
Ko	- Good mechanical resistance	- Good resistance to UV
/////	- Good resistance to UV	- Resistance to transformer oils
1/1/1	- Resistant to transformer oils	- Good compatibility with same class impregnation varnishes
	- Good compatibility with class C impregnation varnishes	- Good behaviour with soldering iron
	- Good behaviour with soldering iron	- Good behaviour with liquid combusti- bles : no decomposition
	- Good behaviour with liquid fuels: no decomposition	- Good resistance to abrasion according to the standard ISO 6722
	- Halogen free	- Halogen free
	- Watertight	- Watertight
	- Very flexible	- Very flexible
		- Fireproof
Standards	 Compliant with directive RoHS 2011/65/EU F1 and I2 according to the standards NF F 16-101/16-102 and STM S-001 HL2/R22-R23 required, according to the railway standard EN45 545 NF EN 60695-2-10 (05-2001) NF EN 60695-2-11 (07-2001) NF EN 60684-1 (10-2003) NF EN 60684-2 (07-2012) NF EN (CEI) 60684-3 sheets 400 to 402 (02/2003) 	 Compliant with the RoHS directive Compliant with Reach regulation Compliant with the requirements of European regulations 118R03 EN (CEI) 60684-3 sheets 400 to 402 (02/2003) EN 60684-1 (10-2003) EN 60684-2 (07-2012) EN 60695-2 -11 (09/2014) Pass the flame retardant UL test UL1441/ VW1 (vertical test)
Colours and packagings	 Manufactured diameters: from 0,5 to 45mm Other colours: green, blue, red, orange, yellow, white, grey Standard packaging: rolls diameter 0,5 to 4mm: 200m diameter 4,5 to 12mm: 100m diameter 14 to 20mm: 50m diameter 22 to 45mm: 30m 	- Manufactured diameters: from 0.5 to 25mm - Standard colour: aluminium - Standard packaging: - diameter 0,5 to 4mm: 200m - diameter 4,5 to 12mm: 100m - diameter 14 to 20mm: 50m - diameter 22 to 45mm: 30m
Options	The reference SCS can be overbraided with fibre glass or polyester yarn and varnish with a varnish of our range.	_
Applications	SO&B@®89 () () () () () () () () () () () () () (Θ

Product name	SEP	SS
Description	Glass fibre braided sleeving with polyurethane varnish	Glass fibre braided sleeving impregnat silicone resin
Characteristics	- Temperature class: F	- Temperature class: C
	- Continuous working temperature: from -30°C to +155°C. Peaks at +185°C (few hours)	- Continuous working temperature: fro -60°C to +350°C. Peaks at +400°C (few hours)
	- Dielectric strength: 3 to 10kV	- Dielectric strength: from 0.5kV to 1.5
	- Hardness of the varnish: 60 Shore A	depends on the thickness
	- Halogen free	- Flammability: non flammable
	- Flammability: combustible, but the	- Good resistance to UV
	glass fibre stands - Good mechanical resistance	- Resistance to transformer oils
	- Good resistance to hydrocarbons	- Good compatibility with same class impregnation varnishes
\sim	- Resistance to transformer oils	- Good behaviour with soldering iron: retraction
	- Good compatibility with same class	- Good behaviour with liquid fuels: no decomposition
	- Good behaviour with soldering iron	- Flexible
	- Good behaviour with liquid fuels: no decomposition	- No watertight
	- Watertight	
	- Flexible	
Standards	 Compliant with RoHS directive Compliant with Reach regulation EN (CEI) 60684-3 sheets 409 (12/1999) EN 60684-1 (10/2003) EN 60684-2 (07-2012) UL flame retardant test approved (horizontal test) 	- Compliant with RoHS directive - Compliant with Reach regulation - EN 60684-1 (10-2003) - EN 60684-2 (07-2012)
Colours and packagings	 Manufactured diameters: from 0.5 to 40 mm Standard colour: light brown Other colours (only up to Ø20 mm): Green, blue, red, black, orange, yellow Standard packaging: diameter 0,5 to 4mm: 200m diameter 4,5 to 12mm: 100m diameter 14 to 20mm: 50m diameter 22 to 40mm: 25m 	 Manufactured diameters: from 0.5 to 50 mm Standard colour: light brown Standard packaging: diameter 0,5 to 4mm: 200m diameter 5 to 12mm: 100m diameter 14 to 20mm: 50m diameter 22 to 50mm: 25m
Applications		





FAVIER

Product name	IS	SHT
Description	Glass fibre braided sleeving with watery varnish impregnated	Glass fibre braided sleeving treated high temperature
Characteristics	- Temperature class: C	- Temperature class: C
	 Continuous working temperature: From 30°C to + 250°C. Peaks at +320°C Dielectric strength: from 0.5kV to 1.5kV, 	- Continuous working temperature: fror -60°C to +450°C. Peaks at +550°C (few hours)
<u>_</u>	depends on the thickness - Halogen free and without solvent	- Dielectric strength: from 0.5kV to 1.5kV depends on the thickness
	- Resistance to flame: Non flammable	- Flammability: non-flammable
MA	- Good resistance to thermal shocks	- Low mechanical resistance - Resistant to transformer oils
	- Resistance to transformer oils - Good compatibility with same class	- Good compatibility with same class impregnation varnishes
/////	impregnation varnishes - Good behaviour with soldering iron, no retraction	- Good behaviour with soldering iron; n retraction
	- Good behaviour with liquid combusti- bles: no decomposition	- Good behaviour with liquid combusti- bles: no decomposition
	- Very flexible	- Very flexible
		- Non watertight - Heat treated sleeving which does not leave any organic deposit
Standards	 Compliant with RoHS directive Compliant with Reach regulation EN 60684-1 (10/2003) EN 60684-2 (07-2012) Flame retardant test approved UL/VW-1, vertical tes 	- Compliant with RoHS directive - Compliant with Reach regulation - EN 60684-3 sheet 300 (02/2003) - EN 60684-1 (10-2003) - EN 60684-2 (07-2012)
Colours and packagings	 Manufactured diameters: 0.5 to 70 mm Standard colour: black Other colours: green, blue, red, orange, yellow, white Standard packaging: diameter 0,5 to 4mm: 200m diameter 4,5 to 12mm: 100m diameter 14 to 20mm: 50m diameter 22 to 70mm: 30m 	 Manufactured diameters: from 0.5 to 70 mr Standard colour: silver white Standard packaging: diameter 0,5: 400m diameter 0,8 to 1,5mm: 300m diameter 2 to 4,5mm: 200m diameter 5 to 12mm: 100m diameter 14 to 20mm: 50m diameter 22 to 30mm: 25m
Options	ISx2 : Reference IS + Glass fibre overbraided with watery varnish impregnated	-
Applications		

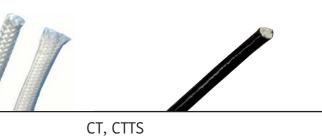
Gaskets

Product names	
Composition	- CT: Glass fibre braid
	- CTTS: Glass fibre bi core coating with si
Standards	- Compliant with dir - Compliant with Re - EN 60695-2 (07-200 - EN 60695-2 -11 (07-2
Colours and packagings	- Manufactured diar - Standard colours: v - Other colours (CTT - Standard packagin
Applications	

CHARACTERISTICS

CHARACTERISTICS
Class of temperature
Minimum temperature
Maximum temperature
Peaks at
Compressibility
Flammability
Mechanical resistance
Flexibility
Resistance to UV
Resistance to soldering iron
Watertight
Resistance to chlorydric and sulphuric acids at 8
Resistance to condensates during the combustic various gases





ided sleeving around glass fibre knitted rope with a core

braided sleeving around glass fibre knitted rope with a silicone rubber

lirective RoHS Reach regulation 201) 7-2001)

ameters: on request : white (CT), black (CTTS) ITS): green, blue, red, orange, yellow, white, grey ing: bobbins



	СТ	CTTS
	С	С
	-60°C	-60°C
	+450°C	+250°C
	+550°C	+300°C
	-	80 %
	Unflammable	Self-extinguishing
	Good	Good
	No	Yes
0°C	Good	Good
on of fuel or	Good	Good

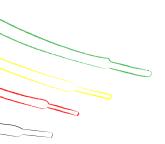


SUMITUBE® Single Wall Polyolefin

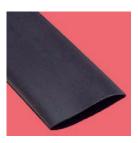




Product name	SUMITUBE™ A	SUMITUBE™ A11
Description	The Sumitube® A is used in a wide comercial range of applications. The Sumitube® A is halogen free.	The Sumitube® A11 is used in a wide comercial range of applications. The Sumitube® A11 is halogen free.
Standards	ASTM, FMVSS 302, JIS C 2133	ASTM, FMVSS 302, JIS C 2133
Operating temperature	-55 to 105°C	-55 to 105°C
Orderable Sizes	1,20 - 76,2mm	2,40 - 27,0mm
Shrink ratio	2:1	2:1
Available colors	Clear	Clear



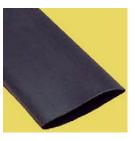




Product name	SUMITUBE™ A2	SUMITUBE™ B11
	SOMITOBE AZ	SOMITOBE BIT
Description	The Sumitube® A2 is a flexible polyolefin halogen free tubing. Good insulation and chemical properties. SAE-AS and VG certified.	Commercial flame retardant, flexible poly- olefin tubing. Versatile and suitable for a wide range of industrial applications.
Standards	VG 95343 T 05 B " VG-approved" (VDE V 0341- 9005), VDE-File-No. 088218, SAE-AS23053/5 class 2, VDE-File-No. 40038285	ASTM
Operating temperature	-55 to 135°C	-55 to 125°C
Orderable Sizes	1,20 - 101,6 mm	1,20 - 101,6 mm
Shrink ratio	2:1	2:1
Available colors	Clear	Black, blue, green, red, white and yellow. Brown and grey (B1)



SUMITUBE® Single Wall Polyolefin





Product name	SUMITUBE™ B11 (3x)	SUMITUBE™ B2
Description	Commercial flame retardant, flexible poly- olefin tubing. Versatile and suitable for a wide range of industrial applications.	The Sumitube® B2 is a very flexible, highly flame retardant , high grade polyolefin tubing. Meets the requirements of a wide range of industrial and high-tech standards.
Standards	ASTM	CSA C 22.2 No. 198.1: 125°C 600V VW-1 (File No. 033298-0-000), SAE-AS23053/5 class 1&3, UL 224 125°C 600V VW-1 (File No. E48762)
Operating temperature	-55 to 125°C	-55 to 135°C
Orderable Sizes	3,0 - 24,0mm	1,20 - 101,6 mm
Shrink ratio	3:1	2:1
Available colors	Black	Black, Brown, Red, , Yellow, Green, Blue, Gray, White, Yellow/Green





Product name		SUMITUDE™ F2 (7)
	SUMITUBE™ B2 (3x)	SUMITUBE™ F2 (Z)
Description	The Sumitube® B2(3x) is a very flexible, highly flame retardant , high grade polyolefin tub- ing. Meets the requirements of a wide range of industrial and high-tech standards.	Very flexible highly flame retardant poly- olefin tubing. UL and CSA recognised and marked. Low shrink temperature.
Standards	CSA C 22.2 No. 198.1: 125°C 600V VW-1 (File No. 033298-0-000), UL 224 125°C 600V VW-1 (File No. E48762)	ASTM, CSA C 22.2 No. 198.1: 125°C 600V VW-1 (File No. 033298-0-000), UL 224 125°C 600V VW-1 (File No. E48762)
Operating temperature	-55 up to 135°C	-55 up to 125°C
Orderable Sizes	1,50 - 40,0 mm	1,20 - 50,8 mm
Shrink ratio	3:1	2:1
Available colors	Black	Black





SUMITUBE® Single Wall Polyolefin





Product name	SUMITUBE™ B55	SUMITUBE™ NH
Description	Very flexible light weight polyolefin tubing. Halogen free and flame retardant according to automotive standard. Specially designed to meet the requirements of the automotive industry. Nevertheless very versatile.	Halogen free flame retardant flexible polyolefin tubing. Low smoke index to meet strict fire security standards in electrical insulation and protection in public areas.
Standards	ASTM, FMVSS 302	ASTM, BS 6853, BSS 7239 Boeing Specifica- tion Support Standard, Japanese Standard for railway vehicle material, LUL. Stand. E 1042. A6, EN45545-2, IEC 60684-3-216
Operating temperature	-70 up to 135°C	-40 up to 105°C
Orderable Sizes	1,20 - 127,0 mm	1,60 - 50,8 mm
Shrink ratio	2:1	2:1
Available colors	Black	Black







Product name	SUMITUBE™ O2	SUMITUBE™ W5B11
Description	The Sumitube® O2 is a halogen free, dual wall polyolefin tubing. Flexible with inner wall of hot melt adhesive. It was developed specifi- cally for the needs of the automotive industry and has excellent protection against corrosion of brake and fuel lines.	Flame retardant dual wall polyolefin tubing. Flexible with inner wall of hot melt adhe- sive. Suitable for electrical applications where good longitudinal water tighness is needed.
Standards	ASTM D 2671, ISO 37, JASO M 104, JIS C 3005	ASTM
Operating temperature	-55 to 105°C	-55 up to 110°C
Orderable Sizes	6,00 - 11,0 mm	3,00 - 40,0 mm
Shrink ratio	-	3:1
Available colors	Black	Black



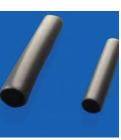


SUMITUBE® Dual Wall Polyolefin





Product name	SUMITUBE™ W5B11 (4x)	SUMITUBE™ W5C
Description	Flame retardant dual wall polyolefin tubing. Flexible with inner wall of hot melt adhesive. Suitable for electrical applications where good longitudinal water tighness is needed	Flexible polyolefin halogen free tubing with inner liner of hot melt adhesive. Transparent colour enables visual inspection of substrate.
Standards	ASTM	ASTM
Operating temperature	-55 up to 110°C	-55 up to 105°C
Orderable Sizes	4,00 - 32,0 mm	3,2 - 40,0 mm
Shrink ratio	4:1	3:1
Available colors	Black	Clear



Product name	SUMITUBE™ SA3CP
Description	Semi-rigid, heat-shrinkable tubing with a thick, hot-melt adhesive liner which melts and flows, encapsulating and sealing components contained within.
Standards	ASTM
Operating temperature	-40 up to 125°C
Orderable Sizes	5,75 - 18.3 mm
Shrink ratio	4:1
Available colors	Black





SUMITUBE® Elastomer





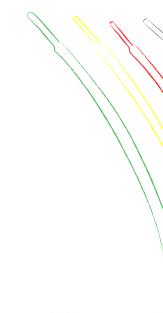


Product name	SUMITUBE™ AN25	SUMITUBE™ R10
Description	AN25 is a heat shrinkable tubing made of cross-linked elastomeric material. It is flexible, flame retardant, abrasion- fluid- and Diesel resistant. Suitable for high tempera- ture applications up to 150°C and long therm solutions.	SUMITUBE R10 is a rubber-like, flame retarded chlorinated polyolefin heat-shrink- able tubing. It's recommended for general purpose applications which require ex- cellent abrasion and chemical resistance, such as diesel fuel environments. R10 has excellent properties at low temperatures.
Standards	VG 95343 T 05 D "VG-approved" (VDE V 0341-9005), VG 95343-14, VG 95343-2, VDE- File-No. 088218, SAE-AS23053/16	23053/1-101, 23053/1-201
Operating temperature	-75 up to 150°C	-75 up to 120°C
Orderable Sizes	3,20 - 102,0 mm	3,20 - 101,6 mm
Shrink ratio	2:1	2:1
Available colors	Black	Black



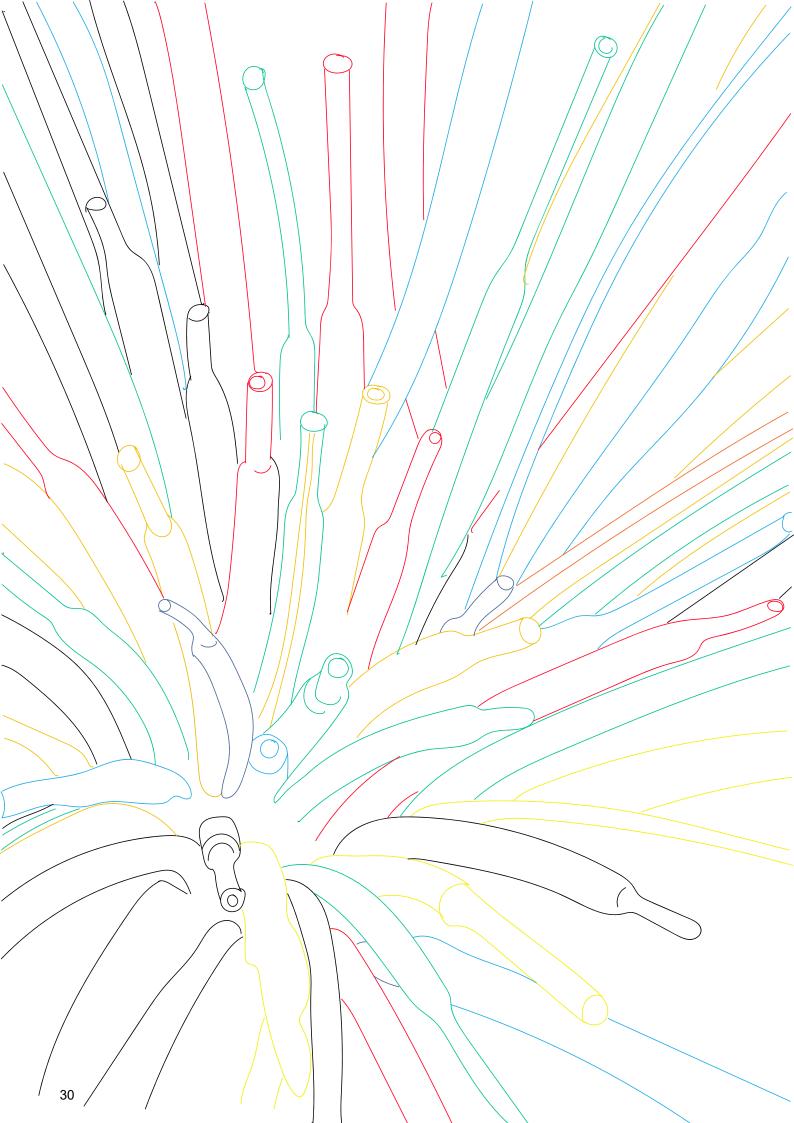


Product name	SUMISEAL	
Description	Halogen free crimp sealed tubing. Three colour coded sizes, excellent strain relief solvent and moisture resistant, visually inspectable, good physical and electrical properties.	
Standards	ASTM	
Operating temperature	-40 up to 105°C	
Orderable Sizes	3.2 (Red), 4.8 (Blue) and 6.4 (Yellow)	
Shrink ratio	1:1	
Available colors	Red, blue and yellow	









CTX Cable Ties – Polyamide 66



APPLICATIONS AND PROPERTIES

Application/s To clamp, hold, join cables or cable harnesses, pipes or any element that needs to be protected by clamping. Being an element universal are present in several sectors complying with all the necessary requirements, from automotive, marine, electrical, ventilation/heating, pneumatics etc.

Our CTX flange has all the regulations to be a quality guarantee. We have the UL, RoHS, CE approvals and has a temperature of work from -20° to +85°. The black color has a natural protection against ultraviolet rays that will vary depending on the different environmental effects to which the clamp is subjected.

(INTUBEX s.L.

Characteristics

Measurement table						
Item code		diameter /max	Loop tensile Operating te min/r			Amount of cable ties by box
2.5x100	2 (0.079)	23 (0.905)	80(18)	-20	85	50.000
2.5x150	3 (0.079)	39 (1.535)	80(18)	-20	85	50.000
2.5x200	2 (0.079)	55 (2.165)	80(18)	-20	85	25.000
3.6x150	3 (0.118)	63 (2.185)	180 (40)	-20	85	10.000
3.6x200	63 (2.185)	72 (2.845)	180 (40)	-20	85	10.000
3.6x300	3 (0.118)	83 (3.268)	180 (40)	-20	85	10.000
3.6x370	3 (0.118)	106 (4.173)	180 (40)	-20	85	10.000
4.8x200	3 (0.118)	50 (1.969)	220 (50)	-20	85	10.000
4.8x250	3 (0.118)	65 (2.559)	220 (50)	-20	85	10.000
4.8x300	3 (0.118)	83 (3.268)	220 (50)	-20	85	10.000
4.8x350	3 (0.118)	99 (3.898)	220 (50)	-20	85	10.000
4.8x400	3 (0.118)	115 (4.528)	220 (50)	-20	85	10.000
4.8x450	3 (0.118)	130 (5.118)	220 (50)	-20	85	5.000
7.2x300	4 (0.157)	82 (3.228)	530 (120)	-20	85	5.000
7.2x350	4 (0.157)	98 (3.858)	530 (120)	-20	85	5.000
7.2x400	4 (0.157)	114 (4.488)	530 (120)	-20	85	5.000
7.2x450	4 (0.157)	130 (5.118)	530 (120)	-20	85	2.500
7.2x530	4 (0.157)	156 (6.142)	530 (120)	-20	85	2.500
7.8x750	4 (0.157)	163 (6.6.278)	530 (120)	-20	85	2.500
9x550	8 (0.315)	153 (6.024)	800 (175)	-20	85	2.500
9x750	8 (0.315)	219 (8.622)	800 (175)	-20	85	1.000
12.6x650	18 (0.709)	185 (7.283)	1200 (250)	-20	85	1.000
12.6x900	18 (0.709)	260 (10.236)	1200 (250)	-20	85	1.000

CTX 304/316 Stainless Steel Cable Ties



APPLICATIONS AND PROPERTIES

Application/s	Characteristics
CTX stainless steel cable ties are designed for appli- cations where a solid hold is required no matter the conditions are thanks to his closing mechanism and secure that it does not come loose even under vibration. Therefore, these clamps are indicated in all those appli- cations where safety is the first priority.	 Unique ball locking mechanism that alloweasily and quickly installed and not undone High tensile strengh. Non flammabilty Working temperature from -60° to 550° High resistance to acetic acid, alcali acid, sulphuric acid, corrode, etc. All lenghts available Stainless Stell type 304 or 316

	Measurement table							
Part number	Width (mm)	Lenght (mm)	Thickness (mm)	(mm) Max.bundle dia	Tensile Strength			
4.6 x 100		100		23				
4.6 x 150		150		37				
4.6 x 200		200		50				
4.6 x 250		250		63				
4.6 x 300	4.6	300	0.25	76	80KGS (800N)			
4.6 x 350	0	350		89				
4.6 x 400		400		102				
4.6 x 450		450		115				
4.6 x 500		500		128				
4.6 x 550		550		141				
7.9 x 150		150		37				
7.9 x 200		200		50				
7.9 x 250		250		63				
7.9 x 300	7.9	300	0.25	76	100KGS (1000N)			
7.9 x 350		350		89				
7.9 x 400		400		102				
7.9 x 500		500		128				
7.9 x 1000		1000		286				
7.9 x 1200		1200		350				



Gx.

CTX 304/316 Stainless Steel Cable Ties

	Measurement table							
Part number	Width (mm)	Lenght (mm)	Thickness (mm)	(mm) Max.bundle dia	Tensile Strength			
10 x 200		200		50				
10 x 300		300		76				
10 x 400	10	400	0.25	102	1000KGS (1000N)			
10 x 500		500		128				
10 x 1000		1000		286				
10 x 1200		1200		350				
12 x 200		200		50				
12 x 250		250		63				
12 x 300	12	300	0.25	76	120KGS (1000N)			
12 x 400		400		102				
12 x 500		500		128				
12 x 1200		1200		350				
15 x 300		300		76				
15 x 400	15	400	0.4	102	150KGS (1500N)			
15 x 500		500	0.4	128				
15 x 1000		1000		286				
19 x 800		800		223				
19 x 1000	. 19	1000		286				
19 x 1200		1200	0.4	350	150KGS (1500N)			
19 x 1500		1500		445	1301(03 (130014)			
19 x 1800		1800		540				
19 x 2000		2000		605				



CTX Wall Plug Base - Polyamide 6



APPLICATIONS AND PROPERTIES

Application/s	Characteristics
Specially designed for fixing by Nylon ties. For the installation of water pipes, electricity, gas, heating, pneumatic, air conditioning, etc.	High thermal resistance (from -40 to +80 degrees). Its great resistance allows very safe installations. Quick and easy to install, just drill and tap the plug with a hammer, pass the flange through the hole and place the tube. Made of Polyamide 6 (Nylon).

Measurement table						
A B C D Ø Drill Container Packing						Packing
9.75 37 6.5 9.7 8 100 5.000						5.000
7.80	31	6.2	9.7	6	100	5.000

Measurements in (mm.)



Poliamide



Extreme temperatures



Patent model

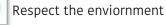




Sound protection









Compliant



PAK A Halogen free







CTX Products Branded CTX Aluminum Foil Tapes

DESCRIPTION

Due to a long history in the market, CTX aluminum tapes have established themselves as one of the main references in the air conditioning and insulation sector. We have a wide range of standard sizes and we offer the possibility of presenting them in different widths, lengths and microns according to the needs of the client in standard color, black and white and in reinforced from 120 microns. The standard colors are bright and matt aluminum.

CTX 30mic Aluminum Foil Tape



TECHNICAL DATA				
Product description	Features	Areas of Use		
CTX Aluminum Foil Tape is a 30u nominal soft aluminum foil with acrylic adhesive and protected.	- Excellent Peel Adhesion - Good Initial Tack & Permanent Bonding - Flame retardant - Water resistant - Outstanding high temperature resistance & Aging Resistance	To tape serpentine, tube insu- lation, fix freezer plate, in Evap assembly group.		

	TECHNICAL PROPERTIES	
Characteristic	Unit	Value
Width	mm	30-40-50-75-100-125-160-165-175- 200-210-225-235-290-400-500
Color	-	Silver
Backing	-	Aluminum foil
Adhesive Type	-	Water based acrylic
Backing Thickness	micron	30
Total Thickness	micron	70
Adhesion to steel	N/25mm	Min 40
Tensile strength	N/25mm	Min 40
Elongation at break	%	5
Temp. resistance	oC	about - 30 < T < 120



CTX Aluminum Foil Tapes

Reinforced Aluminum Foil Tape



TECHNICAL DATA				
Product description	Features	Areas of Use		
Reinforced Aluminum Foil Tape is a 120u nominal soft aluminum foil with water based adhesive and protected by easy release liner.	 Excellent Peel Adhesion Good Initial Tack & Permanent Bonding Flame retardant Water resistant Outstanding high temperature resistance & Aging Resistance Consistent with the appearance of the veneer Higher tensile strength than pure Alu- minum foil tape More stiff, and not easy to curl. 	To tape serpentine, tube insu- lation, fix freezer plate, in Evap assembly group.		

	TECHNICAL PROPERTIES	
Characteristic	Unit	Value
Width	mm	30-40-50-100-125-160-165-175- 200-210-225-235-290-400-500-1000- 1200-1350
Color	-	Silver
Backing	-	Aluminum foil
Adhesive Type	-	Water based adhesive
Backing Thickness	micron	70
Total Thickness	micron	120
Adhesion to steel	N/25mm	25
Tensile strength	N/25mm	75
Tack Rolling Ball	cm	≤20
Elongation at break	%	15
Temp. resistance	oC	about 20 < T < 95
Use Temperature	oC	20< T < +120



CTX PVC Electrical Tapes



DESCRIPTION

As distributors of Advance Tapes UK for more than 30 years, we take great care that all our imported material is guaranteed with the same quality as our main companies but with competitive and affordable price, adapting to the demands of the sector. This is why our PVC tape has been present in the Spanish and Portuguese markets for years with total fidelity and a permanent stock due to its continuous demand. We have all colors including violet and pink.

TECL	

FeaturesUses- Good insulation with a working temperature of -5° a 70°
- Standard thickness of 0,13 mm with a 150%
of elongation
- Nautal resistance to voltage, flame and cold
- Soft material and easy to use.Widely used for wire and cable insulation.

TECHNICAL PROPERTIES						
Total thickness	Peel force	Back peel force	Tensile force	Elongation	Dielectric Strength	
(mic)	(N/cm)	(N/cm)	(N/cm)	%	(KV)	
120	1.4	1.4	18	150%	4.8	
130	1.4	1.4	20	150%	5.2	
150	1.4	1.4	22	170%	6.0	
180	1.4	1.4	24	190%	7.2	
200	1.4	1.4	25	190%	8.0	



Tx.

CTX Self Amalgamating Tape



TECHNICAL DATA

Description	Uses
CTX self-amalgamating tape (0.76mm) is a rubberized tape that can adhere to itself without heat or adhesive providing an easy installation.	Used for cable splicing and cable termination kit, for cable insulation and repair, waterproof and dustproof.

TECHNICAL PROPERTIES					
Test item	Data				
Thickness (mm)	0.76				
Strength (KN/M)	0.5				
Elongation (%)	500				
Applicable voltage (kV)	10				
Self fusing	pass				
Temp Range (°C)	80				
Emergency temp (°C)	100				

Remarks: Note that the above table represents the normal/standard levels of quality testing currently utilized.



Tx.

CTX Packaging Polypropylene Tape



DESCRIPTION

Polypropylene with or without noise and with the possibility to customize the tape to suit the client under request. The standard colors are clear, brown and white, in widths of 48 mm and in lengths of 66/132 meters.

TECHNICAL DATA					
Product description	Features	Areas of Use			
BOPP BROWN TAPE is a 40 nominal soft BOPP film with acrylic adhe- sive. It is widely used in packing. The performance is steady.	- Strong Adheisve - Good Tensile Strength - Wrapped Tight - High Tack Performance	Packing and fixing.			

	TECHNICAL PROPERTIES				
Characteristic	Unit	Value			
Color	-	Clear			
Tack	#	Max 20			
Liner	-	-			
Adhesive Type	-	Water based acrylic			
Glue Thickness	micron	Min 15			
Backing Thickness	micron	Min 25			
Total Thickness	micron	Min 40			
Tensile Strength	N/cm	Min 20			
Elongation at Break	%	Max 5			
Heat Resistance	°C	- 10< T < 80			
Storage Temperature	°C	0< T < 45			
Application Temp	°C	-			
Lead Content	PPM	-			
Cohesion	h	Min 24			
Cohesion(70°C)	h	-			
Cohesion(23°C/24h)	mm	-			
Peel adhesion	N/cm	2< T < 4			
ROHS Compliance	-	-			
REACH Compliance	-	-			

CTX Aluminized Polypropylene Tape



TECHNICAL DATA						
Features	Applications	Storage				
- Adhesive tape with bi-ori- ented polypropylene back- ing and water-based acrylic adhesive. - Color: metallic gray	It is used to wrap cables in air conditioning installations and to bundle aluminum coated panels. In some cases it replaces the aluminum tape due to its charac- teristic of impermeability to steam and resistance to low and high temperatures. Also used for the most usual dec- orations such as gift packages, decorations of Christmas, acces- sories in theater sets, etc	It is recommended that you limit storage up to 6 months to ensure excellent per- formance. Store preferably between 14 and 28°C. Avoid humidity.				

TECHNICAL PROPERTIES

Backing	Polypropylene
Adhesive Type	Water based acrylic
Total Thickness (mm)	48
Adhesive Grammage (gr/m2)	20
Adhesion (N/cm)	2,4
Breaking Load (N/cm)	40
Elongation (%)	110

Remarks: The values shown are the results of tests carried out during our production and are subject to change without notice. Therefore, they do not constitute a reason for commitment on the part of our company.



CTX Masking Tape



TECHNICAL DATA						
Description	Features	Uses				
Like the packaging tape, the masking tape has been gaining strength till becoming one of the most demanded tapes. Thanks to his versatility and universal pres- ence allow us to offer a continu- ous rotation. We stand out above all his good tac and fidelity about no leaving residues on the surface (up to a week).	 Semi-Krepp Paper Adhesive Tape Solvent adhesive with natural rubber Working temperature of 60° or 80° Available colors: yellow and white To guarantee all his qualities we recommend storage it between 14°-28° avoiding humidity 	Tape destined to packaging and masking of internal surfaces.				

CTX - Sumi Butt Splice Heat Shrink Connectors



DESCRIPTION

CTX SUMI connectors are produced with a copper crimping barrel and two-layer, semi-rigid, heat-shrinkable polyolefin tubing. The crimp barrel connects the electrical wires when they are crimped, while the tube insulates the wires. Hot melt adhesive is coated on the inside wall of the two-layer tube so that the adhesive melts and fills the space between the corrugated cylinder and the wire when the tube shrinks. Due to the above feature, CTX SUMI can be used to connect electrical cables protecting the cable joint from water, dust and other unwanted external influences. Furthermore, connecting cables with this product makes cable jointing smoother, more compact and more reliable than conventional tape-based waterproofing processes.

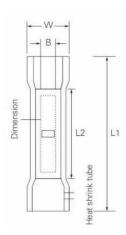


TX.

CTX - Sumi Butt Splice Heat Shrink Connectors

Features

100% waterproof, excellent fluid resistance
Very high abrasion resistance
Operating temperature: -55°C to +125°C
Minimum shrink temperature: 110°C
Color: Red, Blue, Yellow
Shrink ratio: 3:1



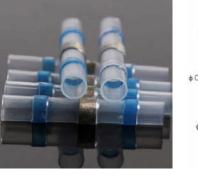
TECHNICAL PROPERTIES					
Property	Test Method	Typical Data			
Tensile Strength	ASTM D 2671	28MPA (min)			
Elongation at back	ASTM D 2671	500% (min)			
Longitudinal Shrinkage	UL 224	0 to -10%			
Heat Shock	250°C/4hrs	No cracking, Flowing of out wall			
Heat Resistance	165°C/168hrs	No cracking, Flowing of out wall			
Cold Bend (-40°C/1hr)	ASTM D 2671	No cracking			
Voltage Withstand (AC 2500V, 60sec.)	ASTM D 2671	No breakdown			
Volume Resistivity	ASTM D 876	10 ^{14cm (min)}			
Copper Corrosion	UL 224	Pass			
Water Absorption	ASTM D 570	≤0.5%			
Fluid Resistance (23°C/24hrs)	ASTM D 2671	Good to excellent			
Specific Gravity	ASTM D 792	1.01g/cm3			
Tensile Strength	ASTM D 2671	28MPA (min)			

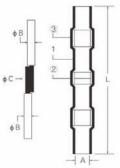
	Lead Section	(m	m)	(m	m)		
AWG	mm2	В	L2	W	L1	Color	Description
20-22	0.3-0.5	1.0	12	3.0	26.0	Yellow	Heat Shrinkable: PE
22-18	0.5-1.0	1.2	15	4.8	26.5	Red	
16-14	1.5-2.5	2.4	15	5.8	26.5	Blue	Brass Material: copper
12-10	4.0-6.0	3.6	15	6.8	41.5	Yellow	



TX.

CTX - SWT Solder Sleeve Wire Splieces





Heat shrinkable tubing
 Low temperature solder sleeve
 Waterpoof hot melt adhesive

TECHNICAL DATA				
Description	Features			
CTX SWT connectors are designed for splicing bare or tinned copper stranded wires rated for at least +85°C. The SWT insulation is made from polyolefin tubing with 2 color coded hot melt adhesives. The rings will melt and flow to seal and encapsulate the internal components, offering environmental protection. Available in 4 sizes and colors.	- Material: Tinned Copper - Colors: Red, Blue, White, Yellow - Operating frequency: Low frequency - Production process: WeldingInsulator material: Nylon - Category: Line to line - Features: Waterproof/Insulated - Operating temperature: -55°C ~ 105°C - Start shrink temperature: 60°C - Solder start melting temperature: 138°C - Solder completely melting temperature: 158°C			

AWG	Lead mm2	(m A (min)	m) L (min)	B (min)	(mm) B and C (min)	C (min)	Color	Description
26-24	(0.25-0.34)	1.7	26.0	1.0	1.7	0.8	White	
22-18	(0.5-1.0)	2.7	40.0	1.4	2.7	1.2	Red	D Heat shrinkable tubing
16-14	(1.5-2.5)	4.5	40.0	2.3	4.5	2.0	Blue	Low temperature solder sleeve Waterproof hot melt adhesive
12-10	(4.0-6.0)	6.0	40.0	3.7	6.0	3.4	Yellow	

CTX - Tibu Brass Crimp Electrical Connector

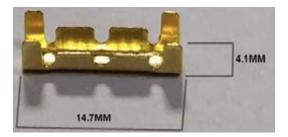
Description	Fe
en brass terminal for cable	Mate

Golden brass terminal for cable splices, for crimping and for cable sections 0.5 - 1.5mm2 and 1.5mm2 to 2.5mm2. Protect it with heat shrink.

eatures

Material: Brass Color: Golden - Pickling on the surface layer to prevent oxidation. - Easy to use. Durable in use.

SIZE	Cable	Length		Width	
	Section	Inch	mm	Inch	mm
TIBU-1,5	0,5-1,5mm2	0.58	14.7	0.16	4.1
TIBU-2,5	1,5-2,5mm2	0.6	15.3	0.25	6.4







Codalec NBR Adhesive Foam Tape



DESCRIPTION

Thought for the insulation and protection of pipes, tanks or valves, our 3 mm closed cell NBR foam tape guarantees its function in industrial cold and air conditioning installations with easy installation and handling (allowing it to be cut by hand) saving time to installers. The thermal insulation guarantees the correct compliance about the Regulation on Thermal Installations in Buildings (RITE). Available in black and white colors and in rolls of 10, 15 and 30 meters.

	TECHNICAL DATA	
Utilities	Available sizes	Color
The tape is used as thermal insulation and combines a high resistance factor to the diffusion of water vapor and to the low spread of the flame due to its easy installation. It is used as an anti-drip bandage and taping of copper tubes in elbows and difficult areas.	(Others can be valued) 50mm x 10 meters 50mm x 15 meters 50mm x 30 meters	Black

Features	Reference value	Proof test
Vapor Diffusion Resistance Factor water (μ)	≥7000	EN 13469/EN 12086
Water vapor permeability	0.07 μgm/Nh	BS4370:Part 2
Water absorption	< 0,1 kg/m2	EN 13472/ EN 1609
NBR foam tape with flexible thermal in- sulation and reticular acrylic adhesive of approximately 4x1mm.	-	-
Working temperatures from -50° to 105°	-	-
Resistance to water vapor diffusion	-	-
Flame resistance M-1	-	-
Acoustic protection		-





Codalec Adhesive Polypropylene Spun Bond Tape



DESCRIPTION

For self-supporting ducts with exposed aluminum exterior at sight, ensuring the duct's watertightness and the perfect and permanent adhesion of the tape to the duct. Designed for applications with temperatures above 0°C and specially designed for joining glass wool. Odorless, non-toxic and non-flammable. Vinyl adhesive in aqueous dispersion.

TECHNICAL PROPERTIES

Description	Polypropylene non-woven tape (black fliselin)	
Adhesive Type	Modified acrylic	
Protector	Havana silicone paper	
Backing	Polypropylene non-woven fabric	
Thickness	0,42mm	
Adhesive Force (Aphera 5001)	15N/25mm	
Temperature Range	-30°C + 100°C	
Applications	Indicated as soundproofing in the automotive industry and joints.	

RECOMMENDATIONS	NOTE
Keep the material in the original packaging, in a dry envi- ronment, away from sunlight and 50% relative humidity. Check before application that the surfaces are dry, clean and free of fats, oils or other substances.	The values of the products mentioned above are based on tests standards applicable to adhesive tapes and do not constitute a specification.
	Under stable conditions of temperature (between 10 – 35 $^{\circ}$ C) and relative humidity of 50% the product maintains its properties for 12 months from the date of expedition.
	It is the customer's responsibility to determine the suitability of the product by their own methods and tests, required for the final article.





Cable Ties

Codalec PA 66 Cable Ties Standard





DESCRIPTION

High quality PA 66 cable ties with Codalec brand guaranteeing the raw material origin exposed in the below technical square.

TECHNICAL PROPERTIES				
		Material	Material Brand	
	Natural	100% Polyamide 6.6 nat- ural	Dupont Zytel 101F, 101L, As- cend Vydyne 21SPC, 21SPF	
Color	Black	Polyamide 6.6 natural+ ~1% carbon black	Dupont Zytel 101F, 101L, As- cend Vydyne 21SPC, 21SPF + Dupont Zytel 105BK, Ascend Vydyne 25WSP	
	Another colors	Polyamide 6.6 natural+Col- orant	Dupont Zytel 101F, 101L, As- cend Vydyne 21SPC, 21SPF	
Flammability of raw material		UL 94 - V2, Plenum Rated AH-2 (Low Smoke)		
Humidity absorption		2,7% - 2,8% (23°C - 50% R.H.)		
Installation	temperature	-20° C ÷ +85° C		
Working te	emperature	40° C ÷ +85° C		
Max. sustainable temperature for short time		+110°		
Good resistance to		Bases, oils, greases, oil derivates, chloride solvents. Limited resistance to acids. Not resistant to phenols.		
UV Resistance		Carbon black addiction gives a better UV resistance (only for black color cable ties).		





CINTA ADRESIVA CODALEC

Cloth Duct Tape - High Grade - CDA132



Product Description	Features
Mesh 27 Black / Grey / Brown cloth backing, combined with a high performance synthetic rubber-resin adhesive.	 Cloth backing provides excellent reflection of both heat and light. High quality adhesive with super strong adhesion and holding power offers reliable Low moisture vapor transmission rate makes CDA132 an excellent vapor barrier. Service Temperature range from -20° to +80°C (-4° to +176°F).

TECHNICAL PROPERTIES				
Properties	Metric	English	Test method	
Cloth Backing	Mesh	27	-	
Total Thickness	170 Micron	6.8/ Mil	PSTC-133	
Peel Adhesion	15 N/25mm	54 Oz./In.	PSTC-101	
Rolling Tack (11mm ball)	≤ 20 cm	≤ 8.0 In.	PSTC-106	
Tensile Strength	75 N/25mm	17 Lb/in	PSTC-131	
Service Temperature Ranger	-20° +80°C	-4 ~ +176 °F	-	

PRODUCT FORM & SIZE AVAILABLE				
Cut Roll	Log Roll	Jumbo Roll		
25mm / 48mm / 50mm (2") / 60mm / 63mm (2.5") / 72mm / 75mm (3") / 96mm / 100mm (4").	1060mm x 50m	1060mm x 1000m		

Storage & Shelf life	Surface Preparation	Product use	Limited warranty & Limited remedy
One year when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight.	It is essential, as with all pressure-sensitive tapes, that the surface to which the tape is applied must be clean, dry, free of grease, oil or other contaminants.	It is essential that the user evaluate the product to determine whether it is fit for a particular purpose and user's method of appli- cation. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on prod- uct between +10 ~ +40°C (+50 ~ +105°F)	Your exclusive remedy & obligation shall be, at our tape's option, to replace or repair the product or refund the purchase price of the Cintubex product.



CINTA ADRESIVA CODALEC

Cloth Duct Tape - High Grade - CDA175



Product Description	Features
Mesh 50 Black / Grey / Brown cloth backing, combined with a high performance synthetic rubber-resin adhesive.	 Cloth backing provides excellent reflection of both heat and light. High quality adhesive with super strong adhesion and holding power offers reliable a Low moisture vapor transmission rate makes CDA175 an excellent vapor barrier. Service Temperature range from -20° to +80°C (-4° to +176°F).

TECHNICAL PROPERTIES			
Properties	Properties Metric		Test method
Cloth Backing	Mesh	50	-
Adhesive Thickness	80 Micron	3.2/ Mil	PSTC-33
Total Thickness	230 Micron	9.2/ Mil	PSTC-33
Peel Adhesion	16 N/25mm	57 Oz./In.	PSTC-1
Rolling Tack (11mm ball)	≤ 10 cm	≤ 4.0 ln.	PSTC-6
Service Temperature Ranger -20° +80°C		-4 ~ +176°F	-

PRODUCT FORM & SIZE AVAILABLE			
Cut Roll Log Roll Jumbo Roll			
25mm / 48mm / 50mm (2") / 60mm / 63mm (2.5") / 72mm / 75mm (3") / 96mm / 100mm (4").	1060mm x 50m	1060mm x 1000m	

Storage & Shelf life	Surface Preparation	Product use	Limited warranty & Limited remedy
One year when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight.	It is essential, as with all pressure-sensitive tapes, that the surface to which the tape is applied must be clean, dry, free of grease, oil or other contaminants.	It is essential that the user evaluate the product to determine whether it is fit for a particular purpose and user's method of appli- cation. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on prod- uct between +10 ~ +40°C (+50 ~ +105°F)	Your exclusive remedy & obligation shall be, at our tape's option, to replace or repair the product or refund the purchase price of the product.



CINTA ADRESIVA CODALEC

Cloth Duct Tape - High Grade - CDA180



Product Description	Features
Mesh 50 Black / Grey / Brown cloth backing, combined with a high performance synthetic rubber-resin adhesive.	 Cloth backing provides excellent reflection of both heat and light. High quality adhesive with super strong adhesion and holding power offers reliable a Low moisture vapor transmission rate makes CDA180 an excellent vapor barrier. Service Temperature range from -20° to +80°C (-4° to +176°F).

TECHNICAL PROPERTIES			
Properties	Metric	English	Test method
Cloth Backing	Mesh	50	-
Adhesive Thickness	155 Micron	6.1 Mil	PSTC-133
Total Thickness	280 Micron	11.0 Mil	PSTC-133
Peel Adhesion	25 N/25mm	90 Oz./In	PSTC-101
Rolling Tack (11mm ball)	≤ 2.5 cm	≤ 1.0 In.	PSTC-106
Service Temperature Ranger	vice Temperature Ranger -20° +80°C		-

PRODUCT FORM & SIZE AVAILABLE			
Cut Roll Log Roll Jumbo Roll			
25mm / 48mm / 50mm (2") / 60mm / 63mm (2.5") / 72mm / 75mm (3") / 96mm / 100mm (4").	1060mm x 50m	1060mm x 1000m	

Storage & Shelf life	Surface Preparation	Product use	Limited warranty & Limited remedy
One year when stored at 21°C (70°F) / 50% relative humidity out of direct sunlight.	It is essential, as with all pressure-sensitive tapes, that the surface to which the tape is applied must be clean, dry, free of grease, oil or other contaminants.	It is essential that the user evaluate the product to determine whether it is fit for a particular purpose and user's method of appli- cation. Good results will be obtained when applied to a clean, dry surface with a suitable pressure on prod- uct between +10 ~ +40°C (+50 ~ +105°F)	Your exclusive remedy & obligation shall be, at our tape's option, to replace or repair the product or refund the purchase price of the product.



codalec Adhesive Tapes

PVC Adhesive Tape - High Grade



Product Description	Features
High quality Soft-PVC-Film, coated with a strong rubber based adhesive, hand applicable, 80°C.	- Rubber adhesive - PVC carrier - Black and other colors available - Flame resistant - Highly conformable - Meet ROHS

TECHNICAL PROPERTIES					
Properties	Properties Typical Value		Test Method		
Thickness	0.13±0.025	mm	ASTM D1000		
Tensile strength	>21	N/cm	ASTM D1000		
Elongation	>230	%	ASTM D1000		
Adhesion	-	-	ASTM D1000		
- to backing	>1.75	N/cm	-		
- to steel	>1.75	N/cm	-		
Flammability	self-extinguishing	-	ASTM D1000		
Breakdown voltage	6.0	Kv	ASTM D1000		

Note: The listed values are typical only and not intended to serve as product specifications.

Standard sizes	Colors	Recommended uses	Storage & Shelf life
Length: 10m, 20m, 25m, 33m Width: 19mm, 25mm Core ID: 32mm, 38mm	Black White Yellow Gray Blue Green Violet Red Brown Green/Yellow	It is specifically designed for used for wrapping electric wires and cables etc. wrapped wires with a half-lap is best. The last layer should be no tension to prevent flagging.	The shelf life of the product is two years when stored at 20- 30°C, max 65% relative humidity and out of direct sunlight, in original packaging.



Tools Standard Cable Ties Tool



	-
A	C

Strength Level	Cable Tie Width (mm)	Tension Strength Minimum (kg)
0	2,2	5,5
1	2,5	8
2	3,5	12,5
3	4,5	14,5

Part No.	Cable Ti Min	ie Width Max	A	В	С	Weight (g)
5401-HB	2,2	4,8	160	130,0	20,3	300

Parameters		Values	
Width	2,5mm	3,5mm	4,5mm
Fastening angle	vertical ≤ 30° - horizontal ≤ 5°	vertical ≤ 30° - horizontal ≤ 5°	vertical ≤ 30° - horizontal ≤ 5°
Tensioning speed	< 50 mm/sec	< 50 mm/sec	< 50 mm/sec
Recommended Operating Temperature	23 °C ± 10 °C	23 °C ± 10 °C	23 °C ± 10 °C
Recommended Operating Relative Humidity	50 % ± 10 %	50 % ± 10 %	50 % ± 10 %
Pretensioning (setting)	from 30 to 40 N	from 50 to 70 N	from 80 N to 100 N
Recommended Storage Temperature	23 °C ± 10 °C	23 °C ± 10 °C	23 °C ± 10 °C
Recommended Storage Relative Humidity	50 % ± 10 %	50 % ± 10 %	50 % ± 10 %
Maximum shelf life after first bag opening	< 8 h	< 8 h	< 8 h

Cable tie gun type			
Tool code	Pretensioning (setting)		
5401-HB	0-1	2	3



Tapes

Spun Rayon Wire Harness Tape (Manual/Machine Application)



Technical Information	Characteristics	Applications	Storage
- Carrier: Spun rayon fabric - Adhesive: Synthetic rubber - Colours: Black, white	- Ageing resistant - Smooth - Resistant to low and high temperature - Solvent-free - PVC-compatible - High adhesion	The tapes are used for man- ual and machine binding and wrapping of cable sets and cable harnesses. Due to the controlled unwinding force, a good processing is ensured.	5°C to 35°C and dry in original packing.

Stitch-Bonded Non-Woven Polyester Adhesive Tapes

Characteristics	Applications
 Material structure pleasant to the touch Suitable for sound-dampening and rattle suppression in the transportation industry Resistant to ageing and rotting Very good resistance to cold and heat Standard tape for better abrasion resistance and rattle suppression Solvent-free synthetic rubber with good adhesionVery easy to apply due to easy-tear property Available in various colours for colour-codingIn accordance with ECE-R118 / 03 	For bundling and binding wire harnesses

Polyester Cloth Tapes

Characteristics	Applications
Dense textile structure Resistant to ageing and rotting Very good resistance to cold and heatIncreased abrasion resistance Easy to tear by hand Highly heat-resistant Excellent resistance to motor vehicle operating fluids Compatible with many cable insulation materials (e.g. XPE and PP) Solvent-free acrylic adhesive	For bundling and binding wire harnesses- For the presentation of an abrasion-re- sistant and attractive appearance



Tapes

Highly Abrasion Resistant Pet Cloth Wire Harness Tape (Manual/Machine Application)

Construction	Characteristics	Applications
- Carrier: PET cloth, black, orange, violet, blue - Adhesive: Acrylic	 Resistant to low and high temperatures Heat-resistance for 3000h at 150°C Suitable for short periods 240h at 175°C Solvent-free Abrasion-resistant Rot-proof PVC-compatible Resistant to ageing Smooth Strong adhesion Good dielectric characteristics Outstanding resistance against chemicals, e.g. Diesel / Gasoline formore than 2 weeks 	Areas for manual and machine bundling and wrapping of cable sets and wire harnesses. Due to the controlled unwind force, a good processing is ensured. The final winding has to be applied on itself and fixed byshort thumb-pressure. Storageat about 5°C to 35°C and dry in original packing.

Pet Cloth Wire Harness Tape

Construction	Characteristics	Applications	Storage
- Carrier: PET cloth - Adhesive: Synthetic rubber - Colours: Black, orange	- Rotting resistant -Smooth - Resistant to low and high temperatures - Solvent-free - PVC-compatible - Resistant to ageing - Easy to tear - Strong adhesion	For bundling and wrapping of cable sets and wire harnesses. Due to the controlled unwind force, a good process is ensured. The final winding has to be ap- plied on itself and fixed by short thumb-pressure.	About 5°C to 35°C and dry in original packing.

No Adhesive Tape Air Signaling



Description	Characteristics	Application
LDPE film of 50 total microns, printed in opacity for zone marking. It can be presented in bands: Red/ White Yellow/Black Blue/White	Type of support Polyethylene Coex (LDPE) Average thickness 50 microns +-10% Breaking strength DL 35 N/mm ² +-15% Breaking strength DT 38 N/mm ² +-15% Elongation at break DL 374% +-15% Elongation at break SD 483% +-15% Punching 147 gr*cm/µ ±15	This film is recommended for marking areas susceptible to visual definition.



Tapes

Polyimide Electrical Tape With Thermosetting Silicone Adhesive Heat Class H



Description	Characteristics	Applications
Based on polyimide film which exhibits outstand- ing solvent and tempera- ture resistance as well as excellent mechanical and electrical properties. High temperature resisting poly- siloxane adhesive.	 Supporting base: polyimide film base Thickness: 0.025 mm 1.0 mil Total thickness: 0.060 mm 2.4 mil Adhesive: polysiloxane thermosetting adhesive Strength: 2.0 n/cm 18 oz/inch Ultimate elongation: 50% Tensile strength: 50 n/cm 28 lbs/inch Dielectric strength: 5,900 volts 5,900 volts Electrolytic corrosion factor*: a 1.0 a 1.0 Flame retardancy: ul 94 vtm-0 Colour: brown transparent Heat class: h (temperature range up to 1800c) tested in accordance with astm d-1000 latest issue, vde 0340*, b.s. 3924 * en 60454 ** astm d-1000 	 Insulation tape for very high temperatures. For high stress conditions in traction machine manufacturing. Excellent masking tape for high temperature applications. Outer wrap for transformers, toroidal coils and motor coils. Bundling of armature coils. Short term heat resistance up to 4000C. UL recognised

Soft Copper Adhesive Tape With Thermosetting Polyacrylate Adhesive



Description	Characteristics	Application
Based on soft copper foil, which is coated on one side with high performance acrylic adhesive. PPI 9110 is completely moisture resis- tant. Is supplied on a release paper interliner.	 Supporting base: soft copper foil base Thickness: 0.035 mm 1.4 mil bs 3924 Total thickness: 0.065 mm 2.6 mil Adhesive: synthetic resin thermosetting Adhesive strength: 4.5 n/cm 41 oz/inch Tensile strength: 40.0 n/cm 23 lbs/inch Adhesive coating: single faced Colour: natural Recommended curing cycle: 1 hour at 150oc or 2 hours at 130oc Length of roll: 66 m 72 yards Temperature resistance: 155oc 311of Interliner: release paper tested in accordance with astm d-1000 latest issue, vde 0340, b.s. 3924. 	 Electrical conducting tape, solderable as heating element. EMI/RFI shielding for motors, cables, cabinet and components. Also available with a conductive adhesive.



Several Products Cables

Non Slip Tapes



Description	Application
No abrasive anti slip tape with solvent acrylic adhesive in clear color and support of no abrasive clear PVC.	- Suitable for slippery areas such as bathrooms, showers, boats, etc - Suitable for bare feet - Good resistance to water and UV rays

Non Slip Tape For Dark Places



Description	Application
No abrasive anti slip tape with solvent acrylic adhesive	- Suitable for slippery areas such as stairs, floors, ramps,
in fluorescent yellow color and support PVC film with	etc avoiding falls and slips.
aluminum oxide.	- Good resistance to water and UV rays.

Double Face Tapes - 6209/6210/6215



Description	Characteristics	Applications	Recommendations
- Reference: 6209/6210/6215 - Double-sided white polyethylene foam tape	Adhesive: Solvent acrylic Protector: Silicone paper Support: Foam thickness: 1mm Adhesive force (Afera 5001): 18N/25mm Temperature range: -30° + 100°	Fixation of mirrors, glass, profiles, etc.	Keep the material in the original packaging, in a dry environment, away from sunlight and a relative humidity of 50%. Check before application that the surfaces are dry, clean and free of grease, oil or other substances.

Tapes

Double Face Tapes - 910



Description	Characteristics	Applications
- Reference: 900 - Double-sided black foam tape	- Adhesive: Solvent acrylic - Protector: Green polyethylene silicone film - Support: Black polyethlyne foam - Thickness: 1mm - Adhesive Strengh (Afera 5001): 15N/25mm - Working temperature: 30°C + 100°C	Fixation of plates, mirrors, profiles, etc. that require high cohesion and resistance to UV rays. for exterior applications.

Double Face Tapes - AC100C



Description	Characteristics	Applications
- Reference: AC100C - Acrylic foam	 Adhesive: acrylic Support: acrylic foam Thickness : 1mm± 10% Protector: red pe film Adhesive strengh: (afera 4001): 1 n/25 mm. Stress at breakage : (afera4004): 67n/10mm590 Elongation at break: (afera 4005): 590% Temperature range: -40° + 120°c165°c Maximum resistance: 165° Adhesive: acrylic Support: acrylic foam Thickness : 1mm± 10% Protector: red pe film Adhesive strengh: (afera 4001): 1 n/25 mm. Stress at breakage : (afera4004): 67n/10mm590 Elongation at break: (afera 4001): 1 n/25 mm. Stress at breakage : (afera4004): 67n/10mm590 Elongation at break: (afera 4005): 590% Temperature range: -40°C + 120°C 165°C Maximum resistance: 165° 	Excellent adhesion power. Indicated for glass, metal and plastics in the automotive sector. Good behavior to UV, humidity and high temperature. Applications that require to be transparent, invisible.



Several Products Cables

Double Face Tapes - 6530T



Description	Characteristics	Applications
- Reference: 6530T - Removable double face (PE film)	Adhesive: blue synthetic rubber Protector: White silicone paper Support: HDPE film Thickness: 0,15mm Adhesive strengh: Ext. 6,5N/25mm - Int. 30N/25mm Working temperature: - 10°C + 50°C	Fixation of fair carpet and deli- cate pavements, which require removable adhesive. Leaves no residue.

Double Face Tapes - 737



Description	Characteristics	Applications
- Reference: 737 -Double-sided polyester fab- ric tape (gauze)	Protective Adhesive: Synthetic rubber Support: Havana silicone paper Color: White Thickness: 0,18mm Adhesive strengh (Afera 5001): 28N/25mm Working temperature: -10° +60°	Fixation of carpets, felts, etc

Double Face Tapes - 2419



Description	Characteristics	Applications
- Reference: 2419 - Removable double-sided tape (polyethylene film)	Adhesive: blue synthetic rubber Protective White: Silicone paper Support: HDPE film Thickness: 0.15mm Adhesive force (Afera 5001): Ext. 6.5N/25mm - Int. 30N/25mm Temperature range - 10°C + 50°C	Fixation of fair carpet and deli- cate pavements, which require removable adhesive. Leaves no residue.



Several Products Tapes / Tubes and Sleeves

PTFE Tape



Description	Characteristics	Applications	Certifications
Universal sealant compound of high density 100% PTFE.	 Resistant to most chemical products, fluids, solvents, fuels and acids. Working temperature between -200° up to +260° Does not melt and does not burn Keeps the same elasticity and does not harden or weaken over time - Completely inert 	 Suitable for all types of steel or plastic threads. Salage at any pressure. Suitable to any kind of fluids. 	- UL - WRAS - CSA -FDA

SP Polyethlyene Spiral Cable Binding



Description	Characteristics
- SP, recyclable polyethylene spiral cable binding. Medium wall	- Melting point 112°C - Tensile strengh: 10 N/mm² min - Ultimate elongation: 700 %min
- SP, Easy application and economy of use. Neat cable bundling and mechanical protection. Very good 'shape memory' and good cut-through resistance.	- Water absorption: 0,1% max - Specific gravety: 0,92 max - Chemical resistance: Good
- Available in black and transparent, other colors under request.	- Dielectric strength: 32 kV/mm - Dielectric constant: 2,2 max

PTFE Heat Shrink Tubing



Description	Characteristics	Applications
PTFE heat shrink tubing is an ideal solution for applications which require protection against high temperatures and chemical resistance. Sold in its expanded state, PTFE heat shrink tubing shrinks to its original size when heat is applied, forming a tight jacket over the substrate material. Like traditional PTFE tubing, heat shrink PTFE is highly resistant to aggressive chemicals and extreme temperatures up to 260°C (500°F). It is available in continuous or cut lengths with shrink ratios of 2:1 and 4:1	 Highly resistant to aggressive chemicals Highest use temperature of fluoropolymers: 260°C (500°F) Melting Temperature: +320 °C Excellent electrical insulation properties Easily applied to a variety of substrates 	- Automotive sensor protection - Wire insulation

Several Products Tubes and Sleeves

High Temperature and High Pressure Fluoropolymer PTFE Tubing



Characteristics

Made out of polytetrafluoroethylene resin, PTFE tubing has the highest working temperature of any fluoropolymer tubing available today.

Description

PTFE is widely used as a pressure tubing in general chemical applications such as delivery of natural gas and mineral oils, toxic gas monitoring, and paint, varnish or adhesive delivery lines. Also have several applications in the automotive. Electrical and appliance markets. - Fully fluorinated fluoropolymer tubing - Opaque/translucent color - Highest working temperature (up to +260°) out of all fluoropolymer tubing.

B50 Polyolefin Heat Shrink Tube



Description	Characteristics	Presentation
 Retardant normal wall heat shrinkable tube. B50 TUBE SERIES Heat Shrinkable Tube has excellent un-flammability, flexibility, and insulation. The shrinking temperature is very low, and it can shrink very quickly. It is suitable for various electric insulation and bonding of cables and connectors and widely applied for connecting or end-handling, electric wire, insulating and harness of electric wire, corrosion-proof of metallic rods or tubes, and antenna protection. Material: Chemical, cross-linked (by radiation), thermally stabilized flame retarded polyolefin. Standard: UL 224 VW-1 C-UL CSA C 22.2 OFT ROHS Halogen Free Flame Retardant 	 Operating temperature: -55°C to +125°C Shrinking Temperature: Start at 70°C and shrunk totally at 110°C (CB) or 115°C. Size range: Ø 0,8mm to 180 mm (3/64 to 5 inch or larger), special size is negotiable. Shrink ratio: 2:1. Available Color: Black, Red, Yellow, Green, Blue, White, Purple and Grey. Can produce upon customer's spe- cial requirement. 	- Rolls - Mini boxes - Pieces of 1,22 mt - Pieces of 1 mt

W5B50 Dual Wall Heat Shrinkable Tube With Internal Adhesive



Description

TUBE SERIES Dual Wall Heat Shrinkable Tube is manufactured by co-extrusion of polyolefin and hot-melt adhesive. Designed to provide both insulation and sealing for protected articles. Used to protectable bundles wires and metal tubes against water and moisture.

Characteristics

Size range: Ф3.2 ~ Ф50 mm (1/8~2 inch) Shrink Ratio: 3:1 Available Color: Black, other color can make upon customer's special requirement.



Several Products Tubes and Sleeves

TPM Dual Wall Heat Shrinkable Tube with Internal Adhesive



Description	Characteristics	Applications
Heavy wall heat shrinkable tubing with radiation cross-linked polyolefin outer layer for excellent insulation, corrosion prevention and adhesive inner layer for waterproof sealing and insulation.	- High Shrink: 3:1 & 4:1 - Abrasion Resistant - Optional flame retardant - Also available without adhesive liner	 Insulation and environmental protection of cable joints. Other applications where requires in- sulation and protection, sealing or cable jacketing. Resistance to voltage from 600v to 1,000v

PVC Heat Shrink Tubing



Characteristics

Atoxic, flame retardant, ecologic.

Does not contain: heavy metals, as cadmium, lead, hexavalent chromium or mercury, Asbestos, latex, recycled plastic.

Does not contain Bisfenol A (BPA) and Bisfenol F (BPF), Phthalates, nanomaterials as defined in Art2(1) of Regulation1223/2009/EC., epoxy derivative.

Does not contain allergens according to Regulation 1169/2011/EC on Allergens does not contain Genetically Modified Organisms (GMO).

SWT Solder Sleeve Wire Splices

Description

PVC heat shrink tubes are used for applications where a high working temperature is

not required, normally between 70° and 80° for protection and insulation of cables, cable

harnesses, connectors, terminals, etc. Supply

in all colors.



Description	Characteristics
SWT, Polyolefin heat shrinkable Solder Sleeve Wire SWT is designed to splice tin-plated or bare copper stranded wires rated for at least +85 °C. The insulation of the SWT is made of polyolefin tubing with 2 thermoplastic, color coded, adhesive. The rings will melt and flow to seal and encapsulate the inner components, offering an environmental protection.	- Shrink Ratio: 3:1 - Operation temperature: -55º to 125º - Melt temperature solder alloy > 140º - Available in 4 sizes: with his corresponding color.



Several Products Cable Ties and Several Fixing Elements

PA 66 Cable Ties



DescriptionCharacteristicsPA 66 Cable ties to hug, fasten, join cables or
cable harnesses, pipes or any element that
needs to be protected by fastening. Being a
universal element, they are present in sever-
al markets.- Cable ties for labeling
- Special cable ties for feed industry
- Full INOX cable ties
- Fixing PA collars
- Recoverable cable ties
- UV resistant cable ties
- Cable ties with special heads
- And much more, please see our web site.

Wall Plug Base in PA 6



Description	Characteristics
Polyamide 6 plug for bridle, with or without wings. Specially designed for fixing using Nylon Cable Ties. For the installation of water, elec- tricity, gas, heating, pneumatic, air condition- ing, etc. pipes.	- High thermal resistance (from -40 to +80 degrees). - Great resistance allows very safe installations. - Quick and easy to install, just drill and hit the plug with a hammer, pass the flange through the hole and place the tube - Base raw material: Made of Polyamide 6 (Nylon).

PA 66 Mounting Bases



Description	Characteristics
Several mounting bases made in PA 66 for cable ties and different fixing devices	- Material: Polyamide 6.6 - Flammability of raw material: UL 94 – V2 - Humidity absorption: 2,7% - 2,8% (23° C - 50% R.H.) - Installation temperature: -10° C ÷ +60° C - Working temperature: -40° C ÷ +85° C - Excellent resistance to aromatic solvents, oils, greases, oil derivates. - Good resistance to bases. - Limited resistance to acids. - Not resistance to phenols and to chlorinated solvents. - Halogens free - Available in different types. - Standard colors: clear and black



Several Products Cable Ties and Several Fixing Elements - Terminal Blocks

Cable Ties Fixing Tools

Description

Several tools for cable ties to save time and money making the installation of the cable ties faster and professional. Available several tools for different sizes.

Threaded Fixing Base for Cable Ties



Description	Characteristics
Threaded base suitable for cable ties up to 9mm wide. To be fixed, my metric head plugs, to different building supports, concrete, solid bricks, etc.	- Polyamide 6 - Halogen free - Humidity absorption: 3% - Working temperature: -10° +65° - Min installation temperature: -5° - Flammability rating: UL94 V2 - Resistant to external agents

PA 66 Terminal Blocks



Description	Characteristics
Facilitates conductor connection thanks to high screw mounting. Possibility of cutting in different numbers of poles.	- Terminal blocks in natural - polyamide PA 6.6 - self-extinguishing UL94 V2, - approved for working temperature of 110° C.

Glass Fiber Terminal Block



Description	Characteristics
Facilitates conductor connection thanks to high screw mounting. Possibility of cutting in different numbers of poles.	- Polyamide PA 6.6 with 25% glass fiber - Self-extinguishing UL94V0 - Working temperature of 150°C - Metallic inserts in brass OT58, - Nickel plated Screws in zinc plated steel





Several Products Terminal Blocks / Several Insulation Tubes

Polypropylene Terminal Blocks



Description	Characteristics
Extra flexible polypropylene terminal blocks for low installations.	Housing material: Polypropylene (PP) - Color: Black and white - Flame retardant to UL 94V-2 - Voltage 300V (UL) 500V (VDE) - Working temperature: T85 (IEC) 65° (UL) - Terminal body: steel, zinc plated - Screws: M3, 5x7 steel zinc plated - Wire range: 2,5mm up to 25mm - Approvals: UL, CE, VDE, FIMKO, CQC

Ceramic Terminal Blocks



Description	Characteristics
Ceramic terminal blocks for installations where requires high temperature resistance.	- Color: clear or light brown - Working temperature of 300° - Temperature spikes of 1.000° for the insulating body in steatite - Number of poles: 3 - Screw in white zinc plated steel

Polyester Expandable Mesh



Characteristics	Applications
- Material: PET - Recovery: ≥ 70% - Operating temperatures: -50 to +130°C - Melting point: +260°C - Fire characteristic: self-extinguishing (V2 UL94) - Specifications: V2 UL94 DIN 5510 S4/SR2/ST2 NF F16-101/ F16-102 I2F2 - Halogen free	- Economical duct with an expansion range from 1 to 2 for common applications. Also usable for railway rolling stock.



Several Products Several Insulation Tubes

Polyamide Expandable Mesh



CharacteristicsApplications- Quality: PA6.6
- Coating: ≥ 80%
- Operating temperatures: -55 to +135°C
- Flash point: +255°C
- Behavior before flame: self-extinguishing (V2 UL94)
- Properties: V2 UL94
- NF F16-101/ F16-102
- Halogen free- This tube is recommended for applications under con-
ditions difficult and lends itself especially to the railway
industry.

Wrap-Around Sheath of Polyester Monofilaments



Description

ROUNDIT® 2000FR is a wrap-around sleeving manufactured from flame-retardant polyester monofilaments and multifilaments, designed for mechanical protection and maintenance of wire and cable bundles. Its construction with 100% covering ratio provides good abrasion resistance. The self-wrapping feature of ROUNDIT 2000FR allows for quick and easy installation and removal of the product for assembly and maintenance.

ROUNDIT 2000FR may be applied and removed without any manipulation of connectors or fittings and offers an innovative solution in areas where breakouts are necessary.

ROUNDIT 2000FR has many applications in the marine, railway and electronic industries.

Polyurethane Thermoplastic Extruded Tube



Rules Characteristics Temperature class F RoHS 2002/95/CE - Working temperature -30° to +155° NF EN 60684-1 - Temperature spikes up to 185° (some hours) - Constant dielectric strength from 8kV up to 15kV NF EN 60684-2 NF EN 6084-2, NF EN 6084-2 - Halogen free - Good resistance to mineral oil, alcohol, isopropanol, etc. - Good mechanic resistance Good compatibility with varnishes of the same class - Self-extinguishing - Flexible - Watertight - Standard color: yellow Other available colors: green, blue, red, black and orange



Several Products Several Insulation Tubes

No Shrinkable PVC Tubing



Description	Characteristics
Flexible PVC compound tube for electrical cable sheath extrusion.	- Low emission of smoke and acid gases (<15%) - Standard color black - Available in other colors under request - Working temperature 80° - Available in different thickness - Quality: ST1-ST2-PVC/A-T11-T12-TM1 following HD21 and T152 following EN50290-2-21

No Shrinkable Silicon Tubes

Characteristics - Platinum vulcanized - Temperature range -60 °C - 200 °C - Mechanical properties are nearly constant over the entire temperature range - Resistant to UV and ozone (resistant to radiation and non-aging) - Excellent compression set - Resistant to many chemicals - Very good fire resistance - No toxic combustion gases - Free of plasticizer - Can be colored as required



Several Products Standard Copper Cables

Silicon Cables



Description	Cable Make-up	Technical Data
Multi wire conductor, single core, silicone rubber isolated cable.	 Annealed Copper Conductor (Class 5 DIN VDE 0295 and IEC 60228). Special Silicone Rubber Insulation according to VDE 0250 Teil 816 and Harmo- nized Document HD 22.3 S3. Special Silicone Rubber Inner Sheath 	 This cable is in compliance with VDE according to DIN VDE 0250 Teil 816 and Harmonized Document HD 22.15 S1. EC directive: This cable confirms to ECD 73/23/EEC (low voltage directive). Working Temperature: -60 °C to +180 °C Peak Temperature: +250 °C for short time Nominal Voltage Uo/U: 300-500 V Conductor: fine stranded annealed copper wire (class 5) Insulation Resistance: min. > 200 G Ω x cm. Radiation Resistance: up to 20 x 106 cJ / kg. (Up to 20 Mrad) Core Insulation: Silicone rubber EI2 for insulation, special silicone compound for sheathing. Cable Marking: According to DIN VDE 0293 (and/or customer requirements) Tests: In reference to VDE 0250 Teil 816 and HD 22.15 S1. Test Voltage: 2000 V; a.c. 50 Hz. Lay Length: 12 – 18 D, nominal 14 D (D=stranding diameter) for < 7 cores. Lay Direction: Left Stranding (according to customer specification)

Fiberglass Cables



Cable Make-up	Technical Data			
 Annealed Copper Conductor (Class 5 DIN VDE 0295 and IEC 60228). Special Silicone Rubber Insulation according to VDE 0250 Teil 816 and Harmonized Document HD 22.3 S3. Special resin impregnated fiberglass special braiding. 	 This cable is in compliance with VDE according to DIN VDE 0250 Teil 816 and Harmonized Document HD 22.15 S1. EC directive: This cable confirms to ECD 73/23/EEC (low voltage directive). Working Temperature: -60 °C to +200 °C Peak Temperature: +250 °C for short time Nominal Voltage Uo/U: 300–500 V Conductor: fine stranded annealed copper wire (class 5) Insulation Resistance: min. > 200 G Ω x cm. Radiation Resistance: up to 20 x 106 cJ / kg. (Up to 20 Mrad) Core Insulation: Silicone rubber El2 for insulation, special silicone compound for sheathing Cable Marking: according to DIN VDE 0293 (and/or customer requirements) Tests: In reference to VDE 0250 Teil 816 and HD 22.15 S1 Test Voltage: 2000 V; a.c. 50 Hz. Lay Direction: Left Stranding (according to customer specification) 			



Several Products Firesleeve Standard



Property	Standard	Tolerance	Test Method
Fiber	Fiberglass	-	-
Coating Material	Silicone Rubber	-	-
Continuous Working Temp.	260°C(500°F)	-	_
Max Short Time Exposure	1650°C(3000°F)	-	-
Insulation	≥10KV	-	ASTM D149
Molten Splash Resistance	Excellent	-	-
Flame Resistance	Excellent	-	-
Abrasion Resistance	Excellent	-	-
Moisture Resistance	Excellent	-	-
Flexibility	Excellent	-	-
Color	Red, Blue & Customized color		
With accessory	Possible with Velcro		
Application	Protecting hydraulic hoses, cables, wiring, used in metallurgy, steel mills, glass work, marine industry, petrochemical industry etc.		



Several Products Silicone Rubber Self-fusing



Property	Standard	Test Result	Test Method
Density	≧1.1g/cm3	1.16g/cm3	-
Operating Temperature	260°C(500°F)	260°C(500°F)	-
Brittle Temperature	-65°C(-85°F)	-65°C(-85°F)	-
Hardness, durometer Shore A	45~55	47	ASTM D2240
Tensile Stress at 100% Strain	-	173psi	ASTM D412
Tensile Strength	≧710psi(4.9Mpa)	1508psi(10.4Mpa)	ASTM D412
Elongation	≧200%	605%	ASTM D412
Tear Strength	-	6.8kN/m	ASTM D624
Dielectric Strength	400V/mil(15.75kV/mm) 1000V/mil(39.6kV/mm)		ASTM D149
Electrical Class	H Class	H Class	-
Bond Strength	-	825N/m	ASTM D2148
Water Absorption	≤3% 0.80% -		-
Resistance to	Acids, Fuels, Oils, Ozones, Salt Water, UV Rays		
Application	Used for Automotive, Marine, Electrical, Plumbing, Sealing, Insulating and Gen- eral Purpose Applications. Include Water Hose & Pipe Repair, Weatherproofing Electrical Connections, Fittings & Hose Seal, Bundling Wires, Boat Rigging, Sport & Tool Handles, Plumbing Repair, Rope Ends, Bicycle & Wheelchair Han- dle Wraps, Emergency Radiator Hose Repair, Emergency O- Rings & Seals.		



Several Products Silicone Rubber Self-fusing Tape with Fiberglass Reinforcement

Property	Standard	Test Result	Test Method
Thickness	0.5±0.1mm	0.5mm	-
Width	25±1mm	25mm	-
Working Temperature	-65°C ~ +260°C (-85°F ~ +500°F)	-65°C ~ +260°C (-85°F ~ +500°F)	-
Hardness, durometer Shore A	50±10	50	ASTM D2240
Volume Resistivity	≥1013Ω/cm	1013Ω/cm	ASTM D257
Elongation	15% ~ 25%	15% ~ 25%	-
Dielectric Strength	≥12kV/mm	15kV/mm	ASTM D149
Self Adhesion	- ≥50g/mm		-
Water Absorption	≤3%	0.90%	-
Resistance to	Acids, Fuels, Oils, Ozones, Salt Water, UV Rays		
Application	Used for Automotive, Marine, Electrical, Plumbing, Sealing, Insulating and Gen- eral Purpose Applications. Include Water Hose & Pipe Repair, Weatherproofing Electrical Connections, Fittings & Hose Seal, Bundling Wires, Boat Rigging, Sport & Tool Handles, Plumbing Repair, Rope Ends, Bicycle & Wheelchair Han- dle Wraps, Emergency Radiator Hose Repair, Emergency O- Rings & Seals.		



Several Products PTFE Sealing Tape



Benefits

PTFE sealing tape is a non-adhesive tape for use with threaded fittings and compression joints on all types of pipes, including potable water and liquid carrying

Product Description

pipework.

Satisfies EN 751-3:1996 and BS 6920-1:2000.
Compatible with all chemicals, acids, alkalis, solvents. • Non Flammable.

Tape Color	Pack Size	Box Qty.
White	12mm x 12m x 0.075mm x 0.3g/cm ³	100 rolls
White	12mm x 12m x 0.075mm x 0.35g/cm ³	100 rolls
White	12mm x 12m x 0.1mm x 0.3g/cm ³	100 rolls
White	19mm x 15m x 0.075mm x 0.3g/cm ³	100 rolls

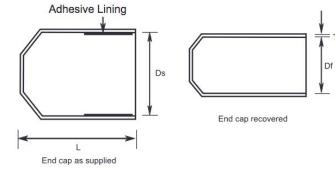
Limitations	Application
 Do not use on pipes, which contain liquid oxygen or flourine. Do not use on pressure greater than 20bar. It is the users responsibility to determine suitability for use. If in doubt contact technical services for advice. 	Remove any dirt, grease or metal shavings from threads. Apply the PTFE tape on the joint following the inclination of the thread overlapping by ½ to ¾ tape width (depending on thickness required). Apply tape with an even firm tension to ensure tight fitting around the thread.

Composition	Max diameter	Temperature	Max pressure	Tensile strength	Percentage elongation
PTFE (Polytetraflo uroethylene)	3/4" – 2"	-200°C to +260°C	20 bar	≧8N/mm	≥25%

Health & Safety	Storage	Shelf Life
Consult MSDS for full list of hazards.	Store in cool dry conditions between 5 and 28°C. Safe in normal use however as a precaution keep polythene outer packaging away from children.	Indefinite shelf life when stored as advised.



Several Products Heat Shrink Cable End Cap



*New sizes D: Internal Diameter s: as supplied

f: after free recovery

Product Description	Characteristics
End Cap is used to seal the ends of all types of Cables & protect from ingress of water/moisture. The caps are manufactured from high quality cross linked poly- olefin material.	Rubber Sheathed Cable. - Hot Melt adhesive lining provides permanent seal on irregular cable sheaths.

Technical Specification				
Properties	Value	Standard		
Physical				
Tensile Strength	12 N/mm (Mpa) (min.)	ASTM D638		
Ultimate Elongation	350 % (min)	ASTM D638		
Density	1.05± 0.2 gm/cm	ASTM D792		
Hardness	45 ±10 Shore D	ASTM D2240		
Water absorption	0.2 % (max.)	ASTM D570		
Thermal				
Accelerated ageing	(120 C for 500 hrs)	ASTM D2671		
Tensile Strength	11 N/mm (Mpa) (min.)	ASTM D638		
Ultimate Elongation	300 % (min.)	ASTM D638		
Low Temperature Flexibility	No Cracking	ASTM D2671		
(-40°C for 4 hrs.)				
Heat Shock (250 C for 30 min.)	No cracking or flowing	ESI 09-11		
Shrink Temperature	125°C	IEC 216		
Continuous Temperature Limit	-40 to +100°C	IEC 216		
Electrical				
Dielectric Strength	12 kV/mm.(min)	ASTM D149		
Volume Resistivity	1 x 1014 Ohm.cm (min.)	ASTM D257		
Dielectric constant	5 (max.)	ASTM D150		



		Selection Chart		All dimensions are in mm
Ds (Min.)	Df (Max.)	Ls (Min.)	Tf(±10%)	Cable Range
6	2	25	2.0	2.5 - 4
8	2	25	2.0	2.5 -6
12	4	40	2.3	5 - 8
12	4	58	2.3	5 - 8
14	4	40	2.3	5 -11
14	4	58	2.3	5 -11
20	7.5	55	2.3	10 - 16
20	8	75	2.5	10 - 16
25	8	55	2.3	10 - 20
25	8	75	2.5	10 - 20
30	11	75	2.5	13 - 26
30	11	110	2.5	13 - 26
35	11	75	2.5	13 - 30
35	11	115	2.5	13 - 30
40	15	90	3.3	17 - 35
40	15	120	3.3	17 - 35
45	15	90	3.3	17 - 40
45	15	120	3.3	17 - 40
55	25	125	3.5	30 - 47
55	25	170	3.5	30 - 47
63	25	125	3.5	30 - 55
63	25	170	3.5	30 - 55
75	35	140	4.0	42 - 68
75	35	180	4.0	42 - 68
85	36	140	4.0	42 - 78
85	35	180	4.0	42 - 78
100	45	160	4.0	55 - 90
100	45	200	4.0	55 - 90
120	45	160	4.0	55 - 110
120	45	200	4.0	55 - 110
130	60	160	4.6	75 - 120
130	65	300	4.6	75 - 120
158	60	165	4.6	75 - 145
158	65	165	5.5	75 - 145
160	65	300	4.5	75 - 145
170	65	300	4.5	75 - 145
180	75	585	3.8	85 - 160
190	125	220	4.0	140 - 165
230	125	220	4.0	140 - 200
310	120	220	7.0	140 - 280
400	204	220	6.0	230 - 360
500	204	220	6.0	230 - 460

Several Products Standard Cable Ties Tool



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Strength Level	Cable Tie Width (mm)	Tension Strength Minimum (kg)
0	2,2	5,5
1	2,5	8
2	3,5	12,5
3	4,5	14,5

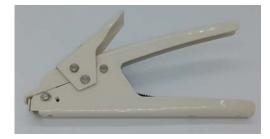
Part No.	Cable Ti Min	e Width Max	А	В	С	Weight (g)
PIN.003	2,2	4,8	160	130,0	20,3	300

Parameters		Values	
Width	2,5mm	3,5mm	4,5mm
Fastening angle	vertical \leq 30° - horizontal \leq 5°	vertical \leq 30° - horizontal \leq 5°	vertical \leq 30° - horizontal \leq 5°
Tensioning speed	< 50 mm/sec	< 50 mm/sec	< 50 mm/sec
Recommended Operating Temperature	23 °C ± 10 °C	23 °C ± 10 °C	23 °C ± 10 °C
Recommended Operating Relative Humidity	50 % ± 10 %	50 % ± 10 %	50 % ± 10 %
Pretensioning (setting)	from 30 to 40 N	from 50 to 70 N	from 80 N to 100 N
Recommended Storage Temperature	23 °C ± 10 °C	23 °C ± 10 °C	23 °C ± 10 °C
Recommended Storage Relative Humidity	50 % ± 10 %	50 % ± 10 %	50 % ± 10 %
Maximum shelf life after first bag opening	< 8 h	< 8 h	< 8 h

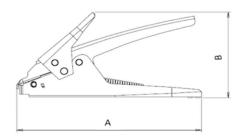
Cable tie gun type			
Tool code	Pretensioning (setting)		
PIN.003	0-1	2	3



Several Products Standard Cable Ties Tool



Technical characteristics (at 23±3°C and 50±10% R.H.)		
Maximum tie width	9 mm	
Minimum tie width 3,6 mm		
Weight g/1 pcs. 320± 5% g		
Material Steel		
Colour White		





Part No.	Dimensional characteristics (at 23±3°C and 50±10% R.H.)		
5400	А	192 mm	
	В	98 mm	
	С	25 mm	







Protection, insulation and cable glands





Product name	HELAVIA® standard sleeves	SILAVIA standard sleeves
Material	polychloroprene rubber quality 3490	silicone rubber quality 2412
Operating temperatures	-30 to +90°C (+110°C short time)	-80 to +200°C (+250°C short time)
Hardness shore A	40 ±5	40 ±5
Tensile strenght at break	>6,5 MPa	>7 MPa
Ultimate elongation	>500 %	>600 %
Tear strenght	>10 kN/m	>20 kN/m
Dielectric strenght	>13 kV/mm	18 kV/mm
Volume resistivity	4x10 ₉ Ω.cm	1015 Ω.cm
Flame resistance	V0 UL94	-
Lubricated sleeves	until type A4	until type A4
Standard colour	black	natural, transparent, white, blue, green, yellow, brown, red, black and grey
		D1541 D1549 D1291 D1391



Product name	Lubricant for sleeves HELAVIA® and SILAVIA	Sleeve expanders and application aids
Material	white mineral oil (silicone-free)	-
Characteristics	transparent, colourless and odourless	In order to use our SES sleeving and sleeves efficiently, a series of expanders and applications aids are available. The illustrations below indicate this versatile range.
Application / photos	LUB2 is recommended by SES-STERLING as a lubricant to facilitate the assembly of HELAVIA and SILAVIA rubber sleeves. The brush attached to the screw cap allows the right amount of lubricant to be delivered to ensure proper assembly using our sleeve clamps.	Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger Market Barger

Protection, insulation and cable glands Elastomer Sleeving



Product name	HELAVIA Neoprene sleeving	SILAVIA silicone rubber sleeving
Material	polychloroprene rubber quality 3490	silicone rubber quality 2412
Operating temperatures	-30 to +90°C (+110°C short time)	-80 to +200°C (+250°C short time)
Hardness shore A	40 ±5	40 ±5
Tensile strenght at break	>6,5 MPa	>7 MPa
Ultimate elongation	>500 %	>600 %
Tear strenght	>10 kN/m	>20 kN/m
Dielectric strenght	>13 kV/mm	18 kV/mm
Volume resistivity	4x10 ₉ Ω.cm	1015 Ω.cm
Flame resistance	V0 UL94	-
Lubricated sleeves	until type A4	until type A4
Application	mechanical protection and dielectric insulating	-
Specifications	-	mechanical protection and dielectric isolation for high temperatures.
Standard colour	black, white, blue, green, yellow, orange, brown, red, purple, grey, pink, light blue, yellow/green	natural, transparent, white, blue, green, yellow, brown, red, black and grey









Protection, insulation and cable glands Insulating sleeving and sleeves





Product name	PLIO SUPER insulating sleeving	PLIO SUPER insulating sleeves
Material	PVC quality 9923	PVC quality 9923
Operating temperatures	-20 to +90°C	-20 to +90°C
Hardness shore A	90 ±5	90 ±5
Tensile strenght at break	20 MPa	20 MPa
Ultimate elongation	300 %	300 %
Dielectric strenght	20 kV/mm	20 kV/mm
Volume resistivity	3x1012 Ω.cm	3x1012 Ω.cm
Flame resistance	V2 UL94 (internal test)	V2 UL94 (internal test)
Specificity	Standards NF C 93 641; DIN 40.621 & VSM 11930	-
Specification / Available lenghts	good resistance to ozone, aging, acids and friction.	< 180mm for longer lengths please consult us
Application	protection and insulation.	
Standard colour / Semi-standard colours	black, white, blue, yellow, red, transparent green, orange, brown, purple, grey	black, white, blue, yellow, red, transparent green, orange, brown, purple, grey, green/yellow





Product name	PLIOPRENE TPE insultaing sleevings	SILA SUPER insulating sleeving
Material	Polypropylene + EPDM irradiated	silicone
Operating temperatures	-40°C to +125°C +150°C (peak)	-50°C to +200°C +250°C (peak)
Hardness shore A	75 ±5	70 ±5
Tensile strenght	8 MPa	10 N/mm ₂
Ultimate elongation	> 400 %	350 %
Dielectric strenght	35 kV/mm	25 kV/mm
Volume resistivity	9x1014 Ωxcm	1015 Ω.cm
Flame resistance	V2 UL94 (internal test)	V2 UL94 (internal test)
Specifications / colour	FMVSS302 / ISO3795 DIN75200 / FAR25.853 halogen free. Black	halogen-free transparent/colourless

Protection, insulation and cable glands _____ Spiral tubing

PE

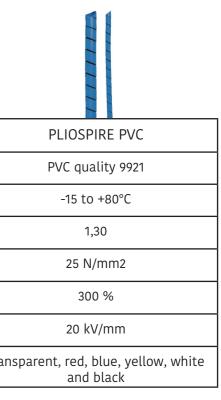
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Product name	PLIOSPIRE cable binding	
Materials	polyethylene	polyethylene (flame resistant)
Operating temperatures	-50 to +85°C	-50 to +75°C
Density	0,92	0,97
Tensile strenght	12 N/mm2	12 N/mm2
Ultimate elongation	550 %	400 %
Dielectric strenght	> 25 kV/mm	> 25 kV/mm
Flammability	-	V2 UL94
Specifications	(TH)	some halogene
Standard colours	natural, red, orange, blue, yellow, grey, black	

Product name	
Material	
Operating temperatures	
Density	
Tensile strenght	
Ultimate elongation	
Dielectric strenght	
Standard colours	trar





PE-AF





Protection, insulation and cable glands _____ Braided sleeving



PLOSIL PA

Product name	PLIOSIL-PET expandable braided sleeving	
Material	PET	PA6.6
Covering	≥ 70%	≥ 80%
Operating temperatures	-50 to +130°C	-55 to +135°C
Melting point	+260°C	+255°C
Flame resistance	self-extinguishing (V2 UL94)	self-extinguishing (V2 UL94)
Specifications	V2 UL94, EN 45545 NF F16-101 / F16-102, halogene free halogene free	
Applications	sleeving with an expansion ratio from 1 to 2 for general use. It has been developped for rail industry. this sleeving has been specifically developed for aeronautic, space, automobile and rail industries	
Standard colours	black and grey	black and grey
	A65-02 A44-03 C121-01 & A11-01 Sitewes in lengths on request	A5502 A4403 C12/101 & A1/101 Steeres in lengths on request

PET





Product name	HSG 0
Time to heat	6 to 8 secon
Tension	230V - 60W
Heating temperature/ Temperature of the wire	600°C
Lenght of the blandes/ Lenght of the hot wire	according to the
According to norm/ Specification	89/336/CEE 73/23/CEE
Application	manual portable machin tent cutting of small se operator activated by a t





Product name	PLIOSIL-PET expandable braided sleeving (PET-V0)	Hotwire cutting machines (FILICUT)	
Material / Time to heat	PBT	instant	
Covering / Tension	≥ 75%	12V - 24W	
Operating temperatures / Lenght of the hot wire	-50 to +150°C	150 mm	
Melting point / Conform to norm	+225°C	NF EN 60335-2-45	
Flame resistance	self-extinguishing (V0 UL94)	-	
Specifications / Applications	V0 UL94	manual portable tool for occasional cut work. Heat is operator activated	
Applications	used in the application that need V0 quality.	by trigger switch. Allows flat cut of sleeving up to 150mm wide.	
Standard colours	Black and grey	-	



Product name	HSG
Time of heat / Dimensions	6 to 8 secor
Power/ Fuel	230V - 40V
Temperature of the wire / Hours of use	600°C
Lenght of the hot wire	HSG 00 HSG-00-VW
Application	bench machine, for larg The HSG 00 her continuously while the equipped with a temp lator. The steel blade o longer lifesp









Protection, insulation and cable glands **Polychloropr.** rubber Moulded grommets



Product name	DU	DA
Material	EPDM	polychloroprene rubber
Colour	black	black
Operating temperatures	-40 to +100°C	-30 to +90°C
Tensile strenght at break	-	> 7 MPa
Ultimate elongation	> 400%	> 400%
Dielectric strenght	> 13 kV/mm	> 13 kV/mm
Resistance to ozone	very good	-
Specification	halogene free	-

HELAVIA® standard grommets DC-DE-DH in black polychloroprene rubber



HELAVIA standard grommets DC



Grommets with unequal sides series DC



Elongated grommets series DH





Product name	DG HELAVIA	15-2**
Material	polychloroprene rubber	polychloroprene rubber
Colours	black - grey (near RAL 7037)	black
Operating temperatures	-30 to +90°C	-30 to +90°C
Tensile strenght at break	7 MPa	> 7 MPa
Ultimate elongation	> 400 %	> 400 %
Dielectric strenght	> 13 kV/mm	> 13 kV/mm
Applications	designed to close off unused entries in panels, enclosures and housings of all types. Wires and conduits can pass through the membrane if required.	protection of cables in the passage of sheet steel, and protection against twisting.



Product name	DV	DX-M / DX-PG
Material	polychloroprene rubber	EPDM
Colours	black	black, light grey (RAL 7035)
Operating temperatures	-30°C to +90°C	-40°C to +110°C
Tensile strenght	> 8 MPa	-
Ultimate elongation	> 600 %	-
Dielectric strenght	> 13 kV/mm	-
Specification	-	IP 67 according to EN 60 529
Applications	for protection and strain relief, very effective when used with SES-QUICK cable ties, in the passages of boxes, of cupboards or crankcase, etc.	grommets, sealing for all exits of panels, enclosures and housings of all types, etc.



Conical grommets series DE



Protection, insulation and cable glands **Polychloropr.** rubber Moulded grommets





Protection, insulation and cable glands ____ TPE thermoplastic rubber moulded grommets





Product name	DK-DKF-DKP TPE	DG-TPE
Material	thermoplastic rubber mixture PP/EPDM	thermoplastic rubber
Colours	black	black - light grey (RAL 7035)
Operating temperatures	-50 to +125°C (+150°C short time)	-50 to +125°C
Hardness shore A	55 +/- 5	55 ± 5
Tensile strenght at break	> 4,5 MPa	> 4,5 MPa
Ultimate elongation	> 300 %	> 300 %
Dielectric strenght	35 kV/mm	35 kV/mm
Flame resistance	HB UL94	HB UL94 (internal test)
Applications	_	grommets with membrane allowing closure of unused entries. They ensure a semi-sealing againts dust when cables or conduits pass through their membrane.





Strain relief grommets in black PLIOPRENE TPE



Product name	DGX-TPE	DGX-MULTI TPE
Material	Thermoplastic Elastomer	Thermoplastic Elastomer
Colour	black - light grey (RAL 7035)	black - light grey (RAL 7035)
Operating temperatures	-50°C to +125°C	-50°C to +125°C
Protection	IP 67	IP 67
Applications	sealing grommet is very flexible, simple and quick to assemble without tools, even on curved surfaces. It adapts to the cable diameter and ensures its protection. It can be used as a stopper.	sealing grommet is very flexible, simple and quick to assemble without tools. Allow the passage of 3 cables while maintaining the seal. It adapts to the cable diameters and protects them. It can be used as a stopper.



- Boots in black PLIOPRENE TPE I



Protection, insulation and cable glands / TPE thermoplastic rubber moulded grommets



¦ for female flag crimp terminals ¦





SES

Protection, insulation and cable glands Mouldings in PVC



Product name	DK-DKF-DR-DKP PVC
Material	flexible PVC
Colours	black
Operating temperatures	-30 to +70°C
Hardness Shore A	55 ± 5
Tensile strenght at break	8 MPa
Ultimate elongation	> 250 %
Dielectric strenght	> 20 kV/mm
Specification	HB UL94



PLIO[®] standard grommets DR-DKF-DKP in flexible PVC black 9542

Protection, insulation and cable glands Mouldings in PVC



Product name	DG-MS	DG-MT
Materials	TPE	TPE
Colour	light grey	light grey
Operating temperatures	-30 to +80°C	-40 to +80°C
Protection rating	IP 66 according to EN 60 529	IP 66 according to EN 60 529
Application	hexagonal membrane grommet with screw thread that allows single cables, flat cables or several cables of small diameters to pass through it.	round membrane grommet in TPE to clip in that allows single cables, flat cables or several cables of small diameters to pass through it.





Product name	DO-PVC	DG-PVC
Material	flexible PVC	flexible polyvinyl chloride
Colours	black - grey	black - light grey - white
Operating temperatures	-30°C to +70°C	-30°C to +70°C
Hardness Shore A	55 ± 5	55 ± 5
Tensile strenght at break	8 MPa	8 MPa
Ultimate elongation	> 250 %	> 250 %
Dielectric strenght	> 20 kV/mm	> 20 kV/mm
Specification	HB UL94	HB UL94
Application	for flat wire protection.	closure of unused entries. They allow the passage of cables or conduits through the membrane by ensuring a dust free fit.



Product name	PLIOFIX	PLIOCAP
Materials	TPE and PA	PE, PP and PA6.6
Colours	black - grey	black - grey
Operating temperatures	-20°C to +125°C	-50°C to +85°C (PE), -40°C to +85°C (PP), -40°C to +110°C (PA6.6)
Self-extinguishing	-	V2 UL94 (PA6.6)
Dielectric strenght	-	> 16 (PE), >20 (PP), 26 (PA6.6)
Protection rating	IP 65	-
Application	they allow the passage of cables or conduits through their membranes allowing a dust free fit. They combine the advantages of grommets and a gland. They are in particular compact parts offering ease of use and speedy assembly.	The grommets change angular holes into fully isolated clean and smooth openings. They isolate and protect electric cables passing through a wall. The general version (PC -U) allows cables from Ø 2,6 to 25,2 mm passing through it. The caps (PC -F) designed to close off unused entries. Simple, fast and safe use.











Protection, insulation and cable glands Mouldings in PVC





Product name	FL13	FL21
Material frame	PP glass fibre reinforced	PP glass fibre reinforced
Material insert	TPE	TPE
Colour	light grey (RAL 7035)	light grey (RAL 7035)
Protection index	IP 65	IP 65
Operating temperatures	-20 to +125°C	-20 to +125°C
Certification	EN 60529:1991+A1 EN 60670-1:2005	EN 60529:1991+A1 EN 60670-1:2005
Applications	space saving wiring system very easy to mount for fast, discreet and aesthetic installation. Modular solution, adaptable to most needs, and evolving even after the installation (by changing the inserts). IP65 to ensure protection against dust and moisture.	space saving wiring system very easy to mount for fast, discreet and aesthetic installation. Modular solution, adaptable to most needs, and evolving even after the installation (by changing the inserts). IP65 to ensure protection against dust and moisture.

SES

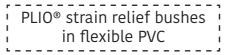
Protection, insulation and cable glands Mouldings in PVC



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Product name	DM-SES	PLIO-PVC
Material	polyamide 6	PVC
Colours / Standard colours	black - white	black, transparent, white, blue, green, yellow, orange, brown, red, violet, grey
Operating temperatures	-20 to +70°C	-25 to +75°C
Hardness Shore A	-	70 +/- 5
Tensile strenght at break	80 MPa	-
Ultimate elongation	> 50 %	350%
Dielectric strenght	60 kV/mm	>20 kV/mm
Flame resistance	V2 UL94 (internal test)	HB UL94









Product name	PLIO	PLIO BA
Materials	PE, PA6, PA6.6, PP	polypropylene
Colours / Standard colours	natural (PE), natural (PA6), natural (PA6.6), natural or black (PP)	white, blue, green, yellow, orange, brown, red, black, grey, pink, lila, natur
Operating temperatures	-50 to +55°C (PE), -20 to +70°C (PA6), -40 to +110°C (PA6.6), -20 to +65°C (PP)	-25°C to +90°C (+120°C short time)
Ultimate elongation	500 % (PE), > 50 % (PA6), 300 % (PA6.6), >150 % (PP)	30 %
Dielectric strenght	60 kV/mm (PA6), 26 kV/mm (PA6.6), 50 kV/mm (PP)	> 20 kV/mm
Flame resistance	V2 UL94 (PA6), V2 UL94 (PA6.6)	-
Application	-	our PLIO-BA boots can be applied over precrimped terminals, therefore they can be used with confidence on automatic application machines.











Protection, insulation and cable glands Grommet strip and PLIO tapes



	6
	100 March 100 Ma
	1.000
	1.2.000

Product name	PLIOBORD for indoor	PLIOBORD for outdoor
Materials	polyethylene (PE), polyethylene non flammable (PE AF)	flexible PVC
Colours	natural (PE), white (PE AF)	black
Operating temperatures	-50 to +85°C (PE), -50 to +75°C (PE AF)	-20 to +90°C
Hardness Shore A	-	90 +/- 5
Tensile strenght at break	> 12 MPa (PE), > 10 MPa (PE AF)	20 MPa
Ultimate elongation	> 550 % (PE), > 600% (PE AF)	300 %
Dielectric strenght	60 kV/mm (PE), 60 kV/mm (PE AF)	20 kV/mm
Chemical resistance	very good (PE), very good (PE AF)	-
Flame resistance	none (PE), V2 UL94 (PE AF)	V2 UL94
Application	protection of cable and conduits from sharp edges in sheet metal work or in panels. Has the advantage of being adaptable to sheet thicknesses from 1 to 4 mm.	used for the protection of outside sides until 1,2 mm thickness.





Product name	SL-303	A-720
Material	silicone rubber	cross-linked polyolefin
Colours	black - red	black
Operating temperatures	-70°C to +250°C	-55°C to +105°C
Shrink temperature	-	> 130°C
Ultimate elongation	> 400 %	-
Dielectric strenght	16 kV/mm	30 kV/mm
Volume resistivity	1015 Ω.cm	-
Specification	After rolling up on the object, the ribbon is welded onto itself by vulcanization and creates a compact and homogeneous insulation.	Heat-shrinkable tape forming on the object which it covers a continuous wall, insulating and tight.



Cable marking Code marker cards



Product name	E8	EV
Material	TEV vinyle covered cotton	PVC transparent
Operating temperatures	-30 to +105°C (class A), -40 to +150°C (short term)	-20 to +70°C
Temperatures of application	+10 to +40°C	+5 to 40°C
Adhesive	special thermal setting adhesive	rubber
Adherence on steel	2,5 N/cm	> 3 N/cm
Tensile strenght at break	80 N/cm	-
Tensile strenght	-	25 N/cm
Dimension of the card	255 x 30 or 40 mm	255 x 82 mm
Print height	1,6 mm	-
Strip number	150 to 156 strips	-
Strip width	3 mm	-
Strip lenght	8 and 12 mm (for wires up to Ø 2,5 mm), 14 mm (for wires up to Ø 4 mm), 19 mm (for wires up to Ø 6 mm), 38 mm (for wires up to Ø 12 mm) 92 mm (for wires up to Ø 28 mm)	-
Strip thickness	0,30 mm	0,15 mm
Standard colour	white	white
Packaging	10 cards same legend (for smaller quantities an extra charge will be applied).	1 card
Specification	-	 Marking by hand (with Nylon-point pen, biro or pencil). Self protection by foil strip. Resistant to oils and light solvents. Possibility of LASER marking for a readable and indelible marking (please contact us).





Cable marking Code marker cards





	Ø < 9,5 mm	
Product name	SM - SMR	ТАВ
Material	TEV vinyl-coated cloth	PVC transparent
Operating temperatures	-30 to +105°C (class A), -40 to +150°C (short term)	-30 to +80°C
Application temperatures	+10 to +40°C	+5 to 40°C
Adhesive	special rubber, thermosetting	acryl
Adherence to steel	2,5 N/cm	> 4 N/cm
Tensile strenght	80 N/cm	-
Strip dimensions	- SM: 38 x 5 mm (for cables Ø < 12 mm) - SMR: 32,5 x 5 mm (for cables Ø < 9,5 mm)	-
Ultimate elongation	-	150 %
Strip thickness	300 µm	120 µm
Pages per book	10	-
Standard colour	white	white
Packaging	1 book	1 card
Legend	6 or 7 repeated legends are printed on each strip. The last one can be removed to mark the corresponding terminal.	_
Specification	_	- Marking by hand. - Self protection by foil strip. - Resistant to oils and light solvents.



Cable marking Code marker cards



Product name	SES-EV	SES-EV
Material	PVC	PET
Operating temperatures	-30 to +80°C	-40 to +125°C
Application temperatures	+5 to +40°C	+10 to 40°C
Adhesive	acryl	acryl
Adherence to steel	> 4 N/cm	> 3 N/cm
Ultimate elongation	150 %	-
Strip thickness	110 µm	80 µm
Dimension of the sheet	-	A4 (210 x 297 mm)
Colours	-	white - yellow
Specification	- Marking by hand. - Self protection by foil strip. - Resistant to oils and light solvents.	- Marking by laser printer. - Self protection by foil strip. - Resistant to oils and light solvents.

Product name	M-MARKERS
Material	flexible PVC
Colour	white
Operating temperatures	-20 to +90°C
Hardness Shore A	80 ± 5
Tensile strenght at break	18 MPa
Ultimate elongation	250 %
Dielectric strenght	>20 kV/mm
Flame resistance	V0 UL94
Applications	Marking of wire and cables from 2,8 to 7,9 mm ext. Ø. Used with our self-protected EV-labels or all other labels, these sleeves allow a fast and reusable cable marking.







Code marker label cards

Product name	S9, S13, S19, S38, S58 and S92
Material	TEV vinyl covered cotton
Operating temperatures	-30 to +105°C (class A), -40 to +150°C (short duration)
Application temperatures	+10 to +40°C
Adhesive	special thermal setting adhesive
Adherence to steel	2,5 N/cm
Tensile strenght at break	80 N/cm
Dimension of the card	255 x 48 mm
Print height	6,3 mm
Quantity strips per card	100 to 152 (according to legend)
Strip size	6 to 9 x 9 mm (according to legend)
Strip thickness	0,30 mm
Standard colours	white - yellow
Pack	10 cards same legend (for smaller quantities an extra charge will be applied).

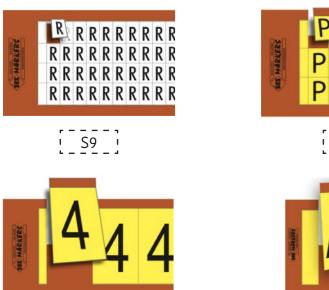


Cable marking

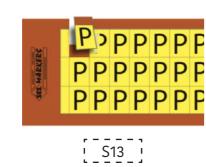
Code marker label cards



Product name	SPOT-IT (Code marker cards with strips SPOT-IT)	SPOT-IT (Sheets with strips SPOT-IT, LASER printable)
Material	TEV vinyl-coated cloth	TEV vinyl-coated cloth
Operating temperatures	-30 to +105°C (class A), -40 to +150°C (short term)	-30 to +80°C
Application temperatures	+10 to +40°C	+10 to +40°C
Adhesive	special rubber, thermosetting	acrylic
Adherence to steel	2,5 N/cm	4,5 N/cm
Tensile strenght at break	80 N/cm	-
Dimension of the card	S19: 255 x 48 mm S38: 255 x 73 mm S58: 255 x 105 mm	-
Strip thickness	0,30 mm	-
Standard colour/s	white - yellow	yellow
Specification	available with or without frame. For an individual mar- king by hand (with nylon point pen, ball point pen, or pencil).	available with or without frame. For a LASER or an individual marking by hand (with nylon point pen, ball point pen, or pencil).



538 S





558 J



S19













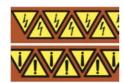
Cable marking

SES markers casettes

Cable marking

Code marker label cards

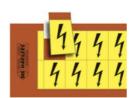




Product name	SPOT-IT (Code marker cards SES-MARKERS with strips SPOT-IT, for printed circuits boards)	SPOT-IT (Code marker cards SES-MARKERS with triangular strips SPOT-IT, Electrical danger)
Material	TEV vinyl-coated cloth	TEV vinyl-coated cloth
Operating temperatures	-30 to +105°C (class A), -40 to +150°C (short term)	-30 to +105°C (class A), -40 to +150°C (short term)
Application temperatures	+10 to +40°C	+10 to +40°C
Adhesive	special rubber, thermosetting	special rubber, thermosetting
Adherence to steel	2,5 N/cm	2,5 N/cm
Tensile strenght at break	80 N/cm	80 N/cm
Dimensions of the strip	2,45 x 4,75 mm	-
Dimensions of the card	255 x 48 mm	-
Strip thickness	0,30 mm	0,30 mm
Standard colours	white - blue - green - yellow - red	yellow
Pack	1 card	-
Specification	used for the location on printed circuits.	used for the warning of the electric dangers and general danger.

Product name	
SES-MARKERS w	/ire r
Material	
Capacity	
Dimensions	
Weight	
Таре	es in
Material	
Lenght	
Width	
Number of legends	

Product name	SPOT-IT (Code marker cards SES-MARKERS with strips SPOT-IT, high tension flash symbol)
Material	TEV vinyl-coated cloth
Operating temperatures	-30 to +105°C (class A), -40 to +150°C (short term)
Application temperatures	+10 to +40°C
Adhesive	special rubber, thermosetting
Adherence to steel	2,5 N/cm
Tensile strenght at break	80 N/cm
Strip thickness	0,30 mm
Standard colours	yellow
Specifications	used for the warning of the electric dangers.







marker cassettes

polypropylene (PP)

5 marker rolls

L 50 mm - Ø 30 mm

24 g (with 5 marker rolls)

n rolls

Polyester (PET)

2,70 m

5,5 mm

600 per roll (approx.)





SES-STERLING®

Cable marking _____ PLIOGRAPH+ and PLIOGRAPH 2000 marker system





Product name	PLIOGRAPH PLUS markers in PVC Type 150	PLIOGRAPH PLUS markers in PVC Type 200
Number of markets per booklet	150	200
Marker width	2,8 mm	2,1 mm
Marker height	3,8 mm	3,8 mm
Print height	2,1 mm	2,1 mm

Carrier - length 25 mm 8 markers type 150	,
A 2 7 B 9 5 E 3	

Carrier - length 25 mm 11 markers type 200	
B CA45 66 F3 2 1	

Accessories	IOI	mounti



Identification mounting tools with concave tab. 4 kinds of mounting tools :

- with a 17 mm prong, to mount up to 5 markers.
- with a 25 mm prong, to mount up to 8 markers.
- with two 17 mm prongs, for simultaneous mounting of 2 identical markers.*
- with two 25 mm prongs, for simultaneous mounting of 2 identical markers.



PLIOGRAPH PLUS plate for PLIOGRAPH PLUS marker distribution • Empty plaque for marker distribution • One plaque is available for 10 x 4 rows -

- i.e 600 markers as total possibility.



PLIOGRAPH 2000 plate for PLIOGRAPH 2000 marker distribution Empty plaque for marker distribution One plate is available for 23 strings of 25 markers. Or a total of 575 markers.

		-		
	1	7	1	
in .			5	

Product name	PLIOGRAPH 2000 markers in PA6 Marker boxes	LMB (Labels PLIOGRAPH PLUS for carriers LASER printed)
Number of markets per string	25 markers	200
Number of markets per box	16	2,1 mm
Print height	2 mm	3,8 mm
Material	-	PET
Operating temperatures	-	-20 to +60°C
Label thickness	-	0,195 mm
Standard colours	-	white - yellow
Specification	-	- printed on a LASER printer - double sided printing: 1 side colour white and 1 side colour yellow



LASER

Cable marking ____ PLIOGRAPH+ and PLIOGRAPH 2000 marker system

ing and removing PLIOGRAPH PLUS for PLIOGRAPH PLUS and PLIOGRAPH 2000 markers

* for PLIOGRAPHPLUS markers only Demounting tool used to remove markers for modifications.



or 20 x 2 rows - of markers.







Cable marking

Polychloroprene wire markers





Product name		HELAVIA - TWIN	HELAVIA LASER - ONE
Material		polychloroprene	polychloroprene
Standard colour		yellow	yellow
Temperature of use		-40 to +90°C	-40 to +90°C
Shore hardness A		40 ±5	40 ±5
Resistance	to light to ozone to petrol to tearing	good good good good	good good good good
Flame resistance		V0 UL94	V0 UL94
Dielectric strengh	t	> 13 kV/mm	> 13 kV/mm
Specifications		black print on both sides protected by a coat	LASER engraved on 1 side
Application		the markers give a neat professional appearance. Due to their great elas- ticity and thin wall, they close fit the cable and remain firmly in position.	LASER-ONE marking rings allow cable identification prior to connection. The identification is clean, indelible and unalterable.

Cable marking

Polychloroprene wire markers



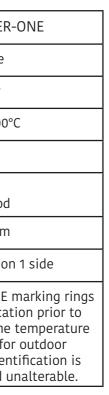
Product name		HELAVIA - RELIEF	SILAVIA - TWIN (markers semi-cut)
Material		polychloroprene	silicone
Standard colour		yellow	yellow
Temperature of use		-40 to +90°C	-80 to +200°C
Shore hardness A		30 ±5	40 ±5
Resistance	to light to ozone to tearing	good good good	good very good -
Dielectric strenght		> 13 kV/mm	18 kV/mm
Specification		HB UL94 - FMVSS302	-
Specifications		raised legends on 1 side - black-coloured	black print on both sides protected by a coat
Application		HELAVIA markers are moulded with raised legends. Legends can even be read when they are covered with dust deposits, ink, coloured liquids or other products.	the markers give a neat professional appearance. Due to their great elasticity and thin wall, they close fit the cable and remain firmly in position.

Product name	SILAVIA LASER
Material	silicone
Standard colour	yellow
Temperature of use	-80 to +200
Shore hardness A	40 ±5
Resistance to light to ozone	good very good
Dielectric strenght	18 kV/mm
Specifications	laser engraved o
Application	The SILAVIA LASER-ONE allow cable identifica connection, in extreme environments or fo applications. The ider clean, indelible and u

















Product name	PLIO-V-MARKERS	PLIO-M-MARKERS
Material	flexible PVC	flexible PVC
Operating temperatures	-20 to +90°C	-20 to +90°C
Hardness Shore A	80 ± 3	80 ± 3
Tensile strenght at break	18 MPa	18 MPa
Ultimate elongation	250 %	250 %
Dielectric strength	> 20 kV/mm	> 20 kV/mm
Flame resistance	V0 UL94	V0 UL94
Application	to identify wires and cables of o.d. 0,6 to 8 mm.	to identify wires and cables of o.d. 0,6 to 8 mm.

Tensile strenght at break	18 MPa
Ultimate elongation	250 %
Dielectric strength	> 20 kV/mm
Flame resistance	V0 UL94
Pack	reels with 500 m
Application	to identify PLIO c
Product name	PLIO M-65 N

		3800
Product name	PLIOSTRAP-8	PLIO M-***
Material	strapping: PVC marking ring: PVC locking stud: PS cable tie: PA 6.6	PVC and PE
Operating temperatures	-20 to +60°C	-20 to +95°C (PVC), -50 to +85°C (PE)
Shore hardness	-	95 ± 5 (Shore A, PVC), 44 (Shore D, PE)
Tensile strenght at break	-	20 MPa (PVC), 16 MPa (PE)
Ultimate elongation	-	300 % (PVC), 550 % (PE)
Applications	system for the identification of cables in the field of lighting, light signals and various other installations of outdoor space supplied at low voltage.	for the identification of large cables and tubes.



Product name

Hardness Shore A

Operating temperatures

Material

Colour

Cable marking Plio PVC wire markers





3800	335KR/R4
PLIO M-65	PLIO M-***-M2
PVC	PVC
-20 to +90°C	-20 to +95°C
-	yellow
80 ± 3	95 ± 5 (Shore A)
18 MPa	20 MPa
250 %	300 %
> 20 kV/mm	-
V0 UL94	V0 UL94 M2 CSTB
s with 500 markers	-
entify PLIO carriers.	for the identification of large cables and tubes.





M2	Marker carriers PLIO M-*** PP
VC	РР
	white - black
°C	-20 to +90°C
	-
	22 MPa
	-
m	-
3	V0 UL94
markers	-
M2 carriers.	identification in halogen free appli- cations requiring high fire resistance (ex: tunnel, rolling material, rail).









Product name	Markers PLIO M-65 TPU	PLIO PP MDE
Material	TPU	PP with metal particles
Operating temperatures	-30 to +90°C	-20 to +70°C
Colour	white - yellow	metal blue
Chemical resistance	-	good resistance to acids, bases and detergents.
Hardness Shore A	77 ± 5	-
Tensile strenght at break	30 MPa	-
Ultimate elongation	600 %	-
Flame resistance	V0 UL94	-
Pack	reels with 500 markers	-
Specifications	-	halogen free adapted to the success of a HACCP* processes.
Application	with our PP marker carriers or directly on cables with Ø 4,2 to 6,6 mm. In halogen free applications requiring a high flame resistance (ex: tunnel, rolling material, rail).	The presence of metal particles in the identification carriers or markers allows easy detection thanks to any metal detector. This identification system is thus used in electrical equipment boxes or chains of pro- duction in food and pharmaceutical industries to limit the risks of product contamination.





Product name	PLIOTEX-V plus	PLIOFAST
Material	flexible PVC	flexible PVC quality 9940
Operating temperatures	-20 to +90°C	-20 to +90°C
Hardness Shore A	85 ± 3	90 ± 5
Tensile strenght at break	20 MPa	25 MPa
Ultimate elongation	300 %	240 %
Dielectric strength	-	20 kV/mm
Density	1260 kg/m₃	-
Volume resistivity	-	3 x 1012 Ω.cm
Print height	-	3 mm
Flame resistance	V0 UL94	_
Application	to identify wires and cables of o.d. 1 to 25 mm.	identification of cables from 0,75 to 25 mm2.



Product name	OPTO-MARKERS TC-9	OPTO-MARKERS TC-27
Material	PVC	flexible PVC quality 9732
Operating temperatures	-20 to +90°C	-20 to +90°C
Hardness Shore A	80 ± 3	80 ± 3
Tensile strenght at break	18 MPa	18 MPa
Ultimate elongation	250 %	250 %
Dielectric strength	> 20 kV/mm	> 20 kV/mm
Flame resistance	V0 UL94	V0 UL94
Special print	please consult us.	please consult us.
Application	identification of fibre optic from 0,2 to 0,4 mm ext. Ø with double sided print (except black markers).	identification of fibre optic from 1,6 to 2,5 mm ext. Ø with double sided print (except black markers).



















Product name	PLIOGRIP	PLIO SNAP+
Material	РОМ	POM
Operating temperatures	-40 to +90°C	-40 to +90°C
Tensile strenght at yield	54 N/mm ₂	45 MPa
Elongation at break	30 %	40 %
Dielectric strength	28 kV/mm	20 kV/mm
Elasticity	2100 N//mm2	1800 MPa
Flame resistance	HB UL94	HB UL94
Application	applied by clipping direct to wires and cables of sections 0,15 - 6 mm ₂ before or after connection.	marking of cables on connector block after connection, even in difficult places.

Children and	



Product name	PLIOCLIP	HELAVIA® LASER
Material	Polyamide 6.6	polychoprene rubber
Operating temperatures	-30 to +100°C	-30 to +90°C
Shore hardness A	-	40 + 5
Tensile strenght at yield	65 N/mm2	-
Elongation at break / Ultimate elongation	300 %	> 600 %
Elasticity / Resistance to ozone	1300 N//mm2	good
Dielectric strength	26 kV/mm	> 13 kV / mm
Flame resistance	V2 UL94	V0 UL94
Application	Applications: markering of wires and cables of Ø 2,2 to 6 mm (sections 0,5 to 6 mm ₂) before or after connection. This markering system is equipped with a security locking equivalent to that of a closed ring.	HELAVIA® LASER marker sleeves allow aesthetic and space-saving identifi- cation thanks to their thin wall which makes them integral with the cable. LASER engraved, they guarantee high quality, indelible and tamper-proof marking, resistant to abrasion, harsh environments and weather conditions.





			EXH-1 .402
Product name		SILAVIA LASER	PLIO
Material		silicone rubber	PVC
Standard colours		-	white (001) - blue (002) yellow (004) - red (007)
Operating tempera	tures	-80 to +200°C	-
Temperatures of u	se	-	-20 to +90°C
Shore hardness A		40 + 5	90 ± 5
Tensile strenght at	: break	-	20 N/mm ₂
Ultimate elongatio	n	> 500 %	300 %
Dielectric strength		18 kV/mm	20 kV/mm
Resistance	to light to ozone	good very good	good good
Minimum available	9	-	250 pieces per type and print
Specification		halogene free	_
Application		in addition to its good elasticity, silicone rubber is characterised by its temperature resistance and excellent resistance to ozone for applications subject to high temperatures or out- doors.	-







SES



Cable marking Plio PVC wire markers





	HA HI HA HA HA OIQ AC MILLER	
Product name	PLIOFINE B-EX / PLIO-R (shrink ratio 2/1 or 3/1)	Printed boots
Material	cross linked Polyolefine or PVC	PVC
Printable sleeving	Ø 1,6 to 32 mm before shrinking for cut sleeves Ø 3,2 to 12,7 mm before shrinking for pre-cut sleeves	-
Print	in 1 or several lines	-
Minimum	100 identical sleeves	-
Specifications	Print of non standard signs, logos and other graphics: extra charge depending on price list (0357 0904 000).	-
	Put into action according to the price list (0357 9999 000)	
Operating temperatures	-	-25 to +75°C
Hardness Shore A	-	70 ± 5
Ultimate elongation	-	350 %
Dielectric strength	-	> 20 kV/mm
Flame resistance	-	HB UL94
Application	-	for the insulation and the marking of crimp terminals.
Minimum quantity	_	printing on 1 side upon request: alphanumeric characters, symbols, other qualities (PE or PA). Please contact us.





Product name	PLIO [®] carriers	PLIO [®] carriers
Material	PVC flame resistant PP flame resistant	flexible PVC (quality 9920)
Operating temperatures	-20 to +90°C (PVC flame resistant) -20 to +90°C (PP flame resistant)	-20 to +90°C
Specifications	V0 UL94 (PVC flame resistant) V0 UL94 halogen free (HF) (PP flame resistant)	V0 UL94
Applications	our carriers are designed to respond to the need for speed of application, retro-marking, larger diameter cables and other applications. Laser engraving guarantees a high-quality marking that is resistant to abrasion and environmental influences.	-



Product name	INOX laser	INOX embossed
Material	stainless steel 316	stainless steel 316
Operating temperatures	-80 to +500°C	-80 to +500°C
Specifications	good resistance to acids and chemicals, not flammable, excellent resistance to aging, unchanging	good resistance to acids and chemicals, not flammable, excellent resistance to aging, unchanging
Application	for identifying cables and tubes in extreme conditions, use in harsh environments, corrosive atmospheres or high level of fire resistance • Engraving from computer files. • Engraved identification, indelible,	for identifying cables and tubes in extreme conditions, use in harsh environments, corrosive atmospheres or high level of fire resistance. • Embossing from computer files. • Identification in relief indelible,
	proof and permanent.	proof and permanent.





















Product name	HZ-2 (Hot printing unit)	TP15 / TP10
Activation	manual	by pneumatic pedal with delay and pressure regulation. Pressure: 7 bar.
Cable diameter	cable Ø 1,5 to 25 mm maxi.	cable Ø 1 to 7 mm (TP15) cable Ø 8 to 12 mm (TP10)
Print height	1,5 to 2,3 mm up to max. 10 wheels	1,2 to 2,3 mm (TP15) 2,5 to 4 mm (TP10)
Quantity of printed wheels	-	15 wheels maxi. (TP15) 10 wheels maxi. (TP10)
Pack	1 complet without wheel	-
Specification	-	bench hot printing unit for small and medium series, providing a legible, durable and resistant marking.
Applications	mobile hot printing unit for wiring assembly points, difficult places of access (electrical equipment box), for marking of connected cables	-





Product name	PLIOSCRIB M-1Std.III	PLIOSCRIB M-1ProV
Weight	2 kg	2 kg
Dimensions (W x L x H)	300 x 250 x 85 mm	300 x 250 x 85 mm
Printing speed	25 mm/s	40 mm/s
Resolution	300 x 300 dpi	300 x 300 dpi
Character sizes	2 - 3 - 6 mm	1,3 - 2 - 2 - 3 - 6 mm
Number of lines	2 lines	3 lines
Print data	approx. 2500 characters	approx. 5000 characters
File storage	7500 characters	60000 characters
PC connectivity	no	USB 2.0 interface
Supported OS	-	Windows 7 - 8 - 8 - 8.1 - 10
Supplied with	1 power cable 1 soft case 1 guide for profiles and sleeves 1 black printing ribbon (40 m)	1 power cable 1 soft case 1 software M-1Pro PC 1 USB connection with its cable 1 guide for profiles and sleeves 1 black printing ribbon (40 m)



Product name	SES-PREMO
Dimension of the press	207,5 x 152 x 140 mm
Weight	4,480 kg
Application	Designed for the marking of CH-M plates for the identification of cables, conduits and posts, both in outdoor and underground, particularly in the field of telecommunications.



















Product name	GN-A6/4 LF	GN-HF-A6/4
Material	Rigid PVC quality 9051 LF	PC/ABS
Colour	grey RAL7030	light grey RAL7035
Operating temperatures	-5 to +65°C	-25 to +90°C
Volume resistivity	1015 Ω.cm	1015 Ω.cm
Dielectric strength	15kV/mm	35kV/mm
Flame resistance	V0 UL94	V0 UL94
Specification/s	DIN 5510-2	NF F 16-101/102, DIN 5510-2, EN 45545-2, halogene free
Standard length	2 meters	2 meters
Double sided adhesive	upon request	upon request
Minimum delivery	1 complete packing (with lids)	1 complete packing (with lids)





Product name	GN-A6/4 blue	GF-DIN-A7/5
Material	rigid PVC quality 9051 LF	Rigid PVC quality 9051 LF
Colour	light blue, RAL 5015	grey RAL7030 - black
Operating temperatures	-5 to +65°C	-5 to +65°C
Volume resistivity	10₁₅ Ω.cm	1015 Ω.cm
Dielectric strength	15kV/mm	15kV/mm
Flame resistance	V0 UL94	V0 UL94
Standard length	2 meters	2 meters
Double sided adhesive	upon request	upon request
Minimum delivery	1 complete packing (with lids)	1 complete packing (with lids)
Application	integrally safe areas.	-



Fixations Cable Trunking



Product name	GF-DIN-SH-A7/5	GF-DIN-C-A12/8
Material	PC/ABS	Rigid PVC quality 9051 LF
Colour	light grey RAL7035	grey RAL7030 - black
Operating temperatures	-25 to +90°C	-5 to +65°C
Volume resistivity	1015 Ω.cm	1015 Ω.cm
Dielectric strength	35kV/mm	15kV/mm
Flame resistance	V0 UL94	V0 UL94
Specification/s	EN 45545-2 NF F16-101/102 - DIN 5510-2 halogene free	-
Standard length	2 meters	2 meters
Double sided adhesive	upon request	upon request
Minimum delivery	1 complete packing (with lids)	1 complete packing (with lids)



Product name	GF-A12/8	GF-DIN-PPDA
Material	rigid PVC quality 9051 LF	Rigid PVC quality 9051 LF
Colour	grey RAL7030	grey RAL7030
Operating temperatures	-5 to +65°C	-5 to +65°C
Density	1,56	1,56
Volume resistivity	1015 Ω.cm	1015 Ω.cm
Dielectric strength	15kV/mm	15kV/mm
Specifications	V0 UL94 CSTB:M2	V0 UL94 CSTB:M2
Standard length	2 meters	2 meters
Double sided adhesive	upon request	upon request
Minimum delivery	1 complete packing (with lids)	1 complete packing (with lids)
Applications	used with cable of large diameter	-









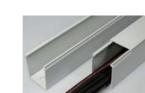








Fixations Cable Trunking



Product name	GN-S LF	GN-HF-S
Material	Rigid PVC quality 9051 LF	PC/ABS, halogen free
Colour	grey RAL7030	light grey RAL7035
Operating temperatures	-5 to +65°C	-25 to +90°C
Volume resistivity	1015 Ω.cm	1015 Ω.cm
Density	1,56	-
Dielectric strength	15kV/mm	35kV/mm
Specification/s	V0 UL94 DIN 5510-2 S3, SR1, ST2	V0 UL94 NF F 16-101/102 : I3/F2 DIN 5510-2 : S4-SR2-ST2 EN 45545-2 : R22 HL3, R23 HL3
Standard length	2 meters	2 meters
Double sided adhesive tape	on request	on request
Minimum quantity	1 complete pack (incl. lids)	1 complete pack (incl. lids)

3



		GI-A GI-B GI-VIDEO'
Product name	GF-DIN-SH-S	GI
Material	PC/ABS, halogen free	PVC quality 9051 LF
Colour	light grey	white cream (RAL 9001) grey (RAL 7030)
Operating temperatures	-25 to +90°C	-5 to +65°C
Density	-	1,56
Volume resistivity	10 ₁₅ Ω.cm	1015 Ω.cm
Dielectric strength	35kV/mm	15kV/mm
Specifications	V0 UL94 NF F 16-101/102 : I3/F2 DIN 5510-2 : S4-SR2-ST2 EN 45545-2 : R22 HL3, R23 HL3	V0 UL94
Standard length	2 meters	2 meters
Double sided adhesive tape	on request	on request
Minimum quantity	1 complete pack (incl. lids)	1 complete packing (with lids)



Fixations Cable Trunking

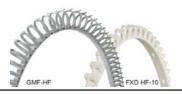


Product name	GI-M	GMF - FXD
Material	rigid PVC modified choc polypropylene, quality flame resistan	
Colour	white (RAL 9001)	light grey RAL 7035
Operating temperatures	-20 to +60°C -40 to +70°C (fixing with s -40 to +60°C (fixing with adhe	
Volume resistivity	10 ₁₄ Ω.cm	-
Density	1,53	-
Dielectric strength	15kV/mm	-
Specification/s	V0 UL94	V2 UL94 halogen-free
Standard length	2 meters	-
Minimum quantity	1 complete pack (with hinged lid)	-
Application	-	PLIOFLEX is a flexible cable trunking system for use in control panels, distribution boards, or in difficult to reach areas.



Product name	XE		PLIOLINE GV
Material	polyamide 6	polypropylene	rigid PVC modified choc, quality 9057
Colour/s	natural	black	-
Operating temperatures	-20 to +85°C	-20 to +65°C	-20 to +60°C
Density	1,13	0,90	-
Volume resistivity	10 ₁₃ Ω.cm	1016 Ω.cm	10 ₁₄ Ω.cm
Dielectric strength	> 20 kV/mm	> 20 kV/mm	15kV/mm
Flame resistance		-	V0 UL94
Specifications	-		Complies with EDF HN 60 S 02 tech- nical specification. UV and weather resistant. Impact resistant according to HN 60- E-03. Colour grey according to norm NF X 08-002/A640 and near RAL 7001.
Minimum quantity	1 complete pack		-











Fixations Cable Trunking

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Product name	AP 4	AA 45
Material	PVC	PVC
Colour	grey	grey and light grey
Operating temperatures	-20 to +60°C	-20 to +60°C
Flame resistance	V0 UL94	V0 UL94
Application	profile used for switch boards and panels, specially adapted for assembling two protection screens.	cover profile for switch boards and electrical panels.

SES cutting tool special for conduit trunking



000 D4/6-01



DX-110 cutter for trunking 0518 0918 000 D4/6-01



Fixations Cable Clamps

SEC.



		8885
Product name	SES-CM	SES-CX
Material	polyamide 6	polyamide 6
Colour	black	black
Operating temperatures	-20 to +70°C	-40 to +130°C
Tensile strength at break	-	45 MPa
Capacity	3 to 7,5 mm according to type	-
Resistance	-	to ageing, ozone, UV radiation and corrosion.
Flame resistance	V2 UL94	V2 UL94
U.V. resistance	good	-
Application/s	adjustable miniature cable clamps which are ideal for fixing cables.	SES-CX moulded "P" clips can clamp a wide range of cable diameters as they are equipped with adjustable slots.



Product name	SES-CX rubber sleeved	SES-CX with foam coating
Material	polyamide 6	polyamide 6
Colour	black	black
Sleeving / Coating	polychloroprene	polychloropren foam
Operating temperatures	-30 to +90°C	-40 to +70°C
Tensile strength at break	45 MPa	45 MPa
Resistance	to ageing, ozone, UV radiation and corrosion.	to ageing, ozone, UV radiation and corrosion.
Flame resistance	V2 UL94	V2 UL94
Dielectric strength	>13 kV/mm	>13 kV/mm
Application/s	SES-CX moulded "P" clips can clamp a wide range of cable diameters as they are equipped with adjustable slots. The rubber sleeve will be found indispensable for clamping sensitive equipment or elements subjected to vibration.	SES-CX moulded "P" clips can clamp a wide range of cable diameters as they are equipped with adjustable slots. They will be found indispensable for clamping sensitive equipment or elements subjected to vibration.















Product name	SES-CV	SES-CN	SES-SP
Material	hard-PVC	polyamide 6	polyamide 6.6
Colour	grey	black	black
Operating temperatures	-20 to +65°C	-40 to +130°C	-40 to +80°C
Adhesive		_	adhesive foam protected by release paper.
Resistance	to ageing, ozone, UV radiation and corrosion.		-
Flame resistance	V2 UL94	HB UL94	V2 UL94
Dielectric strength	35 kV/mm	60 kV/mm	550 kV/mm
Application/s	preformed clips for everyday use for cables or bundles.		clamp with adhesive base with clip for closing, for fixing of cables. It can be fixed on the support by a screw M4 or using an adhesive at the places where drilling is impossible. The opening of the support is carried out using a screwdriver. It is advaisable to read the instructions for the particular ad- hesive being used, for example "using on a clean and smooth surface".





Product name	SES-CT	SES-GFB
Material	high impact Polystyrene	aluminium
Colour	light grey RAL7035	natural alu
Operating temperatures	-40 to +70°C	-40 to +70°C
Adhesive	-	adhesive foam protected by a film
Adhesion	-	0,7 N/cm2 (e.g. stainless steel)
Dielectric strength	150 kV/mm	-
Pack	10 carriers of 10 pre-cut cable clamps	-
Application/s	guide and route wires	cable clamps are ideal when plastic clamps cannot be used. They are of little bulk and hold wires or cables by manual locking (no tool). They are easy to fix when conditions concern- ing adhesive supports are respected.



Fixations Cable Clamps



Product name	SAF	Set screws SES
Material	galvanized steel	polyamide 6.6
Colour	white	natural
Operating temperatures	-30 to +60°C	-30 to +85°C
Adhesive	acrylic on polyethylene foam	-
Density	-	1,14 (7 times less than steel)
Dielectric strength	-	25 kV/mm
Application/s	recommended in environments where drilling is not allowed (noise and/or dust) as in the corridors of hospital services in activity. They can also be used when drilling is not possible or when the area is difficult to access. The metal tab can be deformed and adapted to all types of conductors up to an overall diameter of 16 mm.	ideal for fixing cable clamps, strappings or other cabling accessories, particularly where conditions deny the use of metallic devices.



Product name	PLIOCATCH with rivet	PLIOCATCH GA-W
Material	PA	РА
Colour	natural - black	black
Operating temperatures	-40 to +85°C	-40 to +85°C
Flame / fire resistance	V2 UL94	V2 UL94
Application/s	fixing system with rivet for machines or electrical cabinet. The range includes 4 models in two colours to meet different constraints. These cable locks allow the addition or the removal of cables for a small footprint.	The PLIOCATCH GA-W 2400 is recom- mended for horizontal and vertical cable passage at the front or rear of modular elements. Its fixation is en- sured by means of its innovative W clip to fit all square holes 9,5 x 9,5 mm up to 12,5 x 12,5 mm. Installation is possi- ble on the sections, rails or perforated sheet and a thickness of 1.5 (9,5 x 9,5) and 1,5 to 2,0 mm (10 x 10 to 12,5 x 12,5). The upper part is provided with a hinge and a snap closure, releasable at any time. Once the cables in place, the PLIOCATCH can thus be closed and the maintenance of the cables. Its capacity is equivalent to that of a trough 60 x 40 mm.















Product name	SES-QUICK SX
Material	polyamide 6.6
Colour/s	natural - black
Serration	inside
Operating temperatures	-40 to +85°C (+150°C short time)
Melting point	+260°C
Specification	V2 UL94
	-
	-
Application/s	Cable tie for general use for the main- tenance of cables and wire harnesses. With its open head, inserting the strip is done easily and quickly.



Snap-in SES-QUICK cable ties inside serrations



Push-in rivet base K in PA 6.6

Product name	Series T	SES-QUICK SL-COLOR
Material	polyamide 6.6	PA 6.6 halogen free
Colour/s	natural - black	white, blue, green, yellow, orange, brown, red, violet, grey, black
Operating temperatures	-40 to +85°C (+150°C short time)	-40 to +85°C (+150°C short time)
Melting point	+260°C	+260°C
Serrations	inside serrations	inside serration
Ultimate elongation	60 %	60 %
Flame resistance	V2 UL94	V2 UL94
Dielectric strength	27 kV/mm	27 kV/mm
Application/s	cable ties with mounting hole for particular indoor use. Screw fixing.	coloured cable ties commonly used for the maintenance of cables and harnesses. They can also be used for the identification of electric cables. Easy installation by hand or with a tightening tool.

Cable Tier ...

SES-QUICK SL-V0 (AF)	SES-QUICK SE-V0 (AF)
polyamide 6 flame resistant, halogen free	polyamide 6 flame resistant, halogen free
white - black	white - black
inside	outside
-40 to +100°C	-40 to +100°C
+220°C	+220°C
V0 UL94	V0 UL94
material approved according to the standards fire-smoke NF F 16-101/102 and EN 45545	material approved according to the standards fire-smoke NF F 16-101/102 and EN 45545
cable ties adapted for fixing beams and flexible cables. Their inside serrations ensure efficient maintenance of cables. Recommended in applications requiring high fire resistance and self-extinguishing materials (eg. Rolling material, aerospace, rail, tunnel,). Flame retardant system halogen and red phosphorus free which emit toxic gases under fire.	cable ties used in high vibration environ- ments without damaging the cables. Recommended in applications requiring high fire resistance and self-extinguishing materials (eg. Rolling material, aerospace, rail, tunnel,). Flame retardant system halogen and red phosphorus free which emit toxic gases under fire.

Fixations 🦯 Cable Ties	5	
Product name	SES-QUICK SL-V0 (AF)	SES-QUICK SE-V0 (AF)
Material	polyamide 6 flame resistant, halogen free	polyamide 6 flame resistant, halogen free
Colour/s	white - black	white - black
Serration/s	inside	outside
Operating temperatures	-40 to +100°C	-40 to +100°C
Melting point	+220°C	+220°C
-lame resistance	V0 UL94	V0 UL94
Specifications	material approved according to the standards fire-smoke NF F 16-101/102 and EN 45545	material approved according to the standards fire-smoke NF F 16-101/102 and EN 45545
Application/s	cable ties adapted for fixing beams and flexible cables. Their inside serrations ensure efficient maintenance of cables. Recommended in applications requiring high fire resistance and self-extinguishing materials (eg. Rolling material, aerospace, rail, tunnel,). Flame retardant system halogen and red phosphorus free which emit toxic gases under fire.	cable ties used in high vibration environ- ments without damaging the cables. Recommended in applications requiring high fire resistance and self-extinguishing materials (eg. Rolling material, aerospace, rail, tunnel,). Flame retardant system halogen and red phosphorus free which emit toxic gases under fire.



Product name	SES-QUICK SL-PP	SES-QUICK BIO
Material	polypropylene	biodegradable polyester
Colour/s	brown	natural
Operating temperatures	-20 to +70°C (+110°C short time)	-20 to +70°C (+90°C short time)
Melting point	+160°C	+120°C
Serrations	inside	inside
Ultimate elongation	-	330 %
Specifications	Highly resistant to acids, alkalis and de- tergents. Material complies with regula- tions on products in contact with food.	biodegradable material according to NF EN 13432: 2000 and ASTM D6400.
Application/s	cable ties recommended for use in the field of food processing.	fasteners for holding and fixing cables, cable harnesses and various items for temporary use (pre-assembly operations, maintenance work, construction sites, events, etc.).
Storage conditions	-	keep away from humidity, heat and light to avoid any degradation of the product before use. Made of biodegradable ma- terial, these fasteners have a limited life span.



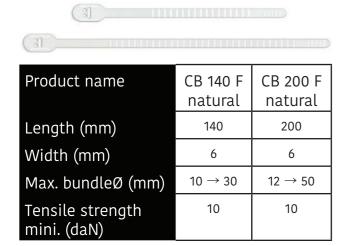








Product name	PLIO-GRAINS
Material	PA (polyamide 6) PP (polypropylene)
Colour/s	natural - black natural
Operating temperatures	-20 to +85°C -20 to +75°C
Flame resistance	V2 UL94 -
Application/s	outdoor use for black colour standard use



Product name	SES-160/90 SF-D natural	SES-160/90 SF-C natural
Length (mm)	165	165
Width (mm)	9	9





Product name	PLIOTER earth straps	SES-WRAP
Strap	tinned bronze	hooks: polyethylene strap: nylon PA
Operating temperatures	-	-20 to +105°C
Cap and wire-strainer	electrogalvanized steel	-
Section	2,5 to 50 mm2	-
Specification	conform to norm NF C15-100	-
Application	designed for grounding electrical installations and metal conduits. The range covers a range of conduc- tors from 2,5 to 50 mm2 and tubes from 8 to 88 mm Ø. The flange and cable are fixed by screwing.	used for fixing of delicate cables, organization of cables Out of velour-laminate, SES-WRAP ties spare the cables and have the advantage of being adjustable and reusable.

SES-Sterling®

Fixations Cable Ties



Product name	INOX-BALL-QUICK	INOX-MUI	_TI-QUICK
		IMQ N316	IMQ R316
Coating	-	-	polyester
Material	stainless steel 304 or 316	stainless steel	stainless steel
Operating temperatures	-80 to +540°C	-80 to +540°C	-30 to +150°C
Thickness	0,265 mm	0,279 mm	0,46 mm
Flame resistance	non-flammable	non-flammable	-
U.V. resistance	very good	excellent	very good
Specification	certification UL 62275	-	-
Application/s	for cables or flexible tubing. 304: recommended in extreme tem- perature applications or flammable like food, chemical, medical 316: recommended in applications with risk of corrosion, such as shipbuilding, mining, petrochemical, textile High resistance to corrosion.	these ties can be tightened in steps due to a unique multiple locking system. To apply with a hook or with tensioner on rigid or flexible support. 316: recommended in extreme tem- perature applications and corrosion 316 coated: recommended for fragile insulated cables.	





Туре	K111
Description	manual pulling cutting
For ties	INOX-BALL-QU & INOX-MULTI-QI
Weight (g)	550







Fixations Cable Ties



Fixations Cable Ties Tools for cable ties SES-QUICK



Product name	F-50	F-200
Handle	plastic	plastic
Tensile strength	-	4 to 11 daN (4 tensile strengths)
Length	170 mm	160 mm
Width	70 mm	130 mm
Weight	60 g	200 g
Application	simple cable tie tool, without dyna- mometric cutting device for cable ties up to 4,8 mm width.	adjustable dynamometric tool for cable ties up to 4,8 mm width. When cables are bundled at the required strength, the excess tie tail is auto- matically cropped.



Product name	F-301	F-350
Handle	plastic	metallic
Tensile strength	4 to 11 daN (8 tensile strengths)	1 to 9 daN (4 tensile strengths)
Length	170 mm	160 mm
Width	130 mm	130 mm
Weight	270 g	300 g
Application	comfortable and ergonomic adjust- able dynamometric tool for SES-QUICK cable ties up to 4,8 mm width. When cables are bundled at the required strength, the excess tie tail is automatically cropped.	adjustable dynamometric tool for SES-QUICK cable ties up to 4,8 mm width. When cables are bundled at the required strength, the excess tie tail is automatically cropped.

Product name	SM6	SM66+
Material	Polyamide 6	Polyamide 6.6 modified

Material	Polyamide 6	Polyamide 6.6 modified	Polyamide 12
Colours	black	black	black
Temperatures of use	-20 to +70°C +120°C short time	-40 to +70°C +120°C short time	-40 to +60°C +120°C short time
Specifications	good resistance against U.V. V2 UL94	protected against U.V. HB UL94	protected against U.V. conform to norm NFC20540 HB UL94
Application	For indoor use	For indoor and outdoor use	For indoor and outdoor use

Accessories - tie bases SES for cable ties SL - SE - SR and SM lashing ties



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SM12

Product name	Wall plug
Information	The tie bases with wall plug in polyamide, black colour, are designed to be used with our cable ties for installation series SM width 9 mm. It is recommended to use the tie bases in PA6 for an interior use and the tie bases in PA12 for an external use.



Product name	SES-SC HT
Material	PA 6.6 HT (high temperatures), UV stabilized
Colour	black
Temperatures of use	-40 to +115°C
Flame resistance	V2 UL94
Applications	system for attachment through the wall, with a blanking head which covers hole both inside and outside of the chassis. Dome head to facilitate the passage of the cables in the chassis. It is compatible with SES-QUICK cable ties of 4.6 and 4.7 mm width















SES-STERLING®

Fixations Cable Ties Tools for lashing ties SES-SM

	7,6 13 mm	7,6 9 mm
		C. C
Product name	F-90	F-95
Handle	metallic	metallic
Length	190 mm	200 mm
Width	100 mm	90 mm
Weight	300 g	320 g
Clamping range	-	2,5 to 10daN
Application	tool without dynamometric device for lashing ties SM, SE and SL from 7,6 to 9 mm width. When cables are bundled to the required strength, press on the	tool with dynamometric device for lashing ties SM, SE, SL and LT from 7,6 to 13 mm width. When cables are bundled, the excess tie tail is auto-

small handle to cut off the excess

tie tail.



matically cropped.



Tools and machines

Sleeve expanders

SES sleeve expanders series KP Ultra lightweight in PLIO®-Carbox for SES binding

These sleeve expanders are ideal for use with original HELAVIA and SILAVIA sleeves.



SES-KP 1 sleeve expander for sleeves A0 - A1 - A1bis

SES-KP 2 sleeve expander for sleeves A1 - A1bis - A1K - A2 - A2K - A3

SES-KP 3 sleeve expander for sleeves A2 - A2K - A3 - A4 - A5

SES-KP 4 sleeve expander for sleeves A5 - A8 - Å9 - A10

up to 4,5 mm Ø max.

up to 9 mm Ø max.

up to 15 mm Ø max.

up to 28 mm Ø max.



Tools and machines Sleeve expanders

SES-KN and SES-KNS sleeve expander in Polyamide for sleeves A0 - A1 - A1bis - A1K - A2





KN with 3 prongs

KNS with 2 prongs

SES sleeve expanders series KY Ultra lightweight in PLIO®-Carbox for SES binding

These sleeve expanders are ideal for use with original HELAVIA and SILAVIA sleeves.



SES-KY 1 sleeve expander for sleeves A0 - A1 - A1bis

up to 4,5 mm Ø max.

SES-KY 2 sleeve expander for sleeves A1 - A1bis - A1K - A2 - A2K - A3

SES-KY 3 sleeve expander for sleeves A2 - A2K - A3 - A4 - A5

SES-KY 4 sleeve expander for sleeves A5 - A8 - A9 - A10

up to 9 mm Ø max.

up to 15 mm Ø max.

up to 28 mm Ø max.



SES-H bench mounted sleeving tool

with foot pedal,

for sleeves A2 - A2K - A3 - A4 - A5

Foot pedal H









Tool H

Prongs H

SES-X bench mounted sleeve expander with hand operated lever for sleeves A5 - A8 - A9 - A10



Tool X





Manual wire strippers and stripping machines Tools and machines /

SES automatic stripping pilers and precision tools

Product name	SES - 6010	SES-4010 (standard)
Material	PLIO-Carbox black	Zamak (zinc alloy) PVC insulated handles
Material blades	special tool steel	special tool steel
Sections	0,15 to 6 mm2	0,15 to 10 mm2
Weight	200 g	360 g
Length	180 mm	180 mm



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Product name	SES-4011 (flat cable)	SES-5012 photovoltaic
Material	Zamak zinc alloy white PVC insulated handles	Zamak zinc alloy white PVC insulated handles
Material blades	special tool steel	special tool steel
Sections	flat cables: 2x 0,5 to 2x 1 mm2 round cables: 1,5 mm2	1,5 - 2,5 - 4 - 6 mm2
Weight	360 g	360 g
Length	180 mm	180 mm





Product name	SES-5011 (teflon)	SES-DK (kapton)
Material	Zamak zinc alloy white PVC insulated handles	Zamak zinc alloy white handles insulated
Material blades	special tool steel	special tool steel
Sections	30 to 10 AWG	26 to 10 AWG
Weight	360 g	360 g
Length	180 mm	180 mm



Tools and machines Manual wire strippers and stripping machines

SES stripping tools with self adjusting blades



Product name	DURO-STRIPAX	MINI-STRIPAX
Material	polyamide	polyamide
Stripping section	0,03 to 0,9 mm2	0,08 to 1 mm2
Stripping length	7 mm maxi.	7 mm maxi.
Cutting section	1 mm2 maxi.	1 mm2 maxi.
Weight	92 g	95 g
Application	self adjusting blades for flexible PVC insulated wires	self adjusting blades for flexible PVC insulated wires or flat cables 5 mm maxi.



Product name	SES-JOKARI SUPER 4 Plus	SES-STRIPAX
Material	glass-reinforced polyamide	polyamide
Stripping section	0,2 to 6 mm2	0,08 to 6 mm2
Stripping length	15 mm maxi.	18 mm maxi.
Cutting section	2,5 mm2 maxi.	4 mm2 maxi.
Weight	90 g	130 g
Application	self adjusting blades for flexible and rigid wire.	self adjusting blades for flexible and rigid wire, round or flat, mono or multi-conductor.

















Tools and machines

SES

Manual wire strippers and stripping machines

SES stripping tools with self adjusting blades





Product name	SES-2000	SES-JOKARI "Special"
Material	polyamide	glass-reinforced polyamide
Stripping section	0,08 to 6 mm2	0,5 to 6 mm2
Stripping length	18 mm maxi.	18 mm maxi.
Cutting section	6 mm2 maxi.	Ø 2,8 mm maxi.
Weight	200 g	160 g
Application	self adjusting blades for flexible and rigid wire, round or flat, mono or multi-conductor.	self adjusting blades for flexible wire. Cable can be inserted from the side in inaccessible areas.





Product name	SES-JOKARI 6-16	SES-JOKARI MEPLAT
Material	glass-reinforced polyamide	glass-reinforced polyamide
Stripping section	6 to 16 mm2	-
Stripping length	unlimited (the wire can pass between the arms of the tool)	unlimited (the wire can pass between the arms of the tool)
Cutting section	-	-
Weight	120 g	120 g
Application	self adjusting blades for flexible wire. Stripping of long lengths.	self adjusting blades for flat wire or sheet of 11 mm width maxi.





Product name	SES-JOKARI SENSOR MINI	SES-JOKARI SENSOR SPECIAL
Material	glass-reinforced polyamide	glass-reinforced polyamide
Stripping capacities	3,2 - 4,4 mm	4,4 - 7 mm
Stripping length	unlimited	unlimited
Neight	126 g	126 g
Application	self adjusting blades for flexible cable type «Sensor actuator» (insulation PVC, PUR, TPE-U) shielded or unshielded.	self adjusting blades for flexible cable type «Sensor actuator» (insulation PVC, PUR, TPE-U) shielded or unshielded.

SES universal stripping tools



Product name	SES-JOKARI HIGH-STRIP (delicate cables)	2022
Material	polyamide	treated seal
For wires Ø	-	0,6 mm and more
Sections	0,5 to 4 mm2 / 20 to 11 AWG	-
Weight	100 g	35 g
Height	121 mm	-
Length	145 mm	130 mm
Specification	-	stripping tool for varnished wires. Usability avoiding hand fatigue.

SES simple stripping tools



Product name	DS-5	SES-166
Material	chromed steel	treated steel
Material handles	bi-material	insulated cellulose acetate (CA)
maxi stripping-Ø	5 mm (10 mm²)	0,3 to 5 mm
Weight	157 g	185 g
Length	160 mm	160 mm
Specifications	for single-wire conductors, multiwire and fine wires, plastic or rubber insulation.	designed for quick use with maximum safety for the soul of conductors. The cutting system consists of lamellae with independent action that fit the profile of the wire or cable. Easy ac- cess to difficult areas, these tools are particularly recommended for wiring work assemblers, electricians, mainte- nance electricians and installers.



Tools and machines Manual wire strippers and stripping machines

SES simple stripping tools











Stripping tools for regular reinforced cables Tools and machines

SES stripping tools





roduct name	SES-JOKARI	SES-JOKARI UNI-PLUS
Iaterial handle	PA	PA
laterial blade	steel, titan-nitride coated	steel, titan-nitride coated
tripping capacity	Ø 4 to 70 mm (according to model)	external Ø 8 to 15 mm
/eight	-	46 g
ength	-	130 mm
pplications	for stripping all standard round ca- bles. These tools are equipped with a red knurled nut for adjusting the cutting depth. The cutting blades are specially coated with Titanium Nitride (TiN) and offer a longer life, faster cutting and slower wear. The user benefits from a secure grip thanks to the non-slip handle. A spare blade is included in the handle.	for cable stripping, SES-JOKARI UNI- PLUS is equipped with 2 additional blades for cables from 1.5 to 2.5mm2. It is equipped with a stopper of modi- fiable length for a ambidextrous use.



Tools and machines

SES stripping tools

Product I

Material

Stripping

Length

Applicati

Product name Material handle Material blade Stripping capacity Weight Length Unive Applications



name	KABIFIX LK 25	KABIFIX FK 28
l handle	РА	PA
g capacity	Ø 6 to 25 mm	Ø 4 to 28 mm
	100 g	100 g
ions	Stripping with transversal and lon- gitudinal cut of optical fibre cables, coaxial and waterproof. Robust tool with a rotating blade a swivel knife.	Stripping with transversal and lon- gitudinal cut of optical fibre cables, coaxial and waterproof. Robust tool with a rotating blade a swivel knife.





Product name	SES-JOKARI n°12	SES-JOKARI SECURA 15
Material handle	PA	PA
Material blade	steel, titan-nitride coated	steel, titan-nitride coated
Stripping capacity	external Ø 8 to 13 mm	external Ø 8 to 13 mm 0,2 - 0,3 - 0,8 - 1,5 - 2,5 and 4,0 mm2
Weight	50 g	46,5 g
Length	124 mm	124 mm
Applications	SES-JOKARI No. 12 is equipped with a durable and ergonomic pocket clip for stripping in junction boxes.	SES-JOKARI SECURA 15 is equipped with a retractable knife for stripping cables.



Stripping tools for regular reinforced cables



SES-STAR-STRIPPER
PA
steel, titan-nitride coated
external Ø 4 to 13 mm 0,5 to 16 mm2
75 g
135mm
ersal multi-purpose tool designed circular and longitudinal cutting

for circular and longitudinal cutting without adjustment of the cutting depth. It allows the stripping of coaxi-al cables in steps from 4 to 8 mm Ø.







Tools and machines

Stripping tools for regular reinforced cables

SES tools for special cables

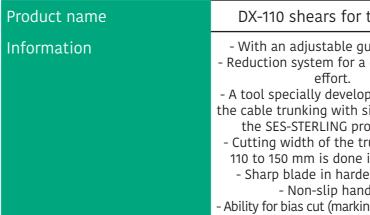
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>>>>	JOKARI ((



Product name	SES-COAXI N° 1 for coaxial cables	SES-JOKARI N° 14 for flat cables
Material blades	titanium nitride treated steel	special treated steel
Material handles	polyamide (PA)	polyamide (PA)
Capacity	Ø 4,8 to 7,5 mm, RG58 and RG59	-
Unsheathing capacity	-	flat cables maxi. width 12 mm
Stripping capacity	-	conductor 0.8, 1.5 and 2.5 mm2
Weight	22 g	48,5 g
Length	100 mm	124 mm
Specifications	Stripping in two quick and easy steps: 1) unsheathing of the outer insulation (side 1) and turn-up shield, 2) stripping the interior insulation (side 2).	Transversal and longitudinal cut.

	SJOKARK (Fibre Solp LC
Product name	SES-JOKARI CAT 1 for data cables	SES-JOKARI FIBRE STRIP LC for optical fibre
Material blades	titanium nitride treated steel	treated steel
Material handles	polyamide (PA)	polyamide (PA)
Capacity	cables Ø 4,5 to 10 mm	cables Ø 8,2 mm
Weight	22 g	43 g
Length	100 mm	125 mm
Specifications	for data cable with PVC insulation and foil shield. Transversal cut. Stripping in 2 steps: 1) external insulation. 2) strip.	optical fibre cable (24x mono-mode). Bi-lateral longitudinal section.

Product name	SES-COSSONAY cutters with guiding shoe	SES-3051 jacket remover
Material blades	Hardened steel blade	retractable blade
Material handles	polyamide (PA)	insulated PA handle (PA - Polyamide
Specifications	Blade with guiding shoe to cut insu- lation without damage to the conduc- tors.	lightweight, retractable blade with guiding security tip, to cut longitud nally cable insulations of maximun thickness 3,5 mm.











r trunking	Cutting tool for trunking webs
guide device. a cut with less	- Will cut trunking webs with little effort. - Simultaneous cutting of 2 webs.
oped to cut all side slits from orogramme. trunking from e in 2 stages. dened steel. ndle. cing guide to45°).	 For conduit trunkings. Sharp blade (width 21,5 mm). Body in steel and cast iron.



DK-60 nibbling tool for trunkings

- To achieve base punching and slots. Insulated handles. - Cut width 3 mm. - 11 mm cut in one operation.





Tools and machines

Scissors and cable cutting tools

SES special cutting tools - CUT system for trunkings and plastic tubes



Product name	CUT 3104 shears for diagonal cropping of trunking	CUT 3105 cutting tool straight cut
Information	- Ideal angle cut profiles of plastic, rubber or wood - Cutting capacity: width 40mm height 25mm - Blade length: 60mm	 Same as CUT 3104 cutting tool but with diagonal cutting feature Ideal for the cropping of plastic, rubber or wood mouldings Blade length: 60 mm

		C C C C C C C C C C C C C C C C C C C
Product name	CUT 3204/90 cutting tools for profiles and tubes	CUT 3204/16-19 cutting tool for tubes
Information	- To cut rectangular profiles: 25 x 45 mm rigid plastic conduit: up to Ø 25 mm - Blade length: 60 mm	- To cut tubes: Ø 16 and 19 mm - Blade length: 60 mm



Product name	CUT 3604 cutting tool for diagonal cutting up to 80 mm
Information	- To cut profiles up to: 80 mm - Blade length: 85 mm







Product name	1101	1000
Weight (g)	40	70
Ø (mm)	18	20
Length (mm)	160	195

SES desoldering braiding in short length dispenser



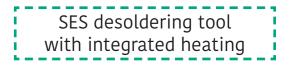
Product name	TA yellow	TB grey	TC blue	TD white	TE green
Braiding width (mm)	1,5	2	3	4	5
Length per dispenser (mm)	1,7	1,7	1,7	1	1

SES desoldering braiding in medium-sized length dispenser



Product name	10 red	15 orange	20 black	30 violet
Braiding width (mm)	1	1,5	2	3
Length per dispenser (mm)	3	3	3	3







Product name	DI-3 24V 30 W
Weight (g)	215
Ø (mm)	34
Length (mm)	265







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