CABLE TIES, HOOK & LOOP TAPE

Whether standard, releasable or steel

cable ties:

We offer tested quality at good prices.

Steel cable ties with ball-lock are resistant to corrosion and radiation, antimagnetic and extremely resistant to high 3temperatures.







Hook & loop tape belt with synthetic eyelet and hookless belt end to quickly open the tie.

Colour cable ties for marking and labelling.

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UNDERWRITERS LABORATORIES INC.



GERMANISCHER LLOYD



Cable ties

Design

Raw material:

Pure polyamide 6.6 (PA 6.6, nylon) with no recycling material content, raw materials procured solely from leading quality manufacturers, colours: natural or black (RAL 9011) through enrichment with carbon (carbon black).

Article no.

Material properties

Self-extinguishing according to UL 94-V2, melting point $+260\,^{\circ}$ C, halogen-free, silicon-free, non-toxic, food-safe according to Recommendation "X" (10) BGA (German Health Authority), non-conductive, high abrasion resistance, low frictional resistance, impact-resistant, recyclable. Black cable ties retain the moisture in the plastic, thus preventing embrittlement, hardening and fragility. Black cable ties are thus suitable for outdoor application and weatherproof for at least two years.

Chemical resistance:

Resistant to (among others) oils, petroleum products (e.g. petrol, kerosene, fats and lubricants), hydrocarbons (e.g. lower alcohols, acetone), cleaning agents and solvents, alkalis, mould, salt water. Conditionally resistant among others, to strongly diluted acids. Non-resistant to, amongst others, phenols, oxidising chemicals, formic acid, phosphoric acid, chlorine, chloric acids (e.g. hydrochloric acid, butanoic acid), benzoic acid, mineral acids.

Processing conditions and conditions of use:

Installation temperature (during installation) -10 °C to +80 °C, continuous service temperature (following installation) -40 °C to +105 °C, possible changes in length depending on temperature (between -20 °C and +100 °C) maximum \pm 1.5 %, depending on relative air humidity (between 25 % and 100 %) maximum \pm 3 %, no changes in length due to ageing if cable ties are not under load.

Important when storing cable ties:

Before use, store cable ties in the sealed packaging, to prevent drying out in a cool, not exceedingly dry place, away from sources of heat. Naturally coloured cable ties can turn yellow after an extended period of time due to temperature-dependent oxidation. This will not affect performance properties.

Packaging:

Packaged in plastic transparent foil, 100 % recyclable, vacuum sealed.

Authorisations and Certifications of Quality:

Products comply with ISO EN 62275, the IEC Standard IEC 92-101, flame retardant according to UL 94-V2, "Yellow Card" certification from Underwriters Laboratories Inc., self-extinguishing in accordance with UL 94, flame class 94V-2, self-extinguishing in accordance with ISO 1210, flame class FV-2, minimum retention strength in accordance with MIL-S-23190 E standard.

natural colour

riatarar corc	, and						
Width	Length	Cable harness	Minimal to	ensile strength			
mm	mm	ø mm	kp	Ν			
2.5	75	2 - 16	9	88	100	18 1360	
	100	2 - 24			100	18 1361	
	135	2 - 35			100	18 1362	
	160	2 - 42			100	18 1402	
	200	2 - 55			100	18 1363	
3.5	140	2.5 – 36	18	176	100	18 1364	
	200	2.5 - 55			100	18 1404	
	280	2.5 - 80			100	18 1378	
4.5	160	2.5 - 40	22	216	100	18 1365	
	180	3 – 45			100	18 1366	
	200	3 - 51			100	18 1367	
	250	5 - 70			100	18 1379	
	280	5 – 76			100	18 1368	
	360	5 – 101			100	18 1369	
	380	5 – 110			100	18 1408	
7.5	180	5 – 46	60	588	100	18 1371	
	240	5 - 64			100	18 1372	
	280	5 – 76			100	18 1377	
	360	5 – 101			100	18 1373	
	450	18 – 132			100	18 1374	
	540	20 – 160			100	18 1375	
	750	32 – 222			100	18 1376	
9.0	780	20 – 235	80	784	100	18 1390	
	920	40 – 280			100	18 1391	
	1220	50 – 375			100	18 1394	
12.5	500	10 - 140	110	1080	50	18 1392	
	750	40 – 225			50	18 1393	
	1000	40 – 300			50	18 1395	



Design PU Article no.

Cable ties

black (RAL 9011) = weather-proof design, conditionally UV resistant

Width	Length	Cable harness	Minimal te	ensile strength			
mm	mm	ø mm	kp	Ν			
2.5	75	2 – 16	9	88	100	18 1860	
	100	2 - 24			100	18 1861	
	135	2 - 35			100	18 1862	
	160	2 - 42			100	18 1802	
	200	2 - 55			100	18 1863	
3.5	140	2.5 – 36	18	176	100	18 1864	
	200	2.5 - 55			100	18 1804	
	280	2.5 - 80			100	18 1878	
4.5	160	2.5 - 40	22	216	100	18 1865	
	180	3 – 45			100	18 1866	
	200	3 - 51			100	18 1867	
	250	5 – 70			100	18 1879	
	280	5 – 76			100	18 1868	
	360	5 – 101			100	18 1869	
7.5	180	5 – 46	60	588	100	18 1871	
	240	5 – 64			100	18 1872	
	280	5 – 76			100	18 1877	
	360	5 – 101			100	18 1873	
	450	18 – 132			100	18 1874	
	540	20 – 160			100	18 1875	
	750	32 – 222			100	18 1876	
9.0	780	20 – 235	80	784	100	18 1890	
	920	40 – 280			100	18 1891	
	1220	50 – 375			100	18 1894	
12.5	500	10 - 140	110	1080	50	18 1892	
	750	40 – 225			50	18 1893	
	1000	40 - 300			50	18 1895	



Releasable cable ties

made of polyamide 6.6, after opening re-usable as often as required, simple release by pressing a finger on the tab

natural colou	ır						
Width	Length	Bundle	Minimal tensile strength				
mm	mm	ø mm	kp				
7.5	200	up to 50	36		100	18 1490	
	280	up to 76	36		100	18 1491	
	360	up to 100	36		100	18 1492	



black (RAL 90	11) = weather	-proof	design,	UV resistance
7 [200	4-	ΓO	27

7.5	200	up to 50	36	100	18 1495
	280	up to 76	36	100	18 1496
	360	up to 100	36	100	18 1497



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Design PU Article no.

Coloured cable ties

for labelling and marking

\	Langth	Cabla hamasa	Minimaltansi	ilo atnonath		
Width	Length	Cable Harriess	Minimal tensi	· ·		
mm	mm	ø mm	kp	Ν		
red (RAL 30	00)					
2.5	100	2 - 24	9	88	100	18 1450
3.5	140	2.5 - 36	18	176	100	18 1452
4.5	200	3 – 51	22	216	100	18 1454
	280	5 – 76			100	18 1456
blue (RAL 50	002)					
2.5	100	2 - 24	9	88	100	18 1460
3.5	140	2.5 – 36	18	176	100	18 1462
4.5	200	3 - 51	22	216	100	18 1464
	280	5 - 76			100	18 1466
green (RAL 6	6024)					
2.5	100	2 - 24	9	88	100	18 1470
3.5	140	2.5 - 36	18	176	100	18 1472
4.5	200	3 – 51	22	216	100	18 1474
	280	5 – 76			100	18 1476
yellow (RAL	1021)					
2.5	100	2 - 24	9	88	100	18 1480
3.5	140	2.5 – 36	18	176	100	18 1482
4.5	200	3 - 51	22	216	100	18 1484
	280	5 - 76			100	18 1486

Other colours available upon request. Please inquire for minimum order quantity, price and delivery times.

Cable ties with labelling surface

made of polyamide 6.6, natural colour

Width	Length	Cable harness	Size Labelling surface			
mm	mm	ø mm	$mm \times mm$			
2.5	100	4.0 - 18	8 x 25	100	18 1420	
2.5	200	4.0 - 50	8 x 25	100	18 1422	
4.8	190	15 - 50	10 x 28	100	18 1424	
4.8	270	15 - 75	10 x 28	100	18 1426	



Printed cable ties

Cable ties can be custom printed, also with logo, serial numbers and variable printing ink colour.

For special marking, registration and labelling of cables, equipment and many other components, including closure and tamper-proof sealing of packages, envelopes, sacks, etc. For use in electrical engineering, machine- and vehicle construction, logistics, food and pharmaceutical industries, public authorities, etc. For cable ties of any length with at least 1 mm thickness, min. order quantity per printing order 30,000 cable ties.

We are happy to advise you about technical details and questions of processing, delivery times, pricing etc.



Plug-in cable ties

Cable ties made from polyamide 6.6, black, self-extinguishing according to UL 94 V-2, with expansion anchor head for fast and safe installation in drill holes (approx. 5 mm \varnothing) by means of force fitting, affixing and bundling of cables in one working step, especially suited for use in vehicle and engine construction, as well as the aerospace industry.

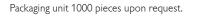
Width	Length	Cable harness	Minimal tensi	le strength			
mm	mm	ø mm	kp	Ν			
3.5	140	max. 32	18	176	100	18 1850	

Design PU Article no.

Cable ties with steel tongue

made of polyamide 6.6, with corrosion-resistant, anti-magnetic, stainless steel tongue

Width	Length	Cable harness	Minimal tens	ile strength		
mm	mm	ø mm	kp	Ν		
natural colou	r					
2.5	100	2 - 16	8	80	100	18 1338
	200	2 - 50			100	18 1336
2.4	356	2 - 102			100	18 1337
3.5	140	2 – 29	18	180	100	18 1339
	200	2 - 50			100	18 1340
	280	2 - 76			100	18 1341
3.6	368	2 - 103			100	18 1342
4.5	200	3.5 - 54	22	220	100	18 1343
	290	3.5 - 78			100	18 1344
	360	3.5 – 102			100	18 1345
7.5	360	6 - 90	55	540	50	18 1347
7.0	762	6 – 229			50	18 1348
black						
2.5	100	2 - 16	8	80	100	18 1738
	200	2 - 50			100	18 1736
2.4	356	2 - 102			100	18 1737
3.5	140	2 – 29	18	180	100	18 1739
	200	2 - 50			100	18 1740
	280	2 - 76			100	18 1741
3.6	368	2 - 103			100	18 1742
4.5	200	3.5 - 54	22	220	100	18 1743
	290	3.5 - 78			100	18 1744
	360	3.5 – 102			100	18 1745
7.5	360	6 - 90	55	540	50	18 1747
7.0	762	6 – 229			50	18 1748







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PU

Article no.

Heat-resistant cable ties

special additives to the raw material create permanently temperature-resistant cable ties up to $\pm 130\,^{\circ}$ C, properties otherwise the same as standard cable ties, basic material pure polyamide 6.6 without recycling content, colour pale green.

Width	Length	Cable harness	Minimal tens	ile strength			
mm	mm	ø mm	kp	Ν			
3.5	140	2.5 - 36	18	176	100	18 1710	
4.5	200	3 - 51	22	216	100	18 1712	
	280	5 - 76			100	18 1713	
	360	5 - 101			100	18 1714	
7.5	360	5 - 101	60	588	100	18 1716	

UV and cold-resistant cable ties

Continual exposure to UV radiation and cold causes standard cable ties to become brittle. They will eventually crack following continuous exposure. The addition of special carbons increases the service life of UV-resistant cable ties by approx. a factor of ten, for up to 10 years when used correctly. They are also cold-resistant to -40 °C. These cable ties are thus ideal for outdoor use and at continuously low temperatures. Flammability rating according to UL 94 HB, colour black (RAL 9011).

Width	Length	Cable harness	Minimal tens	Minimal tensile strength				
mm	mm	ø mm	kp	Ν				
3.5	140	2.5 - 36	16	158	100	18 1720		
4.5	200	3 - 51	20	194	100	18 1722		
	280	5 - 76			100	18 1723		
	360	5 - 101			100	18 1724		
7.5	360	5 - 101	54	529	100	18 1726		

Flame-resistant, self-extinguishing cable ties

for use in areas requiring especially high flame retardant properties. Flame retardant according to UL 94 V-0: The flame-retardant material must not burn longer than 10 seconds nor ignite combustible materials underneath it. Halogen-free, can be used in a temperature range of $-20\,^{\circ}\text{C}$ to $+80\,^{\circ}\text{C}$. Colour milk white.

Width	Length	Cable harnes	s Minimal t	tensile strength			
mm	mm	ø mm	kp	Ν			
3.5	140	2.5 - 36	14	140	100	18 1728	
	280	5 - 76			100	18 1731	
	360	5 - 101			100	18 1732	
7.5	360	5 - 101	48	470	100	18 1734	

TEFZEL® cable ties

Cable ties made from ethylene tetrafluorethylene copolymer. Very high resistance to UV radiation, radioactivity, many aggressive chemicals (incl. acids, alkalis, oxidising agents, metal salt solutions, oils, fats), weatherproof, does not absorb water, heat-stable and flame-retardant (UL 94 V 0), operating temperature -50 $^{\circ}$ C to +150 $^{\circ}$ C, the ideal tie for use in nuclear power plants, the chemical industry, refineries, etc.

Width	Length	Cable harness	Minimal tensi	le strength			
mm	mm	ø mm	kp	Ν			
4.8	186	46	100		100	18 1487	
	360	104	100		100	18 1488	
7.0	338	85	320		100	18 1489	

Detectable cable ties

Cable ties developed especially for food or pharmaceutical industry, detectable due to added metal filings which mean even the smallest fragments can be detected with a metal detector or x-ray machine. Base material pure polyamide 6.6, halogen and silicone-free, self-extinguishing. Flammability class UL 94 HB, temperature resistant: -25 °C to +65 °C, colour code blue.

Width	Length	Bundle	Minimal tensile strength				
mm	mm	ø mm	kp	Ν			
2.5	100	24	8	80	100	18 1750	
3.5	140	36	18	180	100	18 1752	
4.5	200	51	22	220	100	18 1754	
4.5	280	76	22	220	100	18 1756	
4.5	380	110	22	220	100	18 1758	
7.5	360	101	55	550	100	18 1760	



Design Article no.

for screw

Fastening element for cable ties

Dimensions or cable ties

natural colour

Fastening

i asteriirig	Difficusions	or capie lies	ioi screw			
	mm	up to max. mm width	up to ø mm			
For screwing						
	20 x 10	4.8	4	100	18 1380	
	30 x 15	9.0	4	100	18 1389	
For bonding						
Adhesive (se	lf-adhesive) +	screw, natural colours				
	19 x 19	3.6	4	100	18 1382	
Adhesive (se	lf-adhesive) +	screw, black				
	19 x 19	3.6	4	100	18 1882	
Adhesive (se	lf-adhesive) +	screw, natural colours				
	27 x 27	4.8	4	100	18 1384	
Adhesive (se	lf-adhesive) +	screw, black				
	27 x 27	4.8	4	100	18 1884	





Cable clips

Suitable for fastening and release at any time of one or several hoses, round cables and lines of different diameters. Especially suitable when laying cables on very smooth, hard surfaces and in places difficult to access, where the use of normal fastening elements / cable ties is not possible.

Made from polyamide 6.6, natural colour, self-adhesive.

Black available on request.

Length	Width	Height	max. cable ø			
mm	mm	mm	mm			
19	19	10	5	100	18 1381	
26	26	13	10	100	18 1383	
26	26	18	15	100	18 1385	



Wall dowel cable tie holder

for fastening cables, cable bundles, pipes etc. on masonry, for drilled holes 7 to 8 mm in diameter, screw-on head for easy adjustment of height and alignment of the holding block, distance from cable to wall approx. 12 mm

for cable ties up to 9 mm in width	10 x 13	100	18 1386



Assembly dowels for cable ties

A journal mount, which is knocked into a drill hole in the wall, ø 6 or 8 mm.

The protruding head allows a cable bundle to be fastened at a specific distance from the wall.

With heads stabilised with strong fins for perfect hold and cable tie widths up to 9 mm.

basic material pure polyamide 6.6, halogen and silicone-free, self-extinguishing.

Flammability class of base material UL 94 V-2, temperature resistance: -40 °C to +85°C,

Colour code black

Head width	Head length	Head height	Length	Drill hole			
mm	mm	mm	mm				
14.0	11.0	6.3	36.0	6.0	100	18 1762	
14.0	11.0	6.3	43.0	8.0	100	18 1764	











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Spiral bands

Design

To bundle and protect cables in cable manufacturing, in the electronics industry, as well as in switch cabinet, controller, and plant engineering. For efficient and tidy bundling and laying of cables, wiring, cable harnesses, and wire bundles. Also for protecting cables from abrasion or other damage, as well as for stiffening cable harnesses. Customised lengths possible, thus no material wastage. Easily adaptable to different bundle diameters, re-openable and reusable. In the case of spiral bands wound at a distance, the material usage is lower, the cable bundles are more flexible and branches consisting of one or more cables are possible at any point without problem. Ideal for subsequent winding around cable bundles.

Size mm PU Article no.

Made of polyethylene (PE), temperature-resistant from -20° C to $+65^{\circ}$ C, flame resistant, halogen-free, silicone-free

1 roll each = 10 m length.

Bundle	Coil	Outer							
ø mm	width mm	ø mm							
natural colour									
4 - 20	7.0	6		1	18 6200				
6 - 60	11.4	10		1	18 6202				
9 - 70	13.9	12		1	18 6204				
12 - 80	15.0	15		1	18 6206				
15 – 100	18.2	19		1	18 6208				
25 - 130	19.6	24		1	18 6210				
black									
4 - 20	7.0	6		1	18 6220				
6 - 60	11.4	10		1	18 6222				
9 - 70	13.9	12		1	18 6224				
12 - 80	15.0	15		1	18 6226				
15 – 100	18.2	19		1	18 6228				
25 - 130	19.6	24		1	18 6230				



In pistol format for cable ties with a width of 2.2 mm to 4.8 mm, clamping strength adjustable to max. 12 kg and with automatic cutting tool. Weight 303 g.

adjustable	175 mm	1	10 1930	

Cable tie clamping and cutting tool HEAVY DUTY

Made of sheet steel for cable ties with a width of $2.3\,\mathrm{mm}$ to $12.5\,\mathrm{mm}$, with integrated cutting tool. Weight $320\,\mathrm{g}$.

heavy duty version	195 mm	1	10 1931	

Cable tie bag

for all standard cable ties, sewn in hard-wearing, double padded material, with elastic band retainer and belt loop function. When removing individual cable ties from the bag, the elastic band prevents the ties remaining in the bag from falling out.

280 x 70 x 45 mm	1	17 0120	



Design Size mm PU Article no.

Steel cable ties

made from stainless steel 316 (DIN 1.4401), with ball lock, resistant to corrosion and radiation, anti-magnetic, extremely resistant to high temperatures (steel -80°C to +538°C) and aggressive chemicals, steel thickness 0.25 mm, spec./approval UL. For use in machine and vehicle construction, signalling systems, shipbuilding and mining, in the food and chemical industries, in power plants, subways, buildings, switch cabinets, on oil rigs etc.

Width	Length	Cable harn	ess Minimal te	ensile strength			
mm	mm	ø mm	kp	Ν			
4.6	100	20	56	550	100	18 6000	
	125	27			100	18 6001	
	150	44			100	18 6002	
	200	50			100	18 6003	
	290	75			100	18 6004	
	360	102			100	18 6005	
	520	152			25	18 6006	
7.9	200	50	122	1200	100	18 6010	
	290	75			100	18 6011	
	360	102			100	18 6012	
	520	152			25	18 6013	
	680	203			50	18 6014	
	840	254			25	18 6015	
	1000	318			25	18 6016	
12.0	290	75	224	2200	25	18 6020	
	360	102			25	18 6021	
	520	152			25	18 6022	
	680	203			25	18 6023	
	840	254			25	18 6024	
	1000	318			25	18 6025	



Width	Length	Cable harness	Minimal tens	ile strength			
mm	mm	ø mm	kp	Ν			
4.6	100	20	56	550	100	18 6100	
	150	44			100	18 6102	
	200	50			100	18 6103	
	290	75			100	18 6104	
	360	102			100	18 6105	
	520	152			25	18 6106	
7.9	200	50	122	1200	100	18 6110	
	290	75			100	18 6111	
	360	102			100	18 6112	
	520	152			25	18 6113	
	680	203			25	18 6114	
	840	254			25	18 6115	
	1000	318			25	18 6116	
12.0	290	75	224	2200	25	18 6120	
	360	102			25	18 6121	
	520	152			25	18 6122	
	680	203			25	18 6123	
	840	254			25	18 6124	
	1000	318			25	18 6125	

Clamping tool

made of steel, for clamping steel ties up to 12 mm in width, even with protective cable coating, with rotating cutter for burr-free cutting edges

205	1	10 1935	











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Design PU Article no.

SLE steel ties

Ladder cable ties made of stainless steel AISI 316, self-locking with locking mesh, non-releasable. No slipping or sliding effect when tie is pulled tight. Coated with black polyester, UV-stabilised and halogen-free, anti-magnetic, resistant to corrosion and radiation, extremely resistant to high temperatures and aggressive chemicals. Approvals: DNV-GL, Lloyds Register, UL; steel thickness 7.0 mm = 0.30 mm / 12.0 mm = 0.35 mm. Temperature resistant: Steel -80°C to +538°C; Polyester -80°C to +150°C

Width	Length	Bundle	Minimal tensile strength			
mm	mm	ø mm	Ν			
7.0	150	45	445	100	18 6130	
7.0	225	70	445	100	18 6132	
7.0	300	95	445	100	18 6134	
7.0	360	105	445	100	18 6136	
7.0	450	140	445	50	18 6138	
7.0	610	190	445	50	18 6140	
12.0	200	50	890	100	18 6142	
12.0	360	100	890	100	18 6144	
12.0	450	135	890	50	18 6146	
12.0	610	185	890	50	18 6148	
12.0	750	230	890	25	18 6150	

Hook & loop ties (Hook & loop tape cable ties and retaining strips)

Areas of application:

For bundling, fastening, affixing, and many other uses. Especially suitable for the installation of sensitive cables (network cabling, telecommunications, fibre optic cables) and whenever frequent closing and opening of the ties is required (e.g. pre-assembly of cable harnesses).

Special product features:

Soft, flexible surface for minimum pressure on cable bundles, avoids unintentional damage of cables due to sharp or hard edges, even and flush contact over the entire circumference of the cable bundle, hook & loop closure technique adheres in any position, easy to open and close, quick installation without the use of tools, high tensile and shearing strength, adjustable, multiple-use, low wear for long service life, durable, non-fading colours, washable with no risk of damage, light-resistant, UV-resistant and sweat-

resistant, waterproof and resistant to saltwater, no wastage during use, in a range of dimensions.

Hook & loop tape belt with synthetic eyelet

made of woven polyamide, in two colours red/black to facilitate use, belt end without hook to open the tie quickly, suitable for up to 10,000 tie openings, tensile strength 260 N/cm, thickness approx. 2 mm (the minimum tensile load given is valid with at least 50 mm band overlap), silicone- and halogen-free.

Width	Length				
mm	mm				
25	240		10	18 1900	
25	300		10	18 1902	
25	360		10	18 1904	

Hook & loop tape

made of black, extruded polyamide velour laminate, tensile strength min. 120 N/cm, thickness approx. 1.4 mm, self-adhesive "back-to-back", suitable for approx. 200 actuations. Apart from the standard colour black, also available in white, red, blue, green, yellow. Please enquire about minimum order quantity, delivery time approx. 8 weeks.

Hook & loop ties with tab, cut to binding lengths for common electrical installations

Width	Length			
mm	mm			
7	200	25	18 1910	
13	200	25	18 1912	
16	300	25	18 1914	

Design PU Article no.

Hook & loop tape

Hook & loop ties on rolls, roll length 25 m, tensile strength min. 120 N/cm, custom-cut lengths

Width	Length			
mm	m			
13	25	1 roll	18 1920	
16	25	1 roll	18 1922	
20	25	1 roll	18 1924	
25	25	1 roll	18 1926	
30	25	1 roll	18 1928	



Self-adhesive hook & loop tape

self-adhesive hook and loop tape. Ideal for individual and secure fastenings and yet always separable. Hook & loop tape can simply be cut to the desired length, according to requirements.

Material strength min. 210 N/cm, shear strength 10.3 N/cm, approx. 10,000 actuations possible.

Adhesive: rubber-resin based, temperature range: -15° C to +90° C Supplied in dispenser box, each with one roll of hook and loop tape

Width	Length			
mm	m			
20	10	1	18 1980	
50	25	1	18 1982	



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