

3.1 Protective Tubing and Spiral Binding

Helawrap Cable Cover and Accessories

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3.2 Braided Sleeving

Helagaine Braided Sleeving

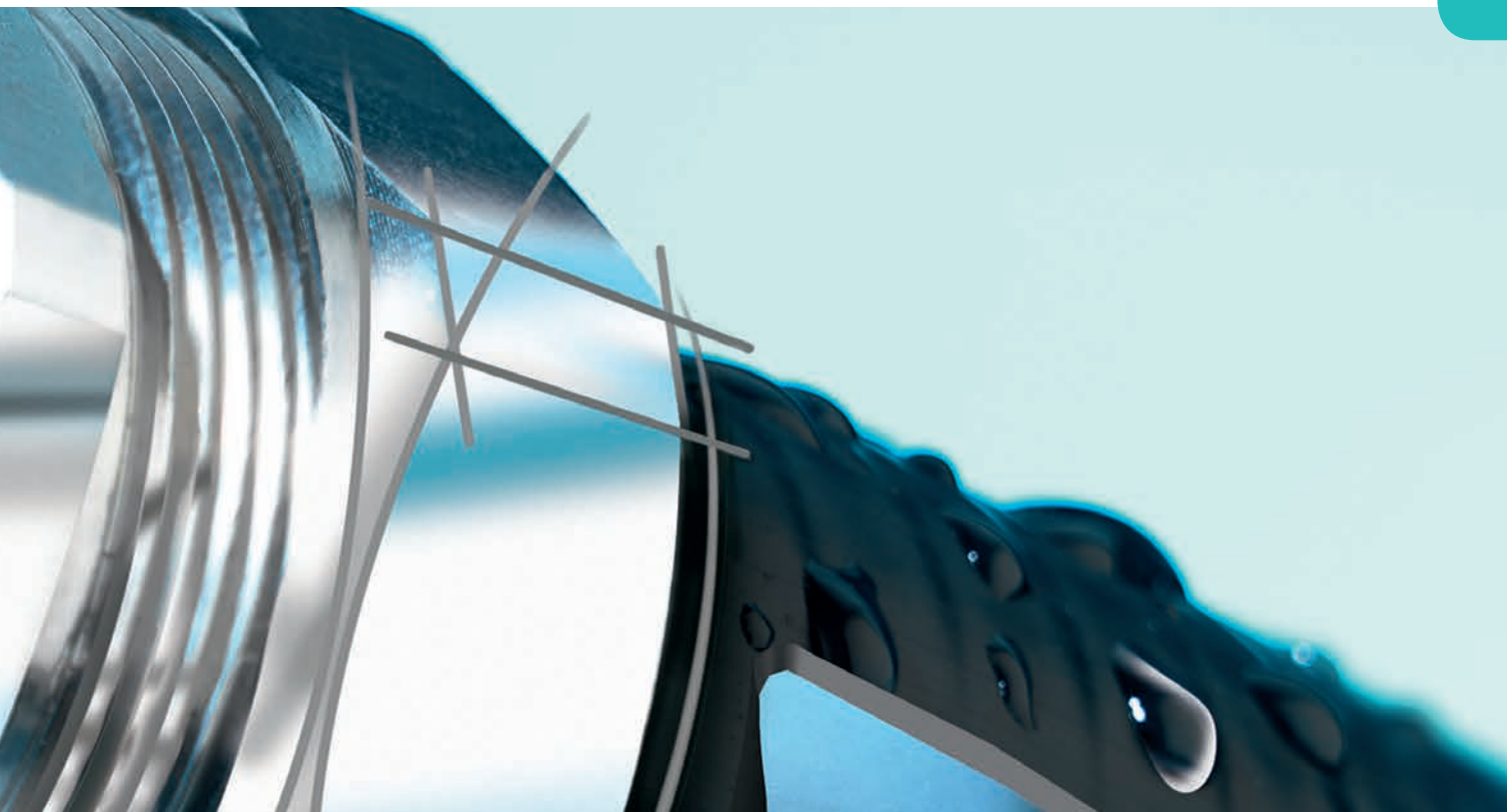
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Cable Cover, Material: PA6, UL94V0

- Helawrap HWPA-V0

Helawrap is used to bundle and protect cables in the electrical industry, panel building, machine, automotive and truck manufacturing. Helawrap in 25m lengths is the time-saving solution for industrial applications. Due to its excellent flame-retardant properties, Helawrap Polyamide 6 V0 is the product of choice wherever fire protection is essential, for example in mass transit.

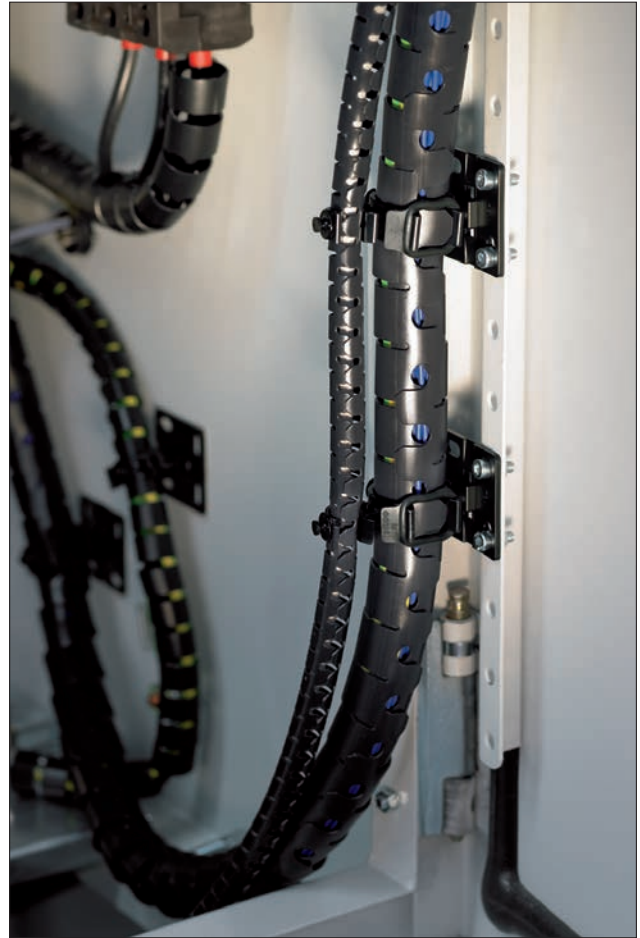
Helawrap in practical 2m lengths is designed for domestic and office use. It puts an end to the cable chaos associated with PCs, TVs and Hi-Fi systems.

Features and Benefits

- Ideal solution for bundling, protecting and fixing cables
- Quick and effortless to apply
- Self-extinguishing according to UL94 V0
- Very good abrasion protection
- Special profile enables branching off cable at any point
- Can be removed and reapplied often
- Available in several colours and sizes
- Handy applicator tool included



One Step to the Web!



HWPV0 is suitable for applications requiring high abrasion and fire protection.

MATERIAL	Polyamide 6 V0 (PA6V0)
Operating Temperature	-40 °C to +90 °C, intermittent +120 °C
Flammability	UL94 V0
Specifications	CEN TS 45545-2: 2009, DIN 5510-2, UL-Recognized



TYPE	Bundle Ø max.	Colour	Reel Length	Application Tool	Article-No.
HWPV08	9.1	Black (BK)	25 m	HAT8	161-63101
HWPV016	16.0	Black (BK)	25 m	HAT16	161-63201
HWPV020	21.1	Black (BK)	25 m	HAT20	161-63301
HWPV025	26.9	Black (BK)	25 m	HAT25	161-63401
HWPV030	32.0	Black (BK)	25 m	HAT30	161-63501

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Accessories for retaining Helawrap Open Cable Cover

- **HWClips**

Helawrap clips and mounting plates can be linked into chains to bundle, protect and fix any number of cables on industrial machines. They can also be used in wiring cabinets, particularly in the door area where movement is a requirement. Helawrap accessories are also used to manage cables in the office or home.

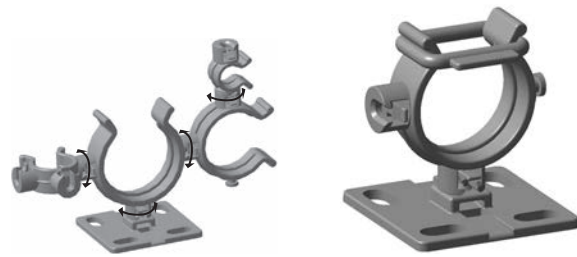
Features and Benefits

- Mounts and routes Helawrap cable cover flexibly and efficiently
- Fit snugly around the cable cover and holds it tight
- Each clip can be joined to mounting plate or other clips of any size
- Each clip rotates freely
- Easily released and re-used
- Mounting plates fixed with screws, cable ties or adhesive



The Helawrap accessory set for bundling, fixing and protecting multiple cable runs.

MATERIAL	Polyamide 6.6 high impact modified, heat stabilised (PA66HIRHS)	Flexible Polyvinyl Chloride, cadmium free (PVC)
Operating Temperature	-40 °C to +105 °C	-35 °C to +85 °C
Flammability	UL94 HB	UL94 V2



Multiple clips can be joined. Clips swivel freely.

For secure hold, R1 loop can be used (for HWClip25 and HWClip30 only).

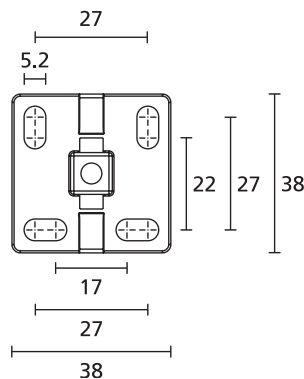
TYPE	for Helawrap size	Material	Colour	Article-No.
HWCLIP08	8	PA66HIRHS	Black (BK)	161-64002
HWCLIP16	16	PA66HIRHS	Black (BK)	161-64004
HWCLIP20	20	PA66HIRHS	Black (BK)	161-64006
HWCLIP25	25	PA66HIRHS	Black (BK)	161-64008
R1	25, 30	PVC	Black (BK)	201-20010
HWCLIP30	30	PA66HIRHS	Black (BK)	161-64010

Subject to technical changes.

- **HWBase**

TYPE	Colour	Article-No.
HWBASEA	Black (BK)	161-64012
HWBASE	Black (BK)	161-64014

Subject to technical changes.



Helawrap HWBase/HWBaseA



Application Tools for Helawrap Cable Cover

- **HAT Tools**

Features and Benefits

- Bundle cable rapidly and effortlessly
- Glides smoothly and securely through cover
- Easy insertion of cable



Applicator tools HAT are available for every Helawrap cover size.

TYPE	Colour	Pack Cont.	Article-No.
HAT8	Blue (BU)	10 pcs.	161-60001
HAT16	Blue (BU)	10 pcs.	161-60002
HAT20	Blue (BU)	10 pcs.	161-60003
HAT25	Blue (BU)	10 pcs.	161-60004
HAT30	Blue (BU)	10 pcs.	161-60005

Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Polyethylene Spiral Binding for enhanced flame protection

- SBPEFR

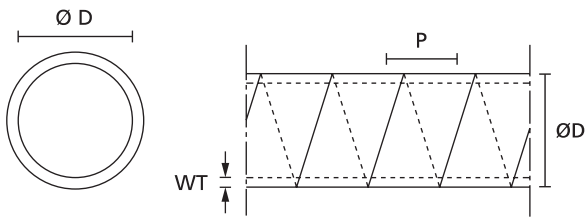
SBPEFR spiral binding is used in areas, where fire protection is important in the automotive and electrical industry.

Features and Benefits

- Organises and protects cables and hoses
- Self-extinguishing according to UL94 V2
- Suitable for retro-fitting
- Cables branch out at any point
- Wide range of diameters and colours



Spiral binding SBPEFR is available in a wide range of diameters and in colours black and white.



MATERIAL	Polyethylene, flame-retardant (PE-FR)
Operating Temperature	-60 °C to +80 °C, intermittent +120 °C
Flammability	UL94 V2, FMVSS 302, Type B



TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPEFR1.5	1.5	0.80	6.0	1.6	8.0	Black (BK)	30 m	161-43001
	1.5	0.80	6.0	1.6	8.0	White (WH)	30 m	161-43000
SBPEFR4	4	1.00	7.8	5.0	20.0	Black (BK)	30 m	161-43101
	4	1.00	7.8	5.0	20.0	White (WH)	30 m	161-43100
SBPEFR9	9	1.40	12.5	10.0	100.0	Black (BK)	30 m	161-43201
	9	1.40	12.5	10.0	100.0	White (WH)	30 m	161-43200
SBPEFR16	16	1.60	16.0	20.0	150.0	Black (BK)	30 m	161-43301
	16	1.60	16.0	20.0	150.0	White (WH)	30 m	161-43300

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Polyethylene Spiral Binding with UL94V0 classification

- SBPAV0

Due to its excellent flame protection properties, SBPAV0 spiral binding is particularly suitable for the rail and aviation industries as well as public buildings.

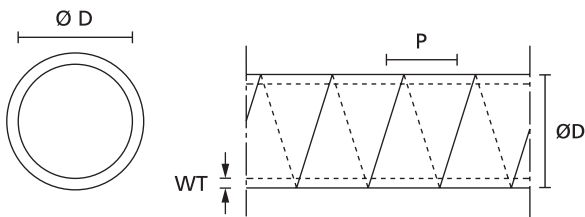
Features and Benefits

- Organises and protects cables and hoses
- Self-extinguishing according to UL94 V0
- Very good protection against abrasion
- Suitable for retro-fitting
- Cables branch out at any point
- Wide range of diameters and colours



Spiral binding SBPAV0.

MATERIAL	Polyamide 6 V0 (PA6V0)
Operating Temperature	-40 °C to +90 °C, intermittent +120 °C
Flammability	UL94 V0
Specifications	CEN TS 45545-2: 2009, UL-Recognized



TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPAV01.5	1.5	0.40	6.0	1.6	8.0	Black (BK)	30 m	161-44000
SBPAV04	4	0.60	7.8	5.0	20.0	Black (BK)	30 m	161-44100
SBPAV09	9	1.00	12.5	10.0	100.0	Black (BK)	30 m	161-44200
SBPAV016	16	1.20	16.0	20.0	150.0	Black (BK)	30 m	161-44300

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



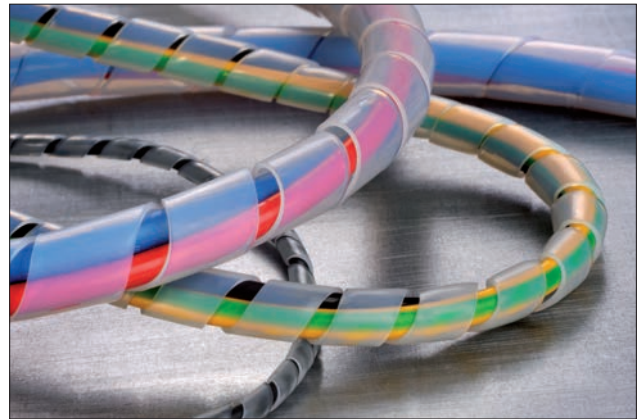
PTFE Spiral Binding for superior protection

- SBPTFE

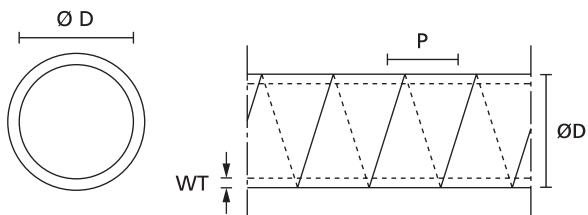
Wherever superior protection against chemical and extreme temperatures are important, the use of SBPTFE is recommended.

Features and Benefits

- Organises and protects cables and hoses
- Excellent fire protection
- Self-extinguishing according to UL94 V0
- Suitable for retro-fitting
- Cables branch out at any point
- Wide range of diameters and colours



Spiral binding SBTFE - ideal for extreme conditions.



MATERIAL	Polytetrafluoroethylene (PTFE)
Operating Temperature	-60 °C to +260 °C, intermittent +350 °C
Flammability	UL94 V0

HF ✓

RoHS ✓

TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPTFE1.5	1.5	0.50	6.0	1.6	8.0	Natural (NA)	5 m	161-45000
SBPTFE4	4	0.70	7.8	5.0	20.0	Natural (NA)	5 m	161-45100
SBPTFE9	9	1.00	12.5	10.0	100.0	Natural (NA)	5 m	161-45200

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



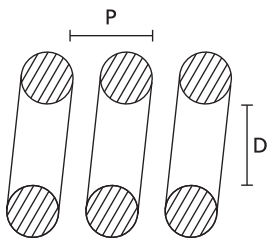
Polypropylene spiral binding for high resistance against oil, narrow pitch

- SPS

SPS spiral binding is especially suitable for the use in areas where high abrasion resistance and much larger cable diameters are needed, for example the automobile and petrochemical industry as well as in heavy plant construction.

Features and Benefits

- Heavy-walled and very robust
- Excellent protection from mechanical stress
- Very high abrasion resistance
- Very good resistance to oils
- Available in diameters up to 50 mm
- Ideal for larger cable bundles



SPS spiral binding (narrow pitch)



Spiral binding SPS is very robust and provides good protection against oil.

MATERIAL	Polypropylene (PP)
Operating Temperature	-30 °C to +100 °C
Flammability	UL94 HB



TYPE	Ø D	Pitch (P)	Bundle Ø max.	Length (L)	Colour	Article-No.
SPS10	10.0	5.0	14.0	1.0 m	Black (BK)	162-10100
SPS15	15.0	5.0	20.0	1.0 m	Black (BK)	162-10150
SPS20	20.0	5.5	25.0	1.0 m	Black (BK)	162-10200
SPS25	25.0	6.0	30.0	1.0 m	Black (BK)	162-10250
SPS30	30.0	6.5	37.0	1.0 m	Black (BK)	162-10300
SPS35	35.0	6.5	42.0	1.0 m	Black (BK)	162-10350
SPS40	40.0	7.0	48.0	1.0 m	Black (BK)	162-10400
SPS50	50.0	8.0	59.0	1.0 m	Black (BK)	162-10500

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Polypropylene spiral binding for high resistance against oil, wide pitch

- SPF

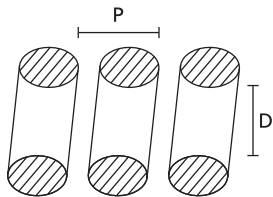
Wherever high abrasion resistance and stable cable inserting are important, the use of SPF spiral binding is recommended. SPF is suitable for wind industry, plant construction and the petrochemical industry.

Features and Benefits

- Heavy-walled and very robust
- Excellent protection from mechanical stress
- Very high abrasion resistance
- Very good resistance to oils
- Available in diameters up to 50 mm
- Ideal for larger cable bundles



Spiral binding - extremely robust and abrasion resistant.



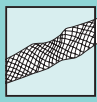
SPF spiral binding (wide pitch)

MATERIAL	Polypropylene (PP)
Operating Temperature	-30 °C to +100 °C
Flammability	UL94 HB



TYPE	Ø D	Pitch (P)	Bundle Ø max.	Length (L)	Colour	Article-No.
SPF10	10.0	10.0	13.0	1.0 m	Black (BK)	162-20100
SPF15	15.0	13.0	18.0	1.0 m	Black (BK)	162-20150
SPF20	20.0	18.0	23.0	1.0 m	Black (BK)	162-20200
SPF25	25.0	19.0	29.0	1.0 m	Black (BK)	162-20250
SPF30	30.0	20.0	34.0	1.0 m	Black (BK)	162-20300
SPF35	35.0	20.0	39.0	1.0 m	Black (BK)	162-20350
SPF40	40.0	20.0	45.0	1.0 m	Black (BK)	162-20400
SPF50	50.0	22.0	56.0	1.0 m	Black (BK)	162-20500

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Standard polyester braided sleeving

- Helagaine HEGP

Helagaine HEGP braided sleeving is used in the automotive industry and in machine construction. It is also used for smaller electrical appliances to avoid pockets of high temperature. HEGP fulfils the strict requirement of DIN5510-2 and is therefore also optimal for railway applications.

Features and Benefits

- Made of sturdy polyester
- Highly flexible
- High abrasion resistance
- Very high surface coverage
- 13 sizes for diameters from 1 - 66 mm for an optimal fit



Helagaine HEGP braided sleeving.

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.

MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +150 °C, intermittent +220 °C
Melting Point	+250 °C
Flammability	UL94 V2, FMVSS 302
Specifications	CEN TS 45545-2: 2009, DIN 5510-2



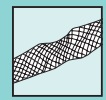
TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGP03	1.0	5.0	Black (BK)	200 m	170-10300
HEGP04	2.0	7.0	Black (BK)	200 m	170-10400
HEGP05	3.0	9.0	Black (BK)	200 m	170-10500
HEGP06	4.0	11.0	Black (BK)	100 m	170-10600
HEGP08	5.0	12.0	Black (BK)	100 m	170-10800
HEGP10	7.0	15.0	Black (BK)	100 m	170-11000
HEGP12	8.0	17.0	Black (BK)	100 m	170-11200
HEGP15	10.0	20.0	Black (BK)	100 m	170-11500
HEGP20	14.0	26.0	Black (BK)	50 m	170-12000
HEGP25	18.0	34.0	Black (BK)	50 m	170-12500
HEGP30	20.0	40.0	Black (BK)	50 m	170-13000
HEGP40	30.0	50.0	Black (BK)	50 m	170-14000
HEGP50	40.0	66.0	Black (BK)	50 m	170-15000

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Standard polyester braided sleeving, expansion rate: 3:1

- Helagaine HEGPX

Helagaine HEGP and HEGPX braided sleeving is used in the automobile sector and in machine construction. It is also used for smaller electrical appliances to avoid pockets of high temperature. HEGP and HEGPX can be supplied in pre-cut lengths on request.

Features and Benefits

- Made of sturdy polyester
- Highly flexible
- Expansion rate of 3:1
- Easy to apply over irregular shapes
- Good abrasion resistance
- 7 sizes for diameters from 3 - 70 mm for an optimal fit

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.



Helagaine HEGPL Braided Sleeving.

MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +150 °C, intermittent +220 °C
Melting Point	+250 °C
Flammability	UL94 V2, FMVSS 302
Specifications	UL-Recognized

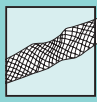


TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGPX06	3.0	10.0	Black (BK)	200 m	170-00060
HEGPX09	5.0	16.0	Black (BK)	100 m	170-00090
HEGPX12	6.0	19.0	Black (BK)	100 m	170-00120
HEGPX20	13.0	32.0	Black (BK)	100 m	170-00200
HEGPX30	19.0	45.0	Black (BK)	50 m	170-00300
HEGPX40	32.0	70.0	Black (BK)	50 m	170-00400

All dimensions in mm. Subject to technical changes.
 Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Polyester braided sleeving, UL94V0 classification

- Helagaine HEGPV0

HEGPV0 braided sleeves are used wherever fire protection is important such as control cabinets, robotics and automatic equipment. Also HEGPV0 is suitable for railway vehicle manufacturing as it conforms to the strict requirements of DIN5510-2 and NFF-16 101.

Features and Benefits

- Made of sturdy polyester
- Self-extinguishing according to UL94 V0 for enhanced fire protection
- Highly flexible
- High abrasion resistance
- High surface coverage



Helagaine HEGPV0 braided sleeving.

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.

MATERIAL	Polyester (PBT)
Operating Temperature	-50 °C to +150 °C, intermittent +200 °C
Melting Point	+225 °C
Flammability	UL94 V0, FMVSS 302
Specifications	CEN TS 45545-2: 2009, DIN 5510-2, NF F 16-101

RoHS

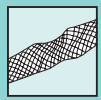
TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGPV004	3.0	7.0	Black with White Identification Yarn (BKIDWH)	100 m	170-30400
HEGPV006	5.0	11.0	Black with White Identification Yarn (BKIDWH)	100 m	170-30600
HEGPV008	7.0	13.0	Black with White Identification Yarn (BKIDWH)	100 m	170-30800
HEGPV012	11.0	17.0	Black with White Identification Yarn (BKIDWH)	50 m	170-31200
HEGPV015	13.0	20.0	Black with White Identification Yarn (BKIDWH)	50 m	170-31500
HEGPV020	18.0	25.0	Black with White Identification Yarn (BKIDWH)	50 m	170-32000
HEGPV030	35.0	40.0	Black with White Identification Yarn (BKIDWH)	50 m	170-33000
HEGPV050	40.0	60.0	Black with White Identification Yarn (BKIDWH)	50 m	170-35000
HEGPV040	45.0	50.0	Black with White Identification Yarn (BKIDWH)	50 m	170-34000

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Polyester braided sleeving, expansion rate: 3:1, UL94V0 classification

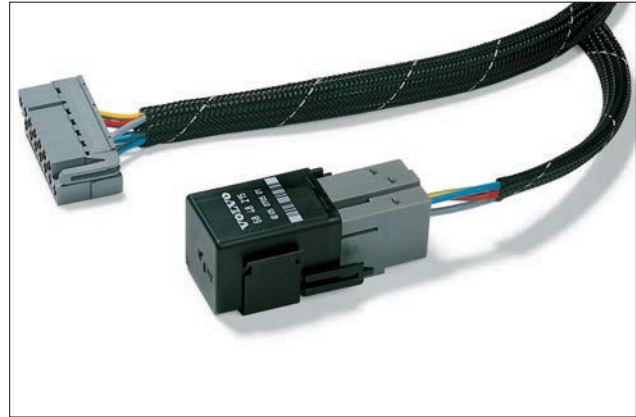
- Helagaine HEGPV0X

Helagaine HEGPV0X is especially suitable for areas wherever fire protection is important as well as a higher expansion ratio of the braided sleeve. Helagaine HEGPV0X offers superior cable protection for machine tools, robotics and automatic equipment. Helagaine HEGPV0X had been successfully tested to DIN5510-2 and NF F 16-101 and can thus be used in many railway applications.

Features and Benefits

- Made of sturdy polyester
- Self-extinguishing according to UL94 V0 for enhanced fire protection
- Highly flexible
- Expansion ratio of 3:1
- Easy to apply over irregular shapes
- Good abrasion resistance

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.



Helagaine HEGPV0X braided sleeving.

MATERIAL	Polyester (PBT)
Operating Temperature	-50 °C to +150 °C, intermittent +200 °C
Melting Point	+225 °C
Flammability	UL94 V0, FMVSS 302
Specifications	DIN 5510-2, NF F 16-101, UL-Recognized



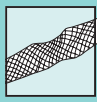
TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGPV0X03	2.0	6.0	Black with White Identification Yarn (BKIDWH)	200 m	170-50030
HEGPV0X06	3.0	10.0	Black with White Identification Yarn (BKIDWH)	200 m	170-50060
HEGPV0X09	5.0	16.0	Black with White Identification Yarn (BKIDWH)	100 m	170-50090
HEGPV0X12	6.0	19.0	Black with White Identification Yarn (BKIDWH)	100 m	170-50120
HEGPV0X20	12.0	32.0	Black with White Identification Yarn (BKIDWH)	100 m	170-50200
HEGPV0X30	19.0	45.0	Black with White Identification Yarn (BKIDWH)	50 m	170-50300
HEGPV0X40	32.0	70.0	Black with White Identification Yarn (BKIDWH)	50 m	170-50400
HEGPV0X50	38.0	76.0	Black with White Identification Yarn (BKIDWH)	50 m	170-50500

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Polyamide braided sleeving for excellent abrasion resistance

- Helagaine HEGPA66

Helagaine HEGPA66 is particularly suitable for vehicle manufacturing as well as plant construction.

Features and Benefits

- Made from heavy-duty polyamide yarn
- Excellent abrasion resistance
- Highly flexible
- Easy to apply over irregular shapes
- Eases application by expanding when compressed
- Very high surface covering



Various types of Helagaine braided sleeving.

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.

MATERIAL	Polyamide 6.6 (PA66)
Operating Temperature	-60 °C to +150 °C, intermittent +200 °C
Melting Point	+255 °C
Flammability	UL94 V2, FMVSS 302
Specifications	DIN 5510-2



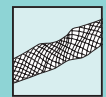
TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGPA6604	3.0	6.0	Black (BK)	200 m	170-40400
HEGPA6606	4.0	8.0	Black (BK)	100 m	170-40600
HEGPA6608	5.0	10.0	Black (BK)	100 m	170-40800
HEGPA6610	7.0	12.0	Black (BK)	100 m	170-41000
HEGPA6612	8.0	14.0	Black (BK)	100 m	170-41200
HEGPA6616	12.0	18.0	Black (BK)	50 m	170-41600
HEGPA6620	15.0	23.0	Black (BK)	50 m	170-42000
HEGPA6625	18.0	28.0	Black (BK)	50 m	170-42500
HEGPA6630	25.0	32.0	Black (BK)	50 m	170-43000
HEGPA6640	30.0	44.0	Black (BK)	50 m	170-44000
HEGPA6650	40.0	55.0	Black (BK)	50 m	170-45000
HEGPA6660	50.0	65.0	Black (BK)	50 m	170-46000

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Polyester braided sleeving for reduction of vibration noise

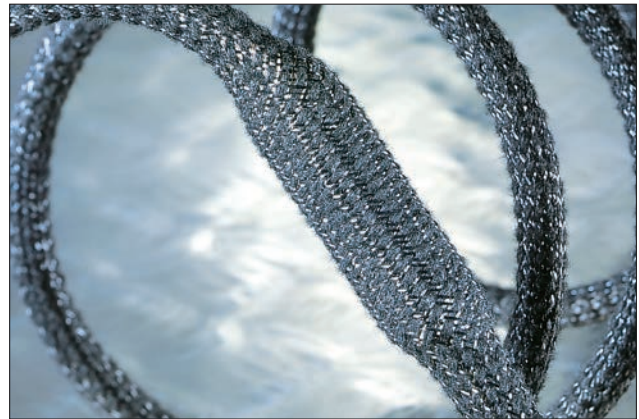
- Helagaine HEGSAS

Helagaine HEGSAS is used primarily in the automotive sector and wherever vibration noise must be reduced. Helagaine HEGSAS can be supplied in pre-cut lengths on request.

Features and Benefits

- Superior noise reduction
- Made of sturdy polyester
- Highly flexible
- Expansion rate of 3:1
- Easy to apply over irregular shapes due
- High surface coverage
- Excellent abrasion resistance

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.



Helagaine HEGSAS braided sleeving.

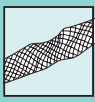
MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +150 °C, intermittent +200 °C
Melting Point	+250 °C
Flammability	FMVSS 302



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGSAS04	2.0	8.0	Black (BK)	200 m	170-60401
HEGSAS06	4.0	11.0	Black (BK)	200 m	170-60600
HEGSAS09	6.0	16.0	Black (BK)	100 m	170-60900
HEGSAS12	8.0	20.0	Black (BK)	100 m	170-61200
HEGSAS15	10.0	24.0	Black (BK)	50 m	170-61500
HEGSAS20	13.0	30.0	Black (BK)	50 m	170-62000
HEGSAS30	20.0	40.0	Black (BK)	25 m	170-63000
HEGSAS40	30.0	50.0	Black (BK)	25 m	170-64000

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



Light weight standard polyester braided sleeving

- Helagaine HEGPL

Helagaine HEGPL is used primarily in automobile interiors, motor compartments, car bodies and underfloors.

Features and Benefits

- Made of sturdy polyester
- Expansion rate of 3:1
- Easier application over irregular shapes
- Highly flexible
- Good abrasion resistance



Helagaine HEGPL braided sleeving.

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.

MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +150 °C, intermittent +220 °C
Melting Point	+250 °C
Flammability	UL94 V2, FMVSS 302, Type B



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGPL03	3.0	8.0	Black (BK)	1,000 m	170-80503
HEGPL06	5.0	12.0	Black (BK)	400 m	170-80506
HEGPL12	8.0	21.0	Black (BK)	300 m	170-80512
HEGPL20	12.0	30.0	Black (BK)	300 m	170-80520
HEGPL30	18.0	55.0	Black (BK)	200 m	170-80530
HEGPL40	24.0	66.0	Black (BK)	150 m	170-80540
HEGPL50	30.0	82.0	Black (BK)	150 m	170-80550

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



NOMEX® braided sleeving

- Helagaine HEGMAN and HEGMANWO

Helagaine HEGMAN and HEGMANWO has been designed for applications that require mechanical protection at high temperatures such as aeronautic, aerospace, military, railway and shipbuilding industries.

Features and Benefits

- Made of non-flammable meta-aramid
- Extremely flexible
- High expansion for easy installation over long lengths
- Optimal mechanical protection for harnesses
- Able to withstand the most severe environments
- Superior protection against abrasion, flames and high temperatures
- Highly resistant to radiation and fluids



Helagaine HEGMAN and HEGMANWO are available in various sizes.

MATERIAL	Polyaramid Polymetaphenylene Isophthalamide (NOMEX)
Operating Temperature	+240 °C
Melting Point	Does not melt / Carbonisation above +370 °C
Flammability	UL94 V0 (Raw material), UL224 VW-1
Specifications	DIN EN 6049



TYPE	Description According to EN6049	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGMAN-02	EN6049-003-02-5	1.0	2.0	Green (GN)	100 m	170-02100
HEGMAN-04	EN6049-003-04-5	2.0	4.0	Green (GN)	100 m	170-02101
HEGMAN-06	EN6049-003-06-5	4.0	8.0	Green (GN)	100 m	170-02102
HEGMAN-08	EN6049-003-08-5	6.0	12.0	Green (GN)	50 m	170-02103
HEGMAN-10	EN6049-003-10-5	8.0	16.0	Green (GN)	50 m	170-02104
HEGMAN-15	EN6049-003-15-5	10.0	20.0	Green (GN)	50 m	170-02105
HEGMAN-20	EN6049-003-20-5	12.0	24.0	Green (GN)	50 m	170-02106
HEGMAN-25	EN6049-003-25-5	15.0	30.0	Green (GN)	50 m	170-02107
HEGMAN-30	EN6049-003-30-5	20.0	40.0	Green (GN)	50 m	170-02108

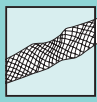
All dimensions in mm. Subject to technical changes.

Cuts in any lengths. NOMEX® is a registered trademark of DuPont. Minimum Order Quantity (MOQ) may differ from package content.

TYPE	Description According to EN6049	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HEGMANWO-02	EN6049-004-02-5	1.0	2.0	Green (GN)	100 m	170-02000
HEGMANWO-04	EN6049-004-04-5	2.0	4.0	Green (GN)	100 m	170-02001
HEGMANWO-06	EN6049-004-06-5	4.0	8.0	Green (GN)	100 m	170-02002
HEGMANWO-08	EN6049-004-08-5	6.0	12.0	Green (GN)	50 m	170-02003
HEGMANWO-10	EN6049-004-10-5	8.0	16.0	Green (GN)	50 m	170-02004
HEGMANWO-15	EN6049-004-15-5	10.0	20.0	Green (GN)	50 m	170-02005
HEGMANWO-20	EN6049-004-20-5	12.0	24.0	Green (GN)	50 m	170-02006
HEGMANWO-25	EN6049-004-25-5	15.0	30.0	Green (GN)	50 m	170-02007
HEGMANWO-30	EN6049-004-30-5	20.0	40.0	Green (GN)	50 m	170-02008

All dimensions in mm. Subject to technical changes.

Cuts in any lengths. NOMEX® is a registered trademark of DuPont. Minimum Order Quantity (MOQ) may differ from package content.



Polyester self-closing sleeving

- Helagaine Twist-In

Helagaine Twist-In has many applications in engineering, electronics and electrical installations. Twist-In in the practical 2m and 5m lengths, used at home and office, provide perfect cable protection for PC, TV- and HiFi-equipment.

Features and Benefits

- Self-closing sleeve made of polyester
- Very good protection against abrasion
- Ideal for retro-fitting
- Quick and easy installation and removal
- Allows to bundle for inspection, maintenance and assembly
- Small range of sizes covers a wide range of applications



Helagaine Twist-In gives easy access to cables and wires for inspection, maintenance and assembly.

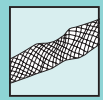
To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.

MATERIAL	Polyester (PET)
Operating Temperature	-70 °C to +125 °C
Melting Point	+255 °C
Flammability	self-extinguishing, FMVSS 302



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
Twist-In 05	4.0	5.0	Black (BK)	150 m	170-01000
Twist-In 08	5.0	8.0	Black (BK)	100 m	170-01001
Twist-In 13	10.0	13.0	Black (BK)	50 m	170-01002
Twist-In 19	16.0	19.0	Black (BK)	25 m	170-01004
Twist-In 25	19.0	25.0	Black (BK)	25 m	170-01005
Twist-In 29	25.0	29.0	Black (BK)	15 m	170-01006
Twist-In 32	29.0	32.0	Black (BK)	15 m	170-01007
Twist-In 38	32.0	38.0	Black (BK)	15 m	170-01008
Twist-In 50	38.0	50.0	Black (BK)	15 m	170-01010

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



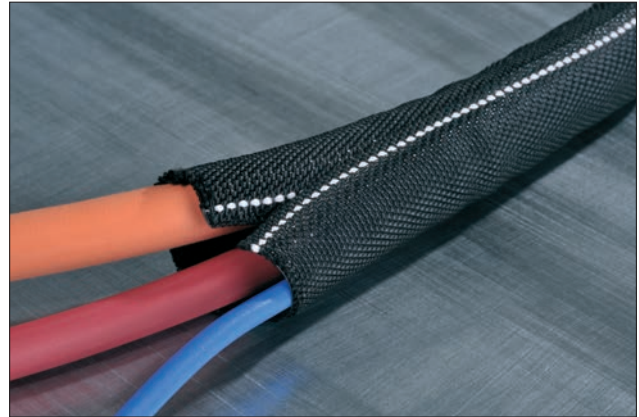
Polyester self-closing sleeving, flame-retardant

- **Helagaine Twist-In-FR**

Helagaine Twist-In-FR can be used in areas where fire protection is important, such as railway, aerospace and shipbuilding.

Features and Benefits

- Self-closing sleeve made from polyester
- Optimal fire protection
- Ideal for retro-fitting
- Very easy, quick installation and removal
- Quick and easy access to bundle for inspection, maintenance and assembly
- Small range of sizes covers a wide range of applications



Helagaine Twist-In-FR with the white identification yarn.

To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0, see page 256.



One Step to the Web!

MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +125 °C
Melting Point	+240 °C
Flammability	UL94 V0, FMVSS 302
Specifications	EN 45545: 2013, NF F 16-101

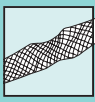


TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
Twist-In-FR 05	4.0	5.0	Black with White Identification Yarn (BKIDWH)	150 m	170-01100
Twist-In-FR 08	5.0	8.0	Black with White Identification Yarn (BKIDWH)	100 m	170-01101
Twist-In-FR 13	10.0	13.0	Black with White Identification Yarn (BKIDWH)	50 m	170-01102
Twist-In-FR 19	16.0	19.0	Black with White Identification Yarn (BKIDWH)	25 m	170-01104
Twist-In-FR 25	19.0	25.0	Black with White Identification Yarn (BKIDWH)	25 m	170-01105
Twist-In-FR 29	25.0	29.0	Black with White Identification Yarn (BKIDWH)	15 m	170-01106
Twist-In-FR 32	29.0	32.0	Black with White Identification Yarn (BKIDWH)	15 m	170-01107
Twist-In-FR 38	32.0	38.0	Black with White Identification Yarn (BKIDWH)	15 m	170-01108
Twist-In-FR 50	38.0	50.0	Black with White Identification Yarn (BKIDWH)	15 m	170-01109

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



Re-sealable protective sleeving for post-termination cable organisation

- HELAHOOK

HELAHOOK is used in industrial machines, electrical appliances, shipbuilding, railway vehicles and in the aerospace industry. HELAHOOK is also employed in automobiles or commercial vehicles. It is the ideal solution for post-termination cable organisation and wherever repeated use is a necessity.

Features and Benefits

- Re-sealable cable protection made of polyester
- Very elastic, fits snugly around the cables
- Hook and loop sealing system can be used for retro-fitting
- High abrasion-resistance



HELAHOOK protective sleeving allows for retrospective fitting and repeated use.

MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +150 °C
Flammability	UL94 V2, FMVSS 302



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
HELAHOOK10	3.0	15.0	Black (BK)	25 m	170-05100
HELAHOOK15	10.0	20.0	Black (BK)	25 m	170-05150
HELAHOOK20	15.0	30.0	Black (BK)	25 m	170-05200
HELAHOOK25	20.0	40.0	Black (BK)	25 m	170-05250
HELAHOOK30	25.0	50.0	Black (BK)	25 m	170-05300

All dimensions in mm. Subject to technical changes.
Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



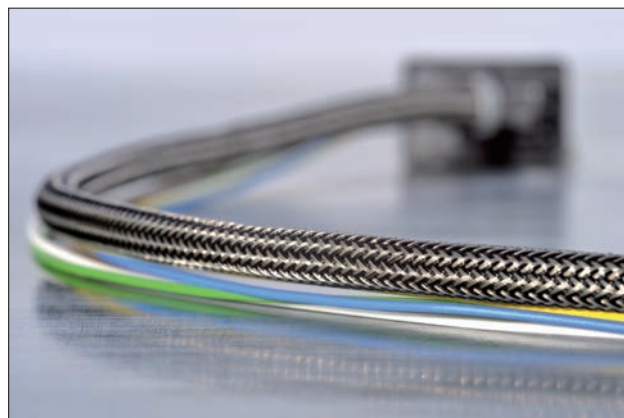
Electromagnetic protection braided sleeving

- **Helagaine HEGEMIP**

Helagaine HEGEMIP braided sleeving is used for highly sensitive electronics, such as electrical appliances and machines, radio equipment, military and automotive engineering.

Features and Benefits

- Excellent electromagnetic protection
- Extremely flexible, expandable and easy to apply
- Superior abrasion protection
- No kinks or tears, even when bending the sleeve 90°
- Particularly suitable for applications with restricted space or requiring movement
- Inner disposable tube protects sleeve from deformation and allows for easy insertion of cables
- Fulfils the requirements of IEC CISPR25 for radio disturbances in vehicles, boats and engines



HEGEMIP braided sleeving: reliable protection from electromagnetic radiation.

MATERIAL	Polyester (halogen free), Tin-plated copper (TNCU)
Operating Temperature	-40 °C to +175 °C, intermittent +200 °C
EMI requirements	10 KHz to 1 GHz according to CISPR25 (DIN VDE 0879-2)
Flammability	UL94 V2, FMVSS 302
Specifications	NF F 16-101

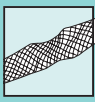


TYPE	Ø D	Bundle Ø min.	Bundle Ø max.	Colour	Weight	Reel Length	Article-No.
HEGEMIP04	4.0	4.0	6.0	Tin-coloured and Black (TCBK)	21.5 g/m	100 m	173-00400
HEGEMIP06	6.0	5.0	10.0	Tin-coloured and Black (TCBK)	28.5 g/m	100 m	173-00600
HEGEMIP08	8.0	8.0	11.0	Tin-coloured and Black (TCBK)	35.7 g/m	100 m	173-00800
HEGEMIP10	10.0	8.0	13.0	Tin-coloured and Black (TCBK)	43.5 g/m	50 m	173-01000
HEGEMIP12	12.0	10.0	15.0	Tin-coloured and Black (TCBK)	48.0 g/m	50 m	173-01200
HEGEMIP14	14.0	12.0	18.0	Tin-coloured and Black (TCBK)	58.0 g/m	100 m	173-01400
HEGEMIP16	16.0	14.0	20.0	Tin-coloured and Black (TCBK)	72.5 g/m	100 m	173-01600
HEGEMIP18	18.0	16.0	22.0	Tin-coloured and Black (TCBK)	78.6 g/m	50 m	173-01800
HEGEMIP20	20.0	18.0	25.0	Tin-coloured and Black (TCBK)	100.0 g/m	50 m	173-02000

All dimensions in mm. Subject to technical changes.
Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



For product specific approvals and specifications please refer to the Appendix.



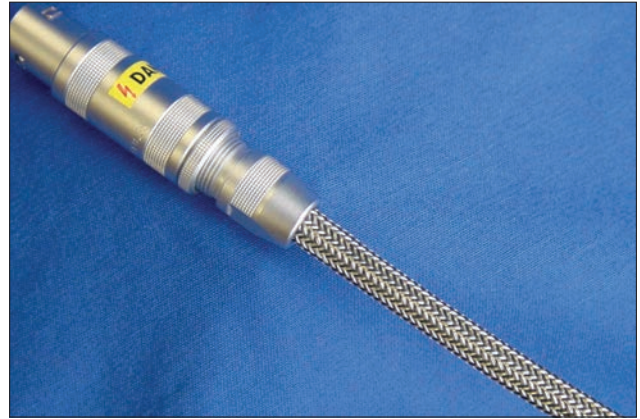
Electromagnetic protection, flame-retardant protection braided sleeving

- Helagaine HEGEMIPV0

Helagaine HEGEMIPV0 braided sleeving is used for protection of highly sensitive electronics in industries, wherever fire protection is important, such as mass transit, aerospace and military industries.

Features and Benefits

- Excellent electromagnetic protection
- Extremely flexible, expandable and easy to apply
- Self-extinguishing according to UL94 V0
- Superior abrasion protection
- No kinks or tears, even when bending the sleeve 90°
- Particularly suitable for applications with restricted space or requiring movement
- Inner disposable tube protects sleeve from deformation and allows for easy insertion of cables
- Fulfils the requirements of IEC CISPR25 for radio disturbances in vehicles, boats and engines



HEGEMIPV0 braided sleeving: EMI protection for enhanced flame protection.

MATERIAL	Polyester (PBT), Tin-plated copper (TNCU)
Operating Temperature	-40 °C to +175 °C, intermittent +200 °C
EMI requirements	10 KHz to 1 GHz according to CI- SPR25 (DIN VDE 0879-2)
Flammability	UL94 V0, FMVSS 302



TYPE	Ø D	Bundle Ø min.	Bundle Ø max.	Colour	Weight	Reel Length	Article-No.
HEGEMIPV004	4.0	4.0	6.0	Tin-coloured and Black (TCBK)	21.5 g/m	100 m	173-60400
HEGEMIPV006	6.0	5.0	10.0	Tin-coloured and Black (TCBK)	28.5 g/m	100 m	173-60600
HEGEMIPV008	8.0	8.0	11.0	Tin-coloured and Black (TCBK)	26.5 g/m	100 m	173-60800
HEGEMIPV010	10.0	8.0	13.0	Tin-coloured and Black (TCBK)	43.5 g/m	50 m	173-61000
HEGEMIPV012	12.0	10.0	15.0	Tin-coloured and Black (TCBK)	48.0 g/m	50 m	173-61200
HEGEMIPV014	14.0	12.0	18.0	Tin-coloured and Black (TCBK)	58.0 g/m	100 m	173-61400
HEGEMIPV016	16.0	14.0	20.0	Tin-coloured and Black (TCBK)	72.5 g/m	100 m	173-61600
HEGEMIPV018	18.0	16.0	22.0	Tin-coloured and Black (TCBK)	78.6 g/m	50 m	173-61800
HEGEMIPV020	20.0	18.0	25.0	Tin-coloured and Black (TCBK)	100.0 g/m	50 m	173-62000

All dimensions in mm. Subject to technical changes.
Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



Electromagnetic protection braided sleeving for hybrid automobiles

- Helagain HEGEMIP-HY

Helagain HEGEMIP-HY provides electromagnetic protection in hybrid automobiles.

Features and Benefits

- Excellent electromagnetic protection
- Extremely flexible, expandable and easy to apply
- No kinks or ruptures even when bent at sharp angles
- Superior abrasion protection
- Special copper alloy for enhanced protection against salt spray
- Particularly suitable for applications with restricted space or requiring movement
- Inner disposable tube protects sleeve from deformation and allows for easy insertion of cables
- Fulfils the requirements of IEC CISPR25 for radio disturbances in vehicles, boats and engines



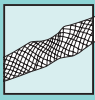
HEGEMIP-HY braided sleeving: EMI protection for hybrid automobiles.

MATERIAL	Polyester (PET), Tin-plated copper (TNCU)
Operating Temperature	-40 °C to +150 °C
EMI requirements	10 KHz to 1 GHz according to CISPR25 (DIN VDE 0879-2)
Flammability	UL94 V2, FMVSS 302



TYPE	Ø D	Bundle Ø min.	Bundle Ø max.	Colour	Weight	Reel Length	Article-No.
HEGEMIP-HY20	20.0	19.0	27.0	Silver (SR), Orange (OG)	72 g/m	50 m	173-02001
HEGEMIP-HY30	30.0	25.0	35.0	Silver (SR), Orange (OG)	101 g/m	50 m	173-03000
HEGEMIP-HY35	35.0	30.0	40.0	Silver (SR), Orange (OG)	120 g/m	50 m	173-03501
HEGEMIP-HY40	40.0	30.0	50.0	Silver (SR), Orange (OG)	180 g/m	50 m	173-04000
HEGEMIP-HY50	50.0	40.0	60.0	Silver (SR), Orange (OG)	193 g/m	50 m	173-05000

All dimensions in mm. Subject to technical changes.
Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.



Hot cutting tool

- HSG0

The HSG0 hand tool is used to cut braided sleeving cleanly and without fraying.

Features and Benefits

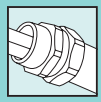
- Light and sturdy
- Heats up quickly with the press of button and cuts in seconds
- The yarn melts and fuses together
- No fraying of the sleeving



The HSG0 hot cutting tool prevents the braided sleeving from fraying.

TYPE	Weight	Colour	Article-No.
HSG0	1.15 kg	Blue (BU)	170-99001

Subject to technical changes.



Cable Protection for sharp-edged cut-out-sections

- **Flexiform Edge Protection grommet strip**

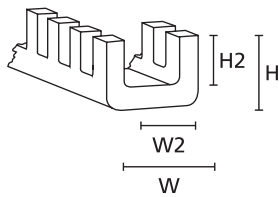
Flexiform grommet strip is used to protect cables routed through sharp-edged cut-out sections.

Features and Benefits

- Very flexible
- Easily and securely applied without adhesives
- Close-fitting rail for effective, orderly-looking protection



Optimal protection of cables and wires at panel edges.



MATERIAL	Polytetrafluoroethylene (PTFE)
Operating Temperature	-60 °C to +260 °C, intermittent +350 °C
Flammability	UL94 V0
Specifications	PAN 6480-A



TYPE	Panel Thickness	Width (W)	Width (W2)	Height (H)	Height (H2)	Colour	Pack Cont.	Article-No.
G51TA	0.4 - 1.3	3.9	1.5	4.3	2.7	Natural (NA)	3 m	251-30109
G51TB	1.3 - 2.1	4.6	2.4	4.3	2.7	Natural (NA)	3 m	251-30209
G51TC	2.1 - 3.3	5.7	3.5	4.3	2.7	Natural (NA)	3 m	251-30309
G51TD	3.3 - 4.8	8.4	5.1	6.2	4.3	Natural (NA)	3 m	251-30409
G51TE	4.8 - 6.5	9.9	6.7	6.4	4.5	Natural (NA)	3 m	251-30509
G51TF	6.5 - 8.1	11.4	8.3	6.8	4.8	Natural (NA)	3 m	251-30609
G51TG	8.1 - 9.7	13.2	10.1	6.8	4.8	Natural (NA)	3 m	251-30709
G51TH	9.7 - 12.9	16.4	13.2	6.8	4.8	Natural (NA)	3 m	251-30809

Minimum Order Quantity (MOQ) may differ from package content.
Flexiform grommet strips are not self-adhesive and therefore not suitable for outer edges.



For product specific approvals and specifications please refer to the Appendix.