A close-up photograph of two braided sleeves. One is orange and the other is black. They are both made of a woven material and are shown in a curved, overlapping arrangement. The background is a plain, light-colored surface.

Routing, Protection & Insulation

Braided Sleeving

**HellermannTyton**

## Braided Sleeving

HellermannTyton braided sleeving products provide abrasion and damage protection for hoses, cable assemblies and wire bundles. Braided sleeving products are made in a variety of materials including general purpose polyester, PA66 nylon, flame retardant, fray resistant, high temperature and materials that provide electromagnetic protection.

Available in non-expandable, expandable, split wrap and hook and loop styles, HellermannTyton offers a braided sleeving option for every application. Many sleeving products are also resistant to harsh environments such as chemicals, salts, solvents, de-icing fluids and petroleum products as well as being resilient against UV light. The unique physical weave of braided sleeving makes it flexible but provides enough airflow as to not trap moisture or humidity. Expandable braided sleeving products are designed to expand beyond their nominal size to fit varying bundle sizes and shapes.

Most braided sleeving products are designed to be cut with a hot knife, which sears the edges and reduces the amount of fraying that occurs during the lifetime of the product. For applications that do not allow access to a hot knife, fray resistant versions are available that can be cut with ordinary scissors with minimal fraying. Ends are easily secured with cable ties, electrical tape or heat shrink materials.

### Market Applications

Automotive, Transportation, Industrial Equipment, Electronics, Automation/Robotics, Control Panels, Marine, Machine Tools, General Manufacturing/OEM

### Product Applications

Hose Assemblies, Cable Bundles, Wire Harnesses, Electrical Cables

### SELECTION GUIDE

Materials Comparison	General Purpose			Flame Retardant				
	General Purpose Expandable Braided Sleeving	General Purpose Expandable Braided Sleeving Helagaine Dispenser Packs	Fray Resistant Expandable Braided Sleeving	Flame Retardant Expandable Braided Sleeving	Flame Retardant + Fray Resistant Expandable Braided Sleeving	Hook & Loop Flame Retardant Expandable Braided Sleeving	Split Wrap Flame Retardant Braided Sleeving	Electromagnetic Flame Retardant Helagaine
Color	Black or Orange	Black	Black	Black or Gray	Black	Black	Black	Tin Colored & Black
Temperature Range	-94°F to 257°F	-58°F to 230°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-40°F to 347°F
	-70°C to 125°C	-50°C to 150°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-40°C to 175°C
Melt Point	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	446°F / 230°C	392°F / 200°C
Flammability Rating	UL 94-V0	—	UL 94-V0	UL VW-1	UL VW-1	UL VW-1	UL VW-1	UL94-V0
ROHS	•	•	•	•	•	•	•	•
UL / CSA	•	—	•	•	•	•	•	—
Other Certifications	FMVSS 302, FAR-25	—	—	FMVSS 302, Mil-202 FAR-25	Mil-202	Mil-202	FAR-25	FMVSS 302
Recommended Cutting	Hot Knife	Hot Knife	Scissors	Hot Knife	Scissors	Hot Knife	Hot Knife	Shears
Abrasion Protection	M	M	M	M	M	M	H	H
Outgassing	M	M	M	M	M	M	M	M
Cut Resistance	M	M	H	M	H	M	H	H
Chemical Resistance	M	M	M	M	M	M	H	H
UV Resistance	•	•	•	•	•	•	•	•
Halogen Free	•	•	•	•	•	•	•	
Expandable	•	•	•	•	•	•	—	•
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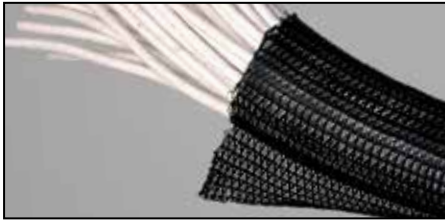
VH = Very High H = High M = Medium L = Low

## Key Benefits

**Easy Application** All braided sleeving products are designed for easy application on bundles while adjusting to fluctuations in bundle size and shape.

**Superior Protection** In addition to abrasion protection, most braided sleeving products also provide protection against chemicals, salts, solvents, de-icing fluids and petroleum products. Specialty braided sleeving models also provide protection against flame, heat and/or electromagnetic interference.

**Enhanced Appearance** Braided sleeving products wrap around varying bundle shapes, sizes and colors to provide an aesthetically pleasing uniform look and appearance.



Specialty				Wrap Sleeving			High Temperature		
Electromagnetic Helagaïne	Polyamide 6.6 Expandable Braided Sleeving	Polyamide 6.6 Helagaïne Expandable Braided Sleeving	Plenum Rated Halar® Expandable Braided Sleeving	Split Wrap Braided Sleeving	Hook & Loop Expandable Braided Sleeving	Split Wrap Woven Braided Sleeving	Extreme High Temperature Resin Saturated Fiberglass Expandable Braided Sleeving	High Temperature Nomex® Expandable Braided Sleeving	High Temperature Aluminum Laminated Fiberglass Sleeving
Tin Colored & Black	Black	Gray	Black or White	Black or Orange	Black	Black	Black	Green	Silver
-40°F to 347°F	-49°F to 302°F	-76°F to 302°F	-103°F to 302°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-94°F to 1,202°F	-320°F to 662°F	-76°F to 491°F
-40°C to 175°C	-45°C to 150°C	-60°C to 150°C	-75°C to 150°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-70°C to 650°C	-196°C to 350°C	-60°C to 255°C
392°F / 200°C	491°F / 255°C	491°F / 255°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	2,048°F / 1,120°C	NA	2,048°F / 1,120°C
UL94-V2	Non Flammable	UL 94-V2	UL VW-1	UL 94-V0	UL 94-V0	UL 94-V0	UL VW-1	Non Flammable	Non Flammable
•	•	•	•	•	•	•	•	•	•
—	—	•	•	•	•	•	•	—	—
FMVSS 302	—	FMVSS 302	UL 2024, NFPA 262, FAR-25, FMVSS 302	—	FAR-25	—	—	—	—
Shears	Hot Knife	Hot Knife	Hot Knife	Hot Knife	Hot Knife	Hot Knife	Scissors	Scissors	Scissors
H	H	H	M	M	M	M	VH	L	NA
M	H	H	L	M	M	M	L	NA	NA
H	H	H	M	M	M	M	VH	L	H
H	H	H	M	M	M	M	H	M	H
•	•	•	•	•	•	•	•	—	•
•	•	•	—	•	—	•	•	•	•
•	•	•	•	—	•	—	•	•	—
13	14	15	16	17, 18	19	20	21	22	23

Nomex® is a registered trademark of the DuPont Corporation. Halar® is a registered trademark of the Solvay Solexis Corporation.

## Braided Sleeving

General Purpose  
Expandable Braided Sleeving

Designed to adjust and expand to irregular shapes, this general purpose sleeving is lightweight and offers a high tensile strength while still maintaining flexibility. This sleeving is an excellent choice for protecting wire and cable bundles from abrasion, chafing and heat degradation.

## Application

Commonly used in electrical and industrial wire harnessing applications where economy and durability are required for the protection of wires, cables, tubing, bundles and pneumatic hoses.

## Benefits

- Adjusts to twisting and flexing without creating wrinkles, bends or bulges.
- Provides tough, durable protection through a wide range of temperatures.
- Expands up to 150% of flat diameter for easy installation.
- Offers excellent abrasion and cut-through resistance as well as inertness to most chemicals and fungus.



## Material Data

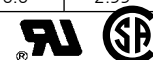
Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03177	1/8	3.2	BSP180	0.094	0.25	2.4	6.4	Black	225	68.6	0.41	0.19
170-03000	1/4	6.4	BSP140	0.125	0.437	3.2	11.1	Black	200	61	0.52	0.24
170-03001	1/2	12.7	BSP120	0.25	0.75	6.4	19.1	Black	100	3.5	0.77	0.35
170-03002	3/4	19.1	BSP340	0.5	1.25	12.7	31.8	Black	75	22.9	0.9	0.41
170-03003	1	25.4	BSP100	0.625	1.625	15.9	41.3	Black	65	19.8	0.87	0.4
170-03004	1-1/4	31.8	BSP1140	0.75	1.75	19.1	44.5	Black	50	15.2	0.8	0.363
170-03005	1-1/2	38.1	BSP1120	1.0	2.125	25.4	54.0	Black	40	12.2	0.79	0.358
<b>Bulk Sized Reels</b>												
170-03174	1/8	3.2	BSP180B	0.094	0.25	2.4	6.4	Black	1000	304.8	1.8	0.82
170-03041	1/4	6.4	BSP140B	0.125	0.437	3.2	11.1	Black	1000	304.8	2.6	1.18
170-03042	1/2	12.7	BSP120B	0.25	0.75	6.4	19.1	Black	500	152.4	3.85	1.75
170-03043	3/4	19.1	BSP340B	0.5	1.25	12.7	31.8	Black	250	76.2	3.0	1.36
170-03044	1	25.4	BSP100B	0.625	1.625	15.9	41.3	Black	250	76.2	3.35	1.52
170-03045	1-1/4	31.8	BSP1140B	0.75	1.75	19.1	44.5	Black	250	76.2	4.0	1.81
170-03178	2	50.8	BSP200B	1.5	3.5	38.1	88.9	Black	200	61.0	6.6	2.99

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

## General Purpose Expandable Braided Sleeving Helagaine Dispenser Packs

This convenient package holds mini spools of expandable braided sleeving. Designed to save space and provide easy access when dispensing, this unit allows for the efficient handling and management of sleeving.

## Application

The perfect solution for use in field-service applications where a large spool of braided sleeving is not feasible or when only a small amount of sleeving is required for a quick-fix project.

## Benefits

- Expands (3:1 ratio) to allow for a wide range of bundle sizes.
- Dispenser box protects sleeving from dirt and keeps it from unraveling.



## Material Data

Material	PET (Polyester)
Operating Temperature	-58°F to 230°F, -50°C to 150°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-80150	1/4	6.4	HLB15	0.2	0.83	5.1	21.1	Black	32.8	10.0	0.45	0.2
170-80250	1/2	12.7	HLB25	0.4	1.18	10.2	30.0	Black	32.8	10.0	0.56	0.25
170-80350	1	25.4	HLB35	0.71	2.13	18.0	54.1	Black	32.8	10.0	0.67	0.3

Use Part No. for ordering and Type for specification purposes.



## Braided Sleeving

## General Purpose Expandable Braided Sleeving - Orange

Orange PET braided sleeving is an extremely flexible, general purpose option for bundling and protecting wires and cables in abrasive type applications. Its color makes it ideal for systematic color coding of complex wiring installations.

## Application

Commonly used to shield cable harnesses in battery-powered vehicles, such as hybrid cars, golf carts, and light trucks.

## Benefits

- Provides easy visual and safety identification of critical wiring components.
- Offers high tensile strength while maintaining extreme flexibility.
- Expands up to 150% of flat diameter for easy installation.
- Does not trap heat and humidity.
- Installs quickly and accommodates expansions and varying cable assembly shapes, reducing installation costs.



## Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03076	1/4	6.4	BSP143B	0.125	0.437	3.2	11.1	Orange	1000	304.8	2.6	1.18
170-03077	1/2	12.7	BSP123B	0.25	0.75	6.4	19.1	Orange	500	152.4	3.9	1.75
170-03078	3/4	19.1	BSP343B	0.5	1.25	12.7	31.8	Orange	250	76.2	3.0	1.36
170-03079	1	25.4	BSP103B	0.625	1.625	15.9	41.3	Orange	250	76.2	3.35	1.52
170-03080	1-1/4	31.8	BSP1143B	0.75	1.75	19.1	44.5	Orange	250	76.2	4.0	1.81
170-03081	1-1/2	38.1	BSP1123B	1.0	2.125	25.4	54.0	Orange	200	61.0	6.6	3.0

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

Fray Resistant Expandable  
Braided Sleeving

A versatile and economical general purpose sleeving that resists fraying when cut with ordinary scissors.

## Application

For use in automotive, industrial and computer applications where the wires, cables and hoses being covered endure frequent handling.

## Benefits

- Enables field installations without a hot knife thus reducing time and assembly costs.
- Expands up to 150% of flat diameter for easy installation.
- Offers excellent abrasion and cut-through resistance as well as inertness to most chemicals and fungus.



## Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Scissors



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03123	1/8	3.3	BSPSC180	0.125	0.25	3.2	6.4	Black	100	30.5	0.4	0.18
170-03035	1/4	6.4	BSPSC140	0.156	0.437	4.0	11.1	Black	100	30.5	0.46	0.21
170-03012	1/2	12.7	BSPSC120	0.25	0.75	6.4	19.1	Black	100	30.5	0.82	0.37
170-03013	3/4	19.1	BSPSC340	0.625	1.0	15.9	25.4	Black	75	22.9	0.83	0.38
170-03014	1	25.4	BSPSC100	0.75	1.19	19.1	30.2	Black	50	15.2	0.62	0.28
170-03015	1-1/4	31.8	BSPSC1140	1.0	1.5	25.4	38.1	Black	50	15.2	0.78	0.35
170-03016	1-1/2	38.1	BSPSC1120	1.25	2.0	31.8	50.8	Black	50	15.2	0.93	0.42

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

Flame Retardant  
Expandable Braided Sleeving

A flame retardant woven (threaded) polyester sleeving that is resistant to cuts and abrasion, and contains a combustion inhibitor allowing it to achieve a UL and CSA flame-resistance rating of VW-1.

## Application

This fire extinguishing braided sleeving is ideal for electronic and high tech applications because of its light weight and durable qualities.

## Benefits

- Resists gasoline, engine fluids, chemicals and cleaning solvents.
- Expands up to 150% of flat diameter for easy installation.
- Enables quick and easy installation over large connectors.



## Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03006	1/4	6.4	BSPFR140	0.125	0.437	3.2	11.1	Black	200	61	0.48	0.22
170-03007	1/2	12.7	BSPFR120	0.25	0.75	6.4	19.1	Black	100	30.5	0.72	0.33
170-03008	3/4	19.1	BSPFR340	0.5	1.25	12.7	31.8	Black	75	22.9	0.65	0.3
170-03010	1-1/4	31.8	BSPFR1140	0.75	1.75	19.1	44.5	Black	50	15.3	0.8	0.363
170-03011	1-1/2	38.1	BSPFR1120	1.0	2.125	25.4	54.0	Black	40	12.2	0.79	0.358
170-03071	1/8	3.2	BSPFR188	0.094	0.25	2.4	6.4	Gray	225	68.6	0.4	0.18
170-03072	1/4	6.4	BSPFR148	0.125	0.437	3.2	11.1	Gray	200	61	0.48	0.22
170-03073	1/2	12.7	BSPFR128	0.25	0.75	6.4	19.1	Gray	100	30.5	0.72	0.33
170-03074	3/4	19.1	BSPFR348	0.5	1.25	12.7	31.8	Gray	75	22.9	0.63	0.29
170-03066	1-1/2	38.1	BSPFR1128	1.0	2.125	25.4	54.0	Gray	40	12.2	0.79	0.358
<b>Bulk Sized Reels</b>												
170-03089	1/8	3.2	BSPFR180B	0.094	0.25	2.4	6.4	Black	1000	304.8	1.6	0.73
170-03090	1/4	6.4	BSPFR140B	0.125	0.437	3.2	11.1	Black	1000	304.8	2.4	1.1
170-03187	3/8	9.5	BSPFR380	0.188	0.5	4.8	12.7	Black	500	152.4	2.85	1.29
170-03091	1/2	12.7	BSPFR120B	0.25	0.75	6.4	19.1	Black	500	152.4	3.6	1.6
170-03092	3/4	19.1	BSPFR340B	0.5	1.25	12.7	31.8	Black	250	76.2	2.2	1.0
170-03093	1	25.4	BSPFR100B	0.625	1.625	15.9	41.3	Black	250	76.2	3.4	1.5
170-03094	1-1/4	31.8	BSPFR1140B	0.75	1.75	19.1	44.5	Black	250	76.2	4.0	1.8
170-03095	1-1/2	38.1	BSPFR1120B	1.0	2.125	25.4	54.0	Black	200	61.0	3.9	1.77

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.





## Flame Retardant + Fray Resistant Expandable Braided Sleeving

This protective sleeving is self-extinguishing and can be cut with sharp scissors instead of a hot knife for fray-resistant ends.

### Application

Readily used in the automotive, audiovisual, industrial, wire, cable and computer industries where flame retardancy is required to reduce the likelihood of ignition and/or reduce the rate of flame spread. It is suited for situations where access to a hot knife is either impractical or impossible.

### Benefits

- Provides fuller coverage and a medium-to-high abrasion resistance.
- Expands for ease of installation in the shop or the field.
- Offers increased braid density without loss of flexibility.
- Contains white tracer thread for simple identification of flame retardancy.
- Extinguishes quickly and reduces flame spread to surrounding components.



#### Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Scissors



#### Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03036	1/4	6.4	BSSCFR140	0.156	0.437	4.0	11.1	Black	100	30.5	0.4	0.18
170-03017	1/2	12.7	BSSCFR120	0.25	0.75	6.4	19.1	Black	100	30.5	0.82	0.37
170-03018	3/4	19.1	BSSCFR340	0.625	1.0	15.9	25.4	Black	75	22.9	0.833	0.38
170-03019	1	25.4	BSSCFR100	0.75	1.188	19.1	30.1	Black	50	15.2	0.62	0.28
170-03020	1-1/4	31.8	BSSCFR1140	1.0	1.5	25.4	38.1	Black	50	15.2	0.78	0.35
170-03021	1-1/2	38.1	BSSCFR1120	1.25	2.0	31.8	50.8	Black	50	15.2	0.925	0.42
<b>Bulk Sized Reels</b>												
170-03116	1/4	3.3	BSSCFR180B	0.125	0.25	3.2	6.4	Black	1000	304.8	4.0	1.8
170-03117	1/4	6.4	BSSCFR140B	0.156	0.437	4.0	11.1	Black	1000	304.8	4.6	2.1
170-03118	1/2	12.7	BSSCFR120B	0.25	0.75	6.4	19.1	Black	500	152.4	4.1	1.9
170-03119	3/4	19.1	BSSCFR340B	0.625	1.0	15.9	25.4	Black	250	76.2	2.78	1.3
170-03120	1	25.4	BSSCFR100B	0.75	1.9	19.1	48.3	Black	250	76.2	3.1	1.4
170-03121	1-1/4	31.8	BSSCFR1140B	1.0	1.5	25.4	38.1	Black	250	76.2	3.9	1.8
170-03122	1-1/2	38.1	BSSCFR1120B	1.25	2.0	31.8	50.8	Black	250	76.2	4.63	2.1

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

### Hook & Loop Flame Retardant Expandable Braided Sleeving

Hook and loop edging keeps this flame retardant sleeving securely wrapped around cables, but allows for easy access when maintenance is necessary.

#### Application

Ideal for high-technology applications, especially operating environments where harsh fluids are present.

#### Benefits

- Conforms to irregular shapes and contours.
- Meets military specifications (Mil-202 approved).
- Cuts easily with a bench-mount hot knife.
- Resists chemicals and cleaning solvents.



#### Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length*		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03153	1/2	12.7	BSHKLPFR120B	0.063	1.6	Black	100	30.5	1.3	0.6
170-03154	3/4	19.1	BSHKLPFR340B	0.063	1.6	Black	100	30.5	1.8	0.8
170-03155	1-1/4	31.8	BSHKLPFR1140B	0.063	1.6	Black	100	30.5	2.3	1.04
170-03156	2	50.8	BSHKLPFR200B	0.063	1.6	Black	100	30.5	3.2	1.45
170-03157	2-1/2	63.5	BSHKLPFR212B	0.063	1.6	Black	100	30.5	3.75	1.7

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Split Wrap Flame Retardant Braided Sleeving

Used when flame retardancy is a primary requirement, this protection option incorporates a lateral split that opens to accommodate a variety of bundling requirements. The semi-rigid braid configuration simply closes around the entire installation without the need for any additional fasteners.

### Application

Use this self-extinguishing product that complies with UL VW-1 standards where cables exit a wall and need to be managed for an uncluttered, clean appearance.

### Benefits

- Installs easily, saving assembly time.
- Allows for future accessibility without disassembly.
- Needs no fasteners (i.e., tape, hook and loop, etc.).
- Provides greater flexibility than spiral wraps or convoluted tubing.
- Retains shape and rigidity throughout operating temperature range.

See installation tool on back cover.



#### Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	446°F / 230°C
Abrasion Protection	High
Recommended Cutting	Hot Knife



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.		ft.	m.	lbs.	kg.
170-03140	1/8	3.1	BSSWFR180B	0.024	0.61	Black	400	121.9	0.8	0.36
170-03141	1/4	6.4	BSSWFR140B	0.025	0.64	Black	200	61.0	1.2	0.54
170-03142	1/2	12.7	BSSWFR120B	0.025	0.64	Black	150	45.7	2.1	0.95
170-03143	3/4	19.1	BSSWFR340B	0.025	0.64	Black	100	30.5	1.6	0.73
170-03144	1	25.4	BSSWFR100B	0.038	0.97	Black	100	30.5	2.0	0.91
170-03145	1-1/4	31.8	BSSWFR1140B	0.038	0.97	Black	75	22.9	1.8	0.82
170-03146	1-1/2	38.1	BSSWFR1120B	0.038	0.97	Black	75	22.9	2.1	0.95
170-03147	2	50.8	BSSWFR200B	0.038	0.97	Black	50	15.2	1.8	0.82

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

Electromagnetic Flame Retardant  
Helagaine

Helagaine VO (HEGEMIPVO) is tubular braided sleeving made from Polyester PBT monofilaments. The raw material is treated with non-burning agents so it has flame retardant and self-extinguishing properties. Rated VO by Underwriters Laboratories.

## Application

Excellent for use where flame can cause damage to highly sensitive wiring in critical applications, such as laboratories, computer rooms, satellites, mass transit and airplanes.

## Benefits

- Shields or dissipates wire and cables from electromagnetic interference.
- Resists most chemicals.
- Expands (ratio 2:1) to allow for easy placement over bundles.



## Material Data

Material	Polyester (PBT)/Tin-plated copper (TNCU)
Flammability	UL 94-V0
Operating Temperature	-40 °F to 347 °F -40 °C to 175 °C
Melt Point	329 °F / 200 °C
Abrasion Protection	High
Recommended Cutting	Shears
EMI Requirements	10 KHz to 1 GHz according to CISPR25



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
173-60400	1/8	3.2	HEGEMIPV004	0.16	0.26	4.0	6.0	Tin + Black	328	100	4.74	2.2
173-60600	1/4	6.4	HEGEMIPV006	0.2	0.39	5.0	10.0	Tin + Black	328	100	6.28	2.8
173-60800	5/16	7.9	HEGEMIPV008	0.32	0.45	8.0	11.0	Tin + Black	328	100	5.84	2.6
173-61000	3/8	9.5	HEGEMIPV010	0.32	0.52	8.0	13.0	Tin + Black	164	50	9.6	4.4
173-61200	7/16	11.1	HEGEMIPV012	0.39	0.59	10.0	15.0	Tin + Black	164	50	10.6	4.8
173-61400	1/2	12.7	HEGEMIPV014	0.47	0.71	12.0	18.0	Tin + Black	328	100	12.8	5.8
173-61600	9/16	14.3	HEGEMIPV016	0.55	0.79	14.0	20.0	Tin + Black	328	100	15.9	7.2
173-61800	5/8	15.9	HEGEMIPV018	0.63	0.87	16.0	22.0	Tin + Black	164	50	17.3	7.8
173-62000	3/4	19.1	HEGEMIPV020	0.71	0.98	18.0	25.0	Tin + Black	164	50	22.1	10.0

Use Part No. for ordering and Type for specification purposes.

## Braided Sleeving

## Electromagnetic Helagaine

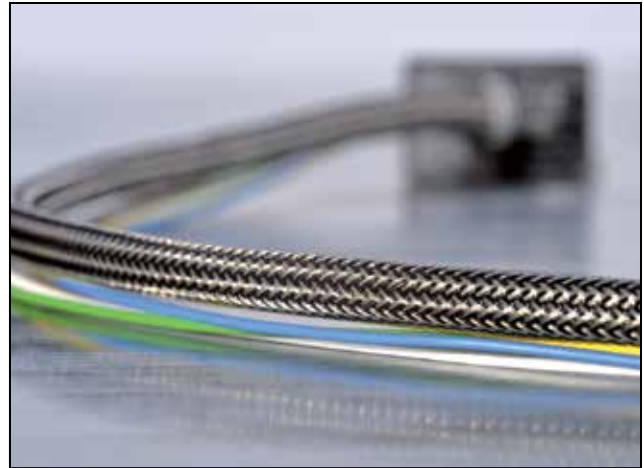
Helagaine (HEGEMIP) is a sleeving created from tin-plated copper and polyester threads that offers not only secure cable bundling but electromagnetic protection as well. The formulated mix of materials offers inside and outside abrasion resistance.

## Application

Particularly suitable for applications with movement and little space; ideal for short-run cables found in electrical appliances and radio equipment.

## Benefits

- Features a supporting inner tube that makes insertion of cable easier and protects the sleeve from deformation during transport.
- Attenuates electrical field interference.
- Provides electromagnetic and electrostatic shielding.
- Delivers added shielding in retrofit applications.
- Retains original form even when bent and twisted, unlike pure copper braids.



## Material Data

Material	PET (Polyester) / Tin-Plated Copper (TNCU)
Flammability	UL 94-V2
Operating Temperature	-40°F to 347°F, -40°C to 175°C
Melt Point	392°F / 200°C
Abrasion Protection	High
Recommended Cutting	Shears
EMI Requirements	10 KHz to 1 GHz according to CISPR25



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
173-00400	1/8	3.2	HEGEMIP04	0.16	0.26	4.0	6.0	Tin + Black	328	100	4.74	2.2
173-00600	1/4	6.4	HEGEMIP06	0.2	0.39	5.0	10.0	Tin + Black	328	100	6.28	2.8
173-00800	5/16	7.9	HEGEMIP08	0.32	0.45	8.0	11.0	Tin + Black	328	100	5.84	2.6
173-01000	3/8	9.5	HEGEMIP10	0.32	0.52	8.0	13.0	Tin + Black	164	50	9.6	4.4
173-01200	7/16	11.1	HEGEMIP12	0.39	0.59	10.0	15.0	Tin + Black	164	50	10.6	4.8
173-01400	1/2	12.7	HEGEMIP14	0.47	0.71	12.0	18.0	Tin + Black	328	100	12.8	5.8
173-01600	9/16	14.3	HEGEMIP16	0.55	0.79	14.0	20.0	Tin + Black	328	100	15.9	7.2
173-01800	5/8	15.9	HEGEMIP18	0.63	0.87	16.0	22.0	Tin + Black	164	50	17.3	7.8
173-02000	3/4	19.1	HEGEMIP20	0.71	0.98	18.0	25.0	Tin + Black	164	50	22.1	10.0

Use Part No. for ordering and Type for specification purposes.

# Braided Sleeving

## Polyamide 6.6 Expandable Braided Sleeving - Black

A pliable yet durable nylon sleeve that delivers excellent protection against cuts, abrasions and excessive wear caused by repetitive motion.

### Application

Used on hoses, pipes, wiring harnesses and cables installed in cars, trucks, military vehicles, trains and industrial equipment. Protects delicate wiring in engine compartments and near exhaust systems. Also organizes wires and breakouts in electrical harnesses.

### Benefits

- Resists fuels, salts, solvents, gasoline and other common contaminants.
- Offers a tight, 12 mil braid that provides full coverage but will not rot or retain moisture.
- Performs well in wet applications and where abiding substrate has a smooth surface.
- Expands up to 150% of flat diameter for easy installation.



### Material Data

Material	Polyamide 6.6 (Nylon)
Flammability	Non-Flammable
Operating Temperature	-49°F to 302°F, -45°C to 150°C
Melt Point	491°F / 255°C
Abrasion Protection	High
Recommended Cutting	Hot Knife



### Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03069	1/4	6.4	BSPA66140	0.125	0.375	3.2	9.5	Black	200	61.0	0.6	0.27
170-03027	1/2	12.7	BSPA66120	0.375	0.75	9.5	19.1	Black	100	30.5	1.03	0.47
170-03028	3/4	19.1	BSPA66340	0.5	1.25	12.7	31.8	Black	75	22.9	1.103	0.5
170-03029	1	25.4	BSPA66100	0.625	1.375	15.9	35.0	Black	50	15.2	0.8	0.36
170-03030	1-1/4	31.8	BSPA661140	0.75	1.5	19.1	38.1	Black	50	15.2	0.89	0.4
<b>Bulk Sized Reels</b>												
170-03070	1/4	6.4	BSPA66140B	0.125	0.375	3.2	9.5	Black	1000	304.8	3.1	1.41
170-03046	1/2	12.7	BSPA66120B	0.375	0.75	9.5	19.1	Black	500	152.4	5.15	2.34
170-03047	3/4	19.1	BSPA66340B	0.5	1.25	12.7	31.8	Black	250	76.2	3.68	1.67
170-03048	1	25.4	BSPA66100B	0.625	1.375	15.9	35.0	Black	250	76.2	4.0	1.81
170-03049	1-1/4	31.8	BSPA661140B	0.75	1.5	19.1	38.1	Black	250	76.2	4.5	2.04

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

## Polyamide 6.6 Helagaine Expandable Braided Sleeving - Gray

Made from heat-stabilized monofilament strands, this lightweight sleeving provides tough protection with excellent resistance to abrasion. Despite its sturdy composition, Helagaine is expandable and durable, and can be easily applied over irregular surfaces.

## Application

Suitable for automotive and transportation industry applications for abrasion protection of sensitive cables and wires.

## Benefits

- Offers a strand diameter that is approximately 10% larger than that of polyester, allowing for greater expandability.
- Resists fuels, salts, solvents, gasoline and other common contaminants.
- Performs well in wet applications and where abiding substrate has a smooth surface.



## Material Data

Material	Polyamide 6.6 (PA66)
Flammability	UL 94-V2
Operating Temperature	-76°F to 302°F, -60°C to 150°C
Melt Point	491°F / 255°C
Abrasion Protection	High
Recommended Cutting	Hot Knife



## Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-20400	1/8	3.2	HEGPA6604	0.12	0.24	3.0	6.1	Gray	656	200	1.1	0.5
170-20600	3/16	4.76	HEGPA6606	0.16	0.32	4.1	8.1	Gray	328	100	1.3	0.59
170-20800	1/4	6.4	HEGPA6608	0.2	0.4	5.1	10.2	Gray	328	100	1.1	0.5
170-21000	3/8	9.5	HEGPA6610	0.28	0.47	7.0	12.0	Gray	328	100	2.09	0.95
170-21200	1/2	12.7	HEGPA6612	0.32	0.55	8.1	14.0	Gray	328	100	2.4	1.1
170-21500	5/8	15.9	HEGPA6616	0.47	0.71	12.0	18.0	Gray	164	50	2.76	1.25
170-22000	3/4	19.1	HEGPA6620	0.59	0.91	15.0	23.1	Gray	164	50	3.1	1.41
170-22500	1	25.4	HEGPA6625	0.71	1.1	18.0	28.0	Gray	164	50	3.9	1.77
170-23000	1-1/4	31.8	HEGPA6630	0.98	1.26	24.9	32.0	Gray	164	50	4.9	2.22
170-25000	2	50.8	HEGPA6650	1.58	2.17	40.1	55.1	Gray	164	50	10.4	4.72

Use Part No. for ordering and Type for specification purposes.



# Braided Sleeving

## Plenum Rated Halar® Expandable Braided Sleeving

Halar® self-extinguishing sleeving is used where flammability, high temperature endurance and low outgassing are concerns. This sleeving is made from strands of high temperature, flame resistant Halar monofilaments that are able to resist a wide range of corrosive chemicals and organic solvents.

### Application

Its low flame spread and smoke generation properties make it the perfect option for use in technologically-advanced applications, such as those in the automotive, aerospace and vital military markets.

### Benefits

- Resists gasoline and engine chemicals.
- Exceeds automotive industry requirements of FMVSS 302 as well as aviation industry requirements of FAR 25.
- Expands up to 150% for economical and expeditious installation.
- Withstands abrasion and won't degrade when exposed to Cobalt 60 radiation conditions.
- Meets UL 2024 and NFPA 262 specifications for plenum applications.



### Material Data

Material	Ethylene Chlorotrifluoroethylene Monofilament (ECTFE)
Flammability	UL VW-1
Operating Temperature	-103°F to 302°F, -75°C to 150°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



### Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03098	1/8	3.1	BSHLR180	0.094	0.25	2.4	6.4	Black	225	68.6	0.6	0.27
170-03100	1/4	6.4	BSHLR140	0.125	0.437	3.1	11.1	Black	200	61.0	0.8	0.36
170-03102	3/8	9.5	BSHLR380	0.187	0.625	4.7	15.9	Black	125	38.1	1.1	0.5
170-03104	1/2	12.7	BSHLR120	0.25	0.75	6.4	19.1	Black	100	30.5	1.1	0.5
170-03106	3/4	19.1	BSHLR340	0.5	1.25	12.7	31.8	Black	75	22.8	1.3	0.6
170-03108	1	25.4	BSHLR100	0.625	1.625	16	41.4	Black	65	19.8	1.4	0.64
170-03110	1-1/4	31.8	BSHLR1140	0.75	1.75	19.1	44.5	Black	50	15.2	1.3	0.6
170-03112	1-3/4	44.4	BSHLR1340	1.25	2.75	31.8	69.9	Black	30	9.1	1.3	0.6
170-03114	2	50.8	BSHLR200	1.5	3.5	38.1	88.9	Black	50	15.2	2.3	1.04
170-03099	1/8	3.1	BSHLR1810	0.094	0.25	2.4	6.4	White	225	68.6	0.6	0.27
170-03101	1/4	6.4	BSHLR1410	0.125	0.437	3.1	11.1	White	200	61.0	0.8	0.36
170-03103	3/8	9.5	BSHLR3810	0.187	0.625	4.7	15.9	White	125	38.1	1.1	0.5
170-03105	1/2	12.7	BSHLR1210	0.25	0.75	6.4	19.1	White	100	30.5	1.1	0.5
170-03107	3/4	19.1	BSHLR3410	0.5	1.25	12.7	31.8	White	75	22.9	1.3	0.6
170-03109	1	25.4	BSHLR1010	0.625	1.625	15.9	41.4	White	65	19.8	1.4	0.64
170-03111	1-1/4	31.8	BSHLR11410	0.75	1.75	19.1	44.5	White	50	15.2	1.3	0.6
170-03113	1-3/4	44.4	BSHLR13410	1.25	2.75	31.8	69.9	White	30	9.1	1.3	0.6
170-03115	2	50.8	BSHLR2010	1.5	3.5	38.1	88.9	White	50	15.2	2.3	1.04

Use Part No. for ordering and Type for specification. \* Pre-cut lengths available upon request.  
Halar® is a registered trademark of the Solvay Solexis Corporation.  
Halar product is produced on 8" diameter mini spools, which will not fit in merchandising display.



## Split Wrap Braided Sleeving

A bundling and protection option with a lateral split and a semi-rigid braid configuration that is the ideal solution for circumstances where ease of installation is the primary concern. The lateral split allows the sleeving to open up to adjust to the bundling requirement while the 25% edge overlap folds back over to protect the connector or splices.

### Application

More flexible than spiral wraps or convoluted tubing, this product is a fast and easy option for adding protection in post-assembly or post-installation situations.

### Benefits

- Needs no fasteners (i.e., tape, hook and loop, etc.).
- Bends to a tight radius without distortion or splitting open.
- Allows future access without disassembly.
- Withstands cuts, abrasions and tension.

See installation tool on back cover.



#### Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length*		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03037	1/4	6.4	BSPSW140	0.025	0.64	Black	100	30.5	0.6	0.28
170-03024	1/2	12.7	BSPSW120	0.025	0.64	Black	75	22.9	1.05	0.48
170-03038	3/4	19.1	BSPSW340	0.025	0.64	Black	50	15.2	0.8	0.36
170-03025	1	25.4	BSPSW100	0.038	0.97	Black	50	15.2	1.0	0.45
170-03026	1-1/4	31.8	BSPSW1140	0.038	0.97	Black	25	7.1	0.6	0.27
<b>Bulk Box</b>										
170-03124	1/8	3.2	BSPSW180B	0.024	0.61	Black	400	121.9	0.8	0.36
170-03125	1/4	6.4	BSPSW140B	0.025	0.64	Black	200	61.0	1.2	0.54
170-03126	1/2	12.7	BSPSW120B	0.025	0.64	Black	150	45.7	2.1	0.95
170-03127	3/4	19.1	BSPSW340B	0.025	0.64	Black	100	30.5	1.6	0.73
170-03128	1	25.4	BSPSW100B	0.038	0.97	Black	100	30.5	2.0	0.91
170-03129	1-1/4	31.8	BSPSW1140B	0.038	0.97	Black	75	22.9	1.8	0.82
170-03130	1 1/2	38.1	BSPSW1120B	0.038	0.97	Black	75	22.9	2.1	0.95
170-03131	2	50.8	BSPSW200B	0.038	0.97	Black	50	15.2	1.8	0.82
<b>Large Bulk Sized Reels</b>										
170-03132	1/8	3.2	BSPSW180LB	0.024	0.61	Black	10,000	3,048.8	20.0	9.0
170-03133	1/4	6.4	BSPSW140LB	0.025	0.64	Black	3,000	914.4	18.0	8.2
170-03134	1/2	12.7	BSPSW120LB	0.025	0.64	Black	1,200	365.8	12.0	5.4
170-03135	3/4	19.1	BSPSW340LB	0.025	0.64	Black	500	152.4	16.8	7.6
170-03136	1	25.4	BSPSW100LB	0.038	0.97	Black	400	121.9	8.0	3.6
170-03137	1-1/4	31.8	BSPSW1140LB	0.038	0.97	Black	250	76.2	6.0	2.7
170-03138	1-1/2	38.1	BSPSW1120LB	0.038	0.97	Black	200	61.0	7.2	3.3
170-03139	2	50.8	BSPSW200LB	0.038	0.97	Black	150	45.7	5.4	2.4

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.

## Braided Sleeving

## Split Wrap Braided Sleeving - Orange

Used for safety identification, this non-expandable bundling and protection option offers a lateral split and a semi-rigid braid configuration that wraps around the bundle assembly without requiring any fasteners, such as hook & loop, cables ties or tape.

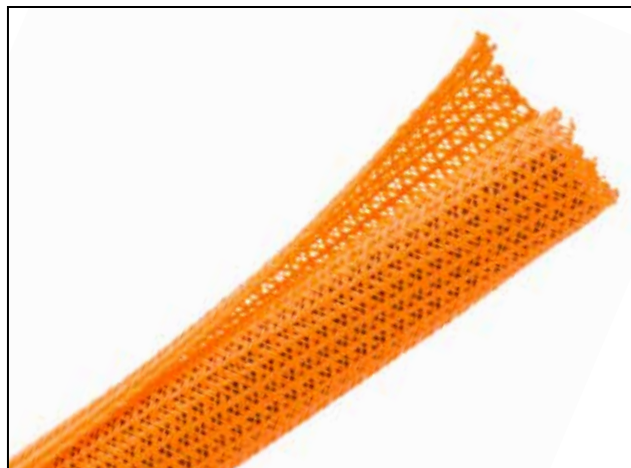
## Application

Provides abrasion protection and identification in electrical-powered vehicles, aircraft and automotive applications.

## Benefits

- Needs no fasteners (i.e., tape, hook and loop, etc.).
- Bends to a tight radius without distortion or splitting open.
- Adapts easily and will not impair the flexibility of the harness assembly, nor will it fracture under stress.

See installation tool on back cover.



## Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



## Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.		ft.	m.	lbs.	kg.
170-03082	1/4	6.4	BSPSW143B	0.025	0.64	Orange	200	61.0	1.2	0.54
170-03083	1/2	12.7	BSPSW123B	0.025	0.64	Orange	150	45.7	2.1	0.95
170-03084	3/4	19.1	BSPSW343B	0.025	0.64	Orange	100	30.5	1.6	0.73
170-03085	1	25.4	BSPSW103B	0.038	0.97	Orange	100	30.5	2.0	0.91
170-03086	1-1/4	31.8	BSPSW1143B	0.038	0.97	Orange	75	22.9	1.8	0.82
170-03087	1-1/2	38.1	BSPSW1123B	0.038	0.97	Orange	75	22.9	2.1	0.95
170-03088	2	50.8	BSPSW203B	0.038	0.97	Orange	50	15.2	1.8	0.82

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Hook & Loop Expandable Braided Sleeving

Designed for the quick and easy management of wire and cable bundles, this expandable sleeving has a hook and loop closure for easy installation and maintenance, as well as instant and convenient access for harness break-outs.

### Application

When component disassembly is not an option or when frequent access to wires and cables is essential. The primary application for this sleeving is the wrapping and bunching of cables in a deployed situation (i.e., location recordings).

### Benefits

- Conforms to irregular shapes and contours.
- Wraps effortlessly over a cable bundle and closes; readily reopens.
- Saves time, allows those working on cables to easily splice or combine wires.
- Made of PET yarn for excellent protection against cuts and abrasions.



#### Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F, -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length*		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03148	1/2	12.7	BSHKLP120B	0.063	1.6	Black	100	30.5	1.3	0.6
170-03149	3/4	19.1	BSHKLP340B	0.063	1.6	Black	100	30.5	1.8	0.8
170-03150	1-1/4	31.8	BSHKLP1140B	0.063	1.6	Black	100	30.5	2.3	1.04
170-03151	2	50.8	BSHKLP200B	0.063	1.6	Black	100	30.5	3.2	1.45
170-03152	2-1/2	63.5	BSHKLP212B	0.063	1.6	Black	100	30.5	3.75	1.7

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

### Split Wrap Woven Braided Sleeving

Split wrap woven braided sleeving is a self-closing protective sleeving manufactured from a unique blend of monofilament and multifilament polyester fibers to create a durable fabric-like material. The overlapping wraparound design provides ease of access to wires and cables, and offers excellent flexibility, coverage and abrasion resistance.

#### Application

The tightly-woven material protects sensitive electronics and communication systems from dust and debris, while also reducing noise in applications that involve movement or vibration.

#### Benefits

- Center slit allows for quick and easy access to wires and cables for future maintenance or inspection, without the need for disassembly.
- Flexible material wraps around a variety of component shapes and sizes, making it easier to use and more versatile than slit loom convoluted tubing or spiral wrap products.
- A unique weave pattern provides increased coverage and greater resistance to abrasion, dust and debris.
- Overlapping slit design enhances flexibility, allowing it to shift and bend without exposing wires and cables.



#### Material Data

Material	Polyester Monofilament (PET) + Multifilament
Operating Temperature	-94°F to 257°F, -70°C to 125° C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Overlap	Reel Length*		Weight	
	in.	mm.		in.	mm.			ft.	m.	lbs.	kg.
170-03181	3/8	9.5	BSSWV380B	0.027	0.68	Black	41%	450	137.1	6.75	3.06
170-03182	1/2	12.7	BSSWV120B	0.027	0.68	Black	35%	300	91.4	5.40	2.45
170-03183	5/8	15.8	BSSWV580B	0.027	0.68	Black	30%	250	76.2	5.25	2.38
170-03184	3/4	19.1	BSSWV340B	0.027	0.68	Black	28%	150	45.7	3.60	1.63
170-03185	1	25.4	BSSWV100B	0.027	0.68	Black	26%	100	30.4	3.20	1.45
170-03186	1 1/2	38.1	BSSWV1120B	0.027	0.68	Black	23%	50	15.2	2.25	1.02

Use Part No. for ordering and Type for specification. \* Pre-cut lengths available upon request.





## Braided Sleeving

## Extreme High Temperature Resin Saturated Fiberglass Expandable Braided Sleeving

Designed as protection for wires and cables subjected to continuous temperature variations, vibration, abrasion, and mechanical stress, this sleeving is resistant to extremely high temperatures.

### Application

Perfect for engine manifolds and exhaust systems or any application where fire and extremely high temperatures create a hazard to workforce and equipment.

### Benefits

- Provides thermal protection up to 1,200°F.
- Maintains its tight structure under extreme shaking, scraping, pressure and varying temperature conditions.
- Cuts cleanly with scissors and installs easily.
- Comes in a wide range of diameters.



#### Material Data

Material	Resin Saturated Fiberglass
Flammability	UL VW-1
Operating Temperature	-94°F to 1,202°F, -70°C to 650°C
Melt Point	2,048°F / 1,120°C
Abrasion Protection	Very High
Recommended Cutting	Scissors



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Maximum Diameter		Color	Reel Length*		Weight	
	in.	mm.		in.	mm.	in.	mm.		ft.	m.	lbs.	kg.
170-03058	1/4	6.4	BSHTFG140	0.031	0.79	0.375	9.5	Black	50	15.2	1.0	0.45
170-03059	1/2	12.7	BSHTFG120	0.046	1.67	0.75	19.1	Black	50	15.2	2.4	1.09
170-03060	3/4	19.1	BSHTFG340	0.046	1.67	1.125	28.6	Black	50	15.2	3.2	1.46
170-03061	1	25.4	BSHTFG100	0.057	1.45	1.625	41.3	Black	25	7.6	2.63	1.2
<b>Bulk Sized Reels</b>												
170-03050	1/4	6.4	BSHTFG140B	0.031	0.79	0.375	9.5	Black	200	61.0	4.0	1.81
170-03051	1/2	12.7	BSHTFG120B	0.046	1.17	0.75	19.1	Black	200	61.0	9.6	4.35
170-03052	3/4	19.1	BSHTFG340B	0.046	1.17	1.125	28.6	Black	200	61.0	12.8	5.81
170-03053	1	25.4	BSHTFG100B	0.057	1.45	1.625	41.3	Black	100	30.5	10.5	4.76

Use Part No. for ordering and Type for specification purposes. \* Pre-cut lengths available upon request.



## Braided Sleeving

### High Temperature Nomex® Expandable Braided Sleeving

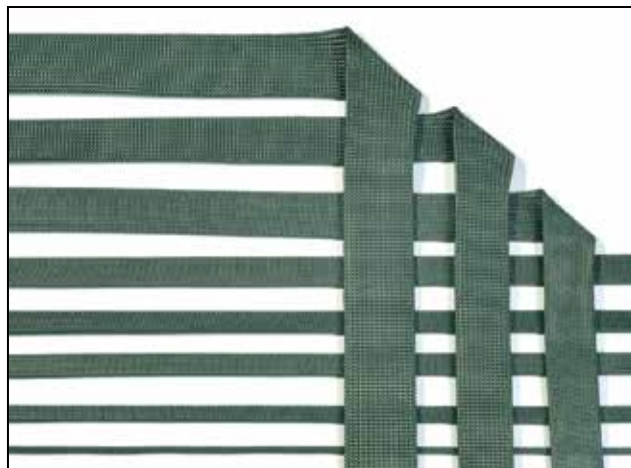
Manufactured with densely woven aramid fibers, this soft and flexible sleeving is self-extinguishing and is able to withstand temperatures reaching up to 662°F.

#### Application

Excellent for use in extremely harsh environments including those with exposure to direct flame, high temperatures, as well as Beta, Gamma and X-ray radiation – in particular, military and aerospace wiring and harnessing applications.

#### Benefits

- Does not melt and is unaffected by most acids.
- Provides excellent thermal stability against flames.
- Meets FMVSS 302 approval for use in automotive engineering.
- Cuts with ordinary scissors which reduces assembly time.



#### Material Data

Material	Polyaramid Polymetaphenylene Isophthalamide
Flammability	Non-Flammable
Operating Temperature	-320°F to 662°F, -196°C to 350°C
Melt Point	N/A
Abrasion Protection	Low
Recommended Cutting	Scissors



#### Product Selection

Part No.	Nominal Size		Type	Expansion Range				Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03158	1/8	3.2	BSNMX185B	0.062	0.25	1.6	6.4	Green	100	30.5	0.12	0.05
170-03159	1/4	6.4	BSNMX145B	0.125	0.312	3.2	7.9	Green	100	30.5	0.5	0.23
170-03160	3/8	9.5	BSNMX385B	0.25	0.5	6.4	12.7	Green	100	30.5	0.67	0.3
170-03161	1/2	12.7	BSNMX125B	0.312	0.625	7.9	15.9	Green	100	30.5	0.91	0.41
170-03162	3/4	19.1	BSNMX345B	0.562	1	14.3	25.4	Green	100	30.5	1.34	0.61
170-03163	1	25.4	BSNMX105B	0.75	1.12	19.1	28.6	Green	100	30.5	2.42	1.1
170-03164	1-1/4	31.8	BSNMX1145B	1.0	1.5	25.4	38.1	Green	100	30.5	3.49	1.58
170-03165	1-1/2	38.1	BSNMX1125B	1.25	1.75	31.8	44.4	Green	100	30.5	4.03	1.83
170-03166	1-3/4	44.4	BSNMX1345B	1.5	2.0	38.1	50.8	Green	100	30.5	4.76	2.16

Use Part No. for ordering and Type for specification purposes. Nomex® is a registered trademark of th DuPont Corporation.

## Braided Sleeving

## High Temperature Aluminum Laminated Fiberglass Sleeving

A tubular shaped product that combines the protection of bonded aluminum and fiberglass into a single solution that is able to reflect radiant heat away from the sensitive contents inside the tube.

### Application

Terrific for applications when appearance and insulation are important for protecting delicate wire bundles, cables and hoses from damage caused by nearby exhaust pipes, headers or heat-generating components.

### Benefits

- Adds a layer of protection that prevents scraping; cut and abrasion resistant.
- Resists gasoline and engine chemicals.
- Creates an insulation barrier for vulnerable cable and wire materials within high-temperature environments.
- Cuts cleanly with scissors.



#### Material Data

Material	Bonded Aluminum + Fiberglass
Flammability	Non-Flammable
Operating Temperature	-76°F to 491°F, -60°C to 255°C
Melt Point	2,048°F / 1,120°C
Abrasion Protection	N/A
Recommended Cutting	Scissors



#### Product Selection

Part No.	Nominal Size		Type	Wall Thickness* ±.006 in.		Maximum Diameter		Color	Reel Length		Weight	
	in.	mm.		in.	mm.	in.	mm.		ft.	m.	lbs.	kg.
170-03175	3/8	9.7	BSHTTST38SR	0.025	0.64	0.317	8.1	Silver	100	30.5	2.3	1.1
170-03062	1/2	12.7	BSHTTST12SR	0.025	0.64	0.437	11.1	Silver	100	30.5	2.55	1.16
170-03063	3/4	19.1	BSHTTST34SR	0.025	0.64	0.687	17.5	Silver	100	30.5	3.45	1.57
170-03064	1	25.4	BSHTTST10SR	0.025	0.64	0.937	23.8	Silver	100	30.5	4.5	2.0
170-03065	1-3/4	44.5	BSHTTST134SR	0.025	0.64	1.687	42.8	Silver	50	15.2	3.7	1.68
170-03097	2-1/2	63.5	BSHTTST212SR	0.025	0.64	2.375	60.3	Silver	50	15.2	5.05	2.3
<b>Bulk Sized Reels</b>												
170-03054	1/2	12.7	BSHTTST12SRB	0.025	0.64	0.437	11.1	Silver	250	76.2	6.375	2.9
170-03055	3/4	19.1	BSHTTST34SRB	0.025	0.64	0.687	17.4	Silver	250	76.2	8.625	3.91
170-03056	1	25.4	BSHTTST10SRB	0.025	0.64	0.937	23.8	Silver	250	76.2	11.25	5.08
170-03057	1-3/4	44.5	BSHTTST134SRB	0.025	0.64	1.687	42.8	Silver	100	30.5	7.4	3.36

Use Part No. for ordering and Type for specification. \*Nominal size measures external diameter of sleeving.

## Merchandising Display Rack

Designed to save space and provide easy access when dispensing braided sleeving, this unit allows for the efficient handling and management of sleeving.

- Simplifies cut-to-length counter sales.
- Dispenses easily from preformed slot.
- Includes mounting hardware.
- Constructed of durable ABS plastic.
- Holds six standard-sized spools; drop-in reels sold separately.
- Dimensions: 23.5" (W) x 10" (D) x 6" (H)



Product Selection		
Part No.	Type	Color
170-03031	BSDISPLAY	Black

Use Part No. for ordering and Type for specification purposes.

## Split Wrap Installation Tool

Use this tool to guide a cable or insert a cable harness inside the split wrap loom tube. This tool protects installer's hands from cuts. Can also be used to apply convoluted tubing.

Product Selection			
Part No.	Size	Type	Description
170-03067	1/4"	BSWTOOL14	1/4" Split Wrap Installation Tool
170-03032	1/2"	BSWTOOL12	1/2" Split Wrap Installation Tool
170-03068	3/4"	BSWTOOL34	3/4" Split Wrap Installation Tool
170-03033	1"	BSWTOOL1	1" Split Wrap Installation Tool
170-03034	1-1/4"	BSWTOOL114	1-1/4" Split Wrap Installation Tool

Use Part No. for ordering and Type for specification purposes.



## Bench and Handheld Hot Knife Tools

Hot knife cuts through braided sleeving easily to minimize fraying and deliver optimum results.

Product Selection			
Part No.	Type	Color	Description
170-03039	BSBHK	White	Bench Mount Braided Sleeve Hot Knife
170-03040	BSPHK	Black	Handheld Braided Sleeve Hot Knife

Use Part No. for ordering and Type for specification purposes.



Bench mount hot knife

- Designed for production environments
- Uses 2.5" blade
- Lighted power switch
- Heats to 1,112°F in 30 sec.
- 110 volt operation
- Replaceable blades



Handheld hot knife

- Trigger switch
- Heats quickly
- 110 volt operation
- Replaceable blades

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