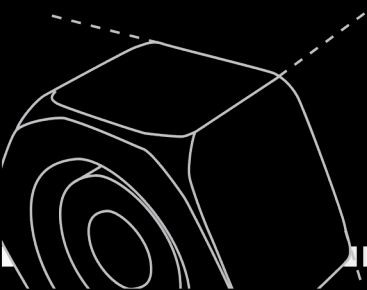


- HYDRAULIEK
- slangen
 - snijringkoppelingen & adapters
 - hogedruk buis
 - flenzen
 - pijpbeugels
 - snelkoppelingen
 - kogelkranen & ventielen



DYNAMIEK IN HYDRAULIEK

Slangbescherming



SAFE-SLEEVE (MSHA) & SAFE-WRAP

What? offer full protection for operators and hoses

- ✓ Pin Hole –tested:
 - prevent direct fluid sprays by dispersing the oil into fog
- ✓ fulfill the requirements of standards
EN 12999 and EN ISO 3457
- ✓ recyclable
- ✓ UV-tolerant
- ✓ great chemical tolerance
- ✓ excellent abrasion resistance
- ✓ Safe-Wrap with Velcro® fasteners
- ✓ own branding possible



Why?

- ✓ hydraulic oil fluid can pierce human skin with only 7 bar pressure.
 - When the oil penetrates dermal tissue and tendons for example through your finger tip it can only be removed in an operation
- ✓ EU-standards demand protection against direct fluid jets
- ✓ our Sleeves are Pin Hole –tested → you can rely on them to
 - protect you and your workers
- ✓ protect hoses against abrasion
- ✓ bundle hoses together

SAFE-STRIPS

What? wide range of hose bundling straps

Why?

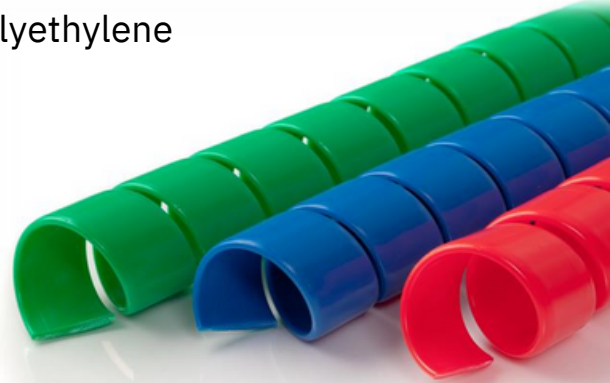
- ✓ bind the hoses together to make the handling of hose bundles safer and easier
- ✓ mounting of spirals becomes easier and faster once the hoses stay together
- ✓ own branding possible



SAFE-SPIRALS

What? High quality & low-cost solution for hose protection.

- ✓
- ✓ manufactured by extrusion from HD Polyethylene
- ✓ extreme breaking strength
- ✓ excellent abrasion resistance
- ✓ naturally rounded edges
- ✓ halogen-free
- ✓ elastic: return to original shape easily
- ✓ UV- tolerant
- ✓ recyclable
- ✓ contain no harmful or dangerous ingredients
- ✓ easy-to-install
- ✓ temperature range from -50 °C to +100 °C
- ✓ wide selection of diameters
- ✓ available in rolls or pre-cuts
- ✓ special colours available on request
- ✓ own branding available on request
- many ad hoc spirals available



Why?

- ✓ protect your hoses against abrasion, hits and weather conditions
- ✓ save you money because the hoses last longer and the number of work delays caused by hose rupture decreases
- ✓ colorful spirals make your hoses more visible to increase safety
- ✓ bundle your hoses to increase safety and ease the handling

Where?

- ✓ forest machines
- ✓ agricultural machines
- ✓ mining machines
- ✓ construction machines, big or small
- ✓ tractors
- ✓ excavators
- ✓ trucks, trains, forklifts
- ✓ airplane ground cables
- basically all hydraulic hoses and much more...



SAFE-SPIRAL FEATURES

Product Quality feature	SAFE - SPIRAL STANDARD	SAFE - SPIRAL ECO	SAFE - SPIRAL BRANDED	SAFE - SPIRAL ABRA	SAFE - SPIRAL DUO	SAFE - SPIRAL ASTA	SAFE - SPIRAL MINE +
Raw material HDPE	●	●	●	●	●	●	●
Round edges	●	●	●	●	●	●	●
Pre-cuts available	●		●				
Rolls available	●	●	●	●	●	●	●
2-coloured			●	●	●		
Special colours	●		●	●	●		
Customer branding	●		●				●
UV-protected	●		●	●	●	●	●
Recyclable	●	●	●	●	●	●	●
Antistatic (limited)	●		●	●	●		
Antistatic (permanent)						●	●
Flame retardant (MSHA)							●
Stock article	●						●

SAFE-SLEEVE FEATURES

Product Quality feature	SAFE-SLEEVE STANDARD	SAFE-SLEEVE MSHA	SAFE-WRAP	SAFE-FIRE SLEEVE / WRAP
Pin hole-approved	●	●	●	
Pre-cuts available	●	●	●	
Rolls available	●	●	●	●
Customer branding		●	● *	● *
Special colours	●		●	● *
Flame retardant		●	● *	●
High temperatures				●
Recyclable Stock article	●	●	●	
	●	●	● **	●
			* on request	* on request
			** standard sizes	

SAFE-SPIRAL hose protectors

- our standard plastic hose guards
- protect hydraulic and pneumatic hoses against abrasion, shocks, weather and general wearing and therefore prolong the life of your hoses
- offer an economical and quality choice for hose protection
- colour spirals make hoses more visible and prevent any possible accidents beforehand
- are easy to install and one size can be used to a large range of hose sizes thanks to the flexibility of Safe-Spirals

SAFE-SPIRALS are produced by extrusion from High Density Polyethylene.

The advantages gained by using this method are superior breaking strength compared to spirals which are produced by cutting, and naturally rounded edges of the spiral.

SAFE-SPIRALS

- resistant to acids, oils and solvents
- contain antistatic additive
- flexible and easy-to-install
- UV-tolerant
- tolerate both frost and heat
- are recyclable



Abrasion resistance of Safe-Spirals is excellent and wearing minimal.



Recommended temperature range is from -50°C up to $+80^{\circ}\text{C}$ (continuous) and $+100^{\circ}\text{C}$ (short).

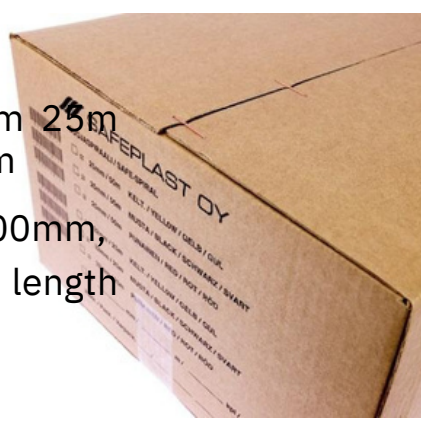
Outer diameters are available from 12mm to 140mm which equals to approximate usage range from hose OD 9mm to 155mm.

Colours: standard colours black and yellow, other colours available on request (MOQ 600m per colour)



Coils: 12mm – 20mm 25m 25m and 50m 25m
 25mm – 50mm 20m 15m 12m 10m
 40mm, 63mm minimum length 500mm,
 75mm, 90mm minimum length
 110mm 125mm 1000mm
 140mm

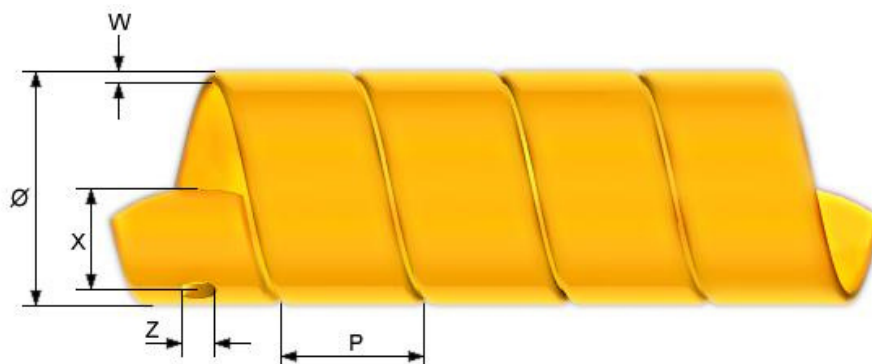
Pre-cut lengths: OD 12 – 50mm
 OD 75 – 140mm



Maximum length for all diameters 6000mm,
 MOQ apply to all pre-cuts.
 All pre-cut lengths are equipped with a rounded end and a drill hole for lengthening and fastening purposes.



SAFE-SPIRAL - TECHNICAL INFORMATION



Material: High Density Polyethylene

Spirals open during storing and transportation but will return to the original shape once installed.
Rolls do not have a hole at the ends.

Nominal outer / inner Ø	Recommended usage range Hose diameter mm / inch	Safeplast article no. for rolls black / yellow	Roll length	Weight average kg / m	Wall W mm	Pitch P mm	Hole Ø Z mm
12 / 9.6mm (ID ~0.38")	9 – 13 0.35 – 0.51"	012R25MU / 012R25KE	25m	0.04	1.2	10	-
16 / 13.4mm (ID ~0.52")	13 – 18	016R25MU / 016R25KE	25m	0.06	1.3	12	-
20 / 16.0mm (ID ~0.63")	0.51 – 0.71" 16 – 22	020R25MU / 020R25KE	25m	0.09	2.0	20	7
25 / 20.6mm (ID ~0.81")	0.63 – 0.87" 20 – 27	025R25MU / 025R25KE	25m	0.15	2.2	21	7
32 / 27.0mm (ID ~1.06")	0.78 – 1.06" 27 – 36	032R25MB / 032R25KB	25m	0.19	2.5	22	7
40 / 34.6mm (ID ~1.36")	1.06 – 1.42" 34 – 44	040R25MU / 040R25KE	25m	0.30	2.7	24	-
50 / 43.2mm (ID ~1.70")	1.34 – 1.73" 43 – 55	050R25M2 / 050R25K2	25m	0.40	3.4	30	7
63 / 55.6mm (ID ~2.19")	1.69 – 2.16" 55 – 67	063R25MU / 063R25KE	25m	0.65	3.7	37	-
75 / 66.2mm (ID ~2.60")	2.16 – 2.64" 66 – 80	075R20MU / 075R20KE	20m	0.73	4.4	42	10
90 / 80.2mm (ID ~3.16")	2.60 – 3.15" 80 – 98	090R20MU / 090R20KE	20m	1.20	4.9	45	10
110 / 99.0mm (ID ~3.90")	3.15 – 3.86" 99 – 115	110R15MU / 110R15KE	15m	1.76	5.5	50	10
125 / 113.2mm (ID ~4.46")	3.90 – 4.53" 113 – 130	125R12MU / 125R12KE	12m	2.05	5.9	52	-
140 / 127.0mm (ID ~5.00")	4.45 – 5.12" 125 – 155	140R10MU / 140R10KE	10m	2.50	6.5	55	10
	4.92 – 6.10"						

SAFEPLAST ECO-LINE

SAFE-SPIRAL ECO

- economical and flexible solution for hose protection
- produced by extrusion from 100 % recycled HD polyethylene
- resistant to acids, oils and solvents
- are recyclable / contain no harmful materials
- recommended temperature range is from

-40°C up to +80°C



Colours: black (ECO),
light grey (RECO) and
yellow (RECOK)

Nominal outer / inner Ø	Safeplast article no. for black / grey / yellow rolls	Weight average kg / m	Wall W mm	Pitch P mm	Roll length
12 / 9.6mm +/-0.7mm	012R25ECO / RECO (yellow not available)	0.04	1.2 +/-0.3mm	10 +/-1.2mm	25m
16 / 13.4mm +/-0.8mm	016R25ECO / RECO / RECOK	0.06	1.3 +/-0.3mm	12 +/-1.2mm	25m
20 / 16.0mm +/-1.0mm	020R25ECO / RECO / RECOK	0.09	2.0 +/-0.3mm	20 +/-1.3mm	25m
25 / 20.6mm +/-1.3mm	025R25ECO / RECO / RECOK	0.15	2.2 +/-0.3mm	21 +/-1.3mm	25m
32 / 27.0mm +/-1.6mm	032R25ECO / RECO / RECOK	0.19	2.5 +/-0.4mm	22 +/-1.5mm	25m
40 / 34.6mm +/-2.0mm	040R25ECO / RECO / RECOK	0.30	2.7 +/-0.4mm	24 +/-1.7mm	25m
50 / 43.2mm +/-2.5mm	050R25ECO / RECO / RECOK	0.40	3.4 +/-0.3mm	30 +/-2.0mm	25m
63 / 55.6mm +/-3.2mm	063R25ECO / RECO / RECOK	0.65	3.7 +/-0.3mm	37 +/-2.0mm	25m
75 / 66.2mm +/-4.0mm	075R20ECO / RECO / RECOK	0.73	4.4 +/-0.3mm	42 +/-2.0mm	20m
90 / 80.2mm +/-6.0mm	090R20ECO / RECO / RECOK	1.20	4.9 +/-0.3mm	45 +/-2.0mm	20m
110 / 99.0mm +/-7.0mm	110R15ECO / RECO / RECOK	1.76	5.5 +/-0.5mm	50 +/-2.0mm	15m

ECO-FLEX & ECO-FLAT

- economical and very flexible solution for hose protection or

hose and cable bundling

- produced by extrusion from 100 % recycled HD polyethylene
- resistant to acids, oils and solvents
- are recyclable / contain no harmful materials
- **recommended temperature range -40°C to +80°C**

Col our s: black only



ECO-FLEX has a round profile to diminish friction. It has a wider bend radius because of smaller distance of spirals.



ECO-FLAT has a flat surface for easy cable bundling.

Available nominal outer diameters	Roll length	Safeplast article no. for ECO-FLEX	Safeplast article no. for ECO-FLAT
16 mm	25m	EFX016R25MU	EFT016R25MU
20 mm	25m	EFX020R25MU	EFT020R25MU
25 mm	25m	EFX025R25MU	EFT025R25MU
32 mm	25m	EFX032R25MU	EFT032R25MU
40 mm	25m	EFX040R25MU	EFT040R25MU

SAFE-SPIRAL DUO

Safe-Spiral DUO is designed for marking of different types of hoses and / or to catch attention to a certain object.

It can also help your company or your end customer to build brand awareness with company colours.

Safe-Spiral DUO is produced by double extrusion and you can pair any colour with black (MOQ 600m per colour combination).

Safe-Spiral DUO is not a stock item but produced after order.



Material: High Density Polyethylene

Spirals open during storing and transportation but will return to the original shape once installed. Rolls do not have a hole at the ends.

Nominal outer / inner □	Recommended usage range Hose diameter mm	Safeplast article no. for rolls in black with yellow stripe	Roll length	Weight average kg / m	Wall W mm	Pitch P mm
20 / 16.0mm	16 – 22	DUO020R25MK	25m	0.09	2.0	20
25 / 20.6mm	20 – 27	DUO025R25MK	25m	0.15	2.2	21
32 / 27.0mm	27 – 36	DUO032R25MK	25m	0.19	2.5	22
40 / 34.6mm	34 – 44	DUO040R25MK	25m	0.30	2.7	24
50 / 43.2mm	43 – 55	DUO050R25MK	25m	0.40	3.4	30
63 / 55.6mm	55 – 67	DUO063R25MK	25m	0.65	3.7	27
75 / 66.2mm	66 – 80	DUO075R20MK	20m	0.73	4.4	42

SAFE-SPIRALS WITH YOUR BRAND

Safe-Spirals can be laser-marked with your brand or logo text for you to further increase your brand awareness.

It is possible to add also your company colours to differentiate your company from your competitors.

Minimum order quantity (MOQ) is 600 meters per order (per colour when this option is wished) and this can comprise of different sizes. Price is offered based on total quantity.

Printing is possible on black spirals

OD 16 – 110mm.

Colour stripe is possible for spirals

OD 16 – 110mm.

These laser-marked spirals are always produced after order.



SAFE-SPIRAL ABRA

Safe-Spiral ABRA is a 2-coloured Wear Indicator –spiral. It has black surface and yellow interior.

Safe-Spiral ABRA helps to identify those problematic points that are exposed to abrasion and / or hard hits and therefore need more punctual monitoring: once the black top layer wears off and the yellow colour appears this indicates that the spiral should soon be replaced.

Abrasion of this spiral is very minimal even though the thickness of the top layer is only 0.5 mm. It would take approximately 1000 km or 415 hours to wear off at 1.9 MPa surface pressure (pin-on-disk tester).

Safe-Spiral ABRA is produced by double extrusion from HD Polyethylene and has round edges just like our standard Safe-Spiral.



Safe-Spiral ABRA is available in following diameters:

OD 20mm, 25mm, 32mm, 40mm, 50mm, 63mm, 75mm, 90mm and 110mm

Lengths: available only in coils.

Safe-Spiral ABRA is not a stock item but produced after order.

SAFE-SPIRAL ABRA – TECHNICAL INFORMATION



Material: High Density Polyethylene

Spirals open during storing and transportation but will return to the original shape once installed.
 Rolls do ~~not~~ have a hole at the ends.

Nominal outer / inner □	Recommended usage range Hose diameter mm	Safeplast article no.	Roll length	Weight average kg / m	Wall W mm	Pitch P mm
20 / 16.0mm	16 – 22	DC020R25MK	25m	0.09	2.0	20
25 / 20.6mm	20 – 27	DC025R25MK	25m	0.15	2.2	21
32 / 27.0mm	27 – 36	DC032R25MK	25m	0.19	2.5	22
40 / 34.6mm	34 – 44	DC040R25MK	25m	0.30	2.7	24
50 / 43.2mm	43 – 55	DC050R25MK	25m	0.40	3.4	30
63 / 55.6mm	55 – 67	DC063R25MK	25m	0.65	3.7	27
75 / 66.2mm	66 – 80	DC075R20MK	20m	0.73	4.4	42
90 / 80.2mm	80 – 98	DC090R20MK	20m	1.20	4.9	45
110 / 99.0mm	99 – 115	DC110R15MK	15m	1.76	5.5	50

SAFE-SPIRAL MINE +

Safe-Spiral MINE + is flame retardant and permanently antistatic ("FRAS"), making it best suitable for protection against mechanical abrasion of hydraulic hoses in underground mining machinery and mining appliances.

Safe-Spiral MINE + is accepted as Flame-Resistant Solid Product taken into Mines with Acceptance No. MSHA IC-271 by the Mine Safety and Health Administration.

According to UL-94 (standard for Safety of Flammability of Plastic Materials) Safe Spiral MINE + scored the top V-0 classification.

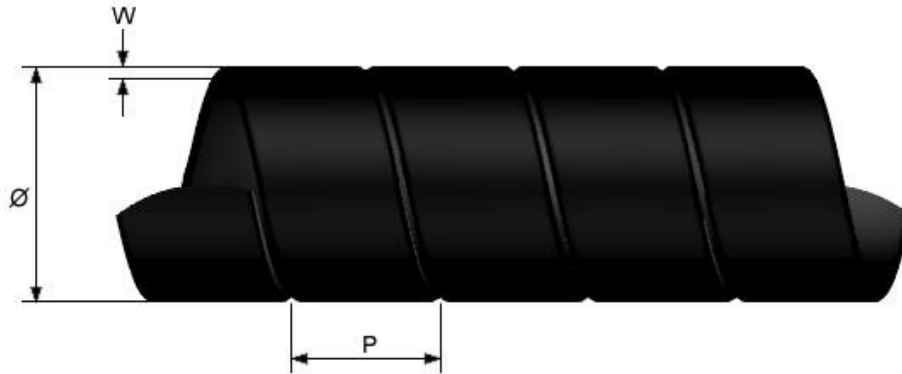
Lengths: available only in coils
Color: brownish grey
Delivery time: 4 – 5 weeks from order



Material: This product is produced from HD Polyethylene. Flame resistivity has been improved further with different ingredients to decelerate ignitability and burning. Product includes a conductive thermoplastic compound.



SAFE-SPIRAL MINE + – TECHNICAL INFORMATION



Material: High Density Polyethylene
 Spirals open during storing and transportation but will return to the original shape once installed.
 Rolls do not have a hole at the ends.

Nominal outer / inner Ø	Recommended range Hose diameter mm	Safeplast article no.	Roll length	Weight average kg / m	Wall mm	Pitch mm
16 / 13.4mm	13 – 18	016R25MINE+	25m	0.06	1.3	12
20 / 16.0mm	16 – 22	020R25MINE+	25m	0.12	2.0	20
25 / 20.6mm	20 – 27	025R25MINE+	25m	0.17	2.2	21
32 / 27.0mm	27 – 36	032R25MINE+	25m	0.22	2.5	22
40 / 34.6mm	34 – 44	040R25MINE+	25m	0.32	2.7	24
50 / 43.2mm	43 – 55	050R25MINE+	25m	0.55	3.4	30
63 / 55.6mm	55 – 67	063R25MINE+	25m	0.72	3.7	27
75 / 66.2mm	66 – 80	075R20MINE+	20m	0.90	4.4	42
90 / 80.2mm	80 – 98	090R20MINE+	20m	1.09	4.9	45
110 / 99.0mm	99 – 115	110R15MINE+	15m	1.60	5.5	50

Safe-Spiral MINE + is not a stock item but produced after order.

SAFE-SPIRAL ASTA

Safe-Spiral ASTA is a permanently antistatic spiral which is designed for explosive surroundings, like underground mines and other special environments that demand conductivity. Safe-Spiral ASTA conforms with PN-EN 13463-1 which is the ATEX -related standard for “Non-Electrical Equipment for potentially Explosive Atmospheres”.

Lengths:	available only in coils
Colors:	black
Delivery time:	4 -5 weeks after order
Material:	HD polyethylene + conductive thermoplastic compound



Safe-Spiral ASTA is available in following diameters:

Normative outer / inner Ø	Recommended range Hose diameter mm	Safeplast article no.	Roll length	Weight average kg / m	Wall mm	Pitch mm
20 / 16.0mm	16 – 22	020R25ASTA	25m	0.11	2.0	20
25 / 20.6mm	20 – 27	025R25ASTA	25m	0.17	2.2	21
32 / 27.0mm	27 – 36	032R25ASTA	25m	0.23	2.5	22
40 / 34.6mm	34 – 44	040R25ASTA	25m	0.29	2.7	24
50 / 43.2mm	43 – 55	050R25ASTA	25m	0.41	3.4	30
63 / 55.6mm	55 – 67	063R25ASTA	25m	0.70	3.7	27
75 / 66.2mm	66 – 80	075R20ASTA	20m	0.88	4.4	42
90 / 80.2mm	80 – 98	090R20ASTA	20m	1.20	4.9	45
110 / 99.0mm	99 – 115	110R15ASTA	15m	1.61	5.5	50

*** Due to the conductive compounds the above-mentioned measurements are normative as the product tends to shrink a bit after cooling. Surface resistivity is average 8.0 kΩ / sq. Test report / certificate of conformity are available on request.

STANDARD PACKAGES

Coils

Diameter	Length	Package
12 mm	25 m	40 x 40 x 10 cm
16 mm	25 m	40 x 40 x 10 cm
20 mm	25 m	40 x 40 x 15 cm
25 mm	25 m	60 x 40 x 15 cm
25 mm	50 m	60 x 40 x 25 cm
32 mm	25 m	60 x 40 x 25 cm
32 mm	50 m	60 x 40 x 38 cm
40 mm	25 m	60 x 40 x 38 cm
50 mm	25 m	80 x 60 x 28 cm
50 mm	50 m	80 x 60 x 43 cm
63 mm	25 m	80 x 60 x 43 cm
75 mm	20 m	80 x 60 x 43 cm
90 mm	20 m	80 x 60 x 63 cm
110 mm	15 m	80 x 60 x 63 cm
125 mm	12 m	80 x 60 x 63 cm
140 mm	10 m	80 x 60 x 63 cm



6m pieces

Diameter	Pieces	Package
20 mm		
25 mm	25 pcs	80 x 60 x 28 cm
32 mm	25 pcs	80 x 60 x 43 cm
50 mm	10 pcs	80 x 60 x 28 cm
75 mm	10 pcs	80 x 60 x 43 cm
90 mm	5 pcs	80 x 60 x 63 cm
110 mm	4 pcs	80 x 60 x 63 cm
140 mm	3 pcs	80 x 60 x 63 cm
	2 pcs	80 x 60 x 63 cm

Plastic packages

Pieces up to 2m

Diameter	Pieces
20 mm	25 pcs
20 mm	50 pcs
25 mm	25 pcs
25 mm	50 pcs
32 mm	25 pcs
32 mm	50 pcs
50 mm	25 pcs
75 mm	10 pcs
90 mm	10 pcs
110 mm	10 pcs
140 mm	10 pcs
	5 pcs

SAFE-SLEEVE

Our standard type textile SAFE-SLEEVE is produced from polypropylene which is very hard-wearing and recyclable.

Polypropylene endures acids and alkalis well.

- protect people near-by a breaking hose
- protect hydraulic hoses from abrasion
- offer an economical and safe choice for hose protection
- material fully recyclable



tolerate both freeze and heat

SAFE-SLEEVE protects people near-by a breaking hose (is pin hole-approved). European standard EN ISO 3457 states that hydraulic hoses must be protected in following cases:

- operating pressure exceeds 5 MPa (=50 bar) or
- temperature exceeds 60 °C and
- the hoses are in common operating place within 1 meter range from the operator and in case of hose breakage the direct fluid spray may reach the operator

In addition, the protectors must be strong enough to stop, spread or turn the fluid from directly hitting the operator once the hose breaks. Standards EN 12999 and EN 4413 also contain protection demands for hose assemblies.

Our Safe-Sleeve fulfils these demands!

Abrasion resistance of SAFE-SLEEVE is excellent (tested to standard SFS-EN ISO 12947-3: minimal mass loss of only 2 mg after 100,000 rubs). This makes it a very good hose protector, as well.

The recommended temperature range is from -40 °C to +80 °C.

SAFE-SLEEVE is UV-protected (lasts at least 120 kLy) and according to UV-aging tests the UV-ageing did not have a significant effect on the tensile properties or colour of the Safe-sleeve. SAFE-SLEEVE has low conductivity of electricity.

Colour: plain black, no printing
 Lengths: other colours also possible, MOQ 3000m per size
 Extensions: 50m / roll
 max one per roll

It is recommended to choose a size which is a few millimetres larger than the hose to improve protection and make mounting easier. Whether there is a coupling already installed also affects the eligible size.

SAFE-SLEEVE product code	Inner Ø / flat (mm) Tolerance for ID +/- 0.5mm and for flat size +/- 5%
SL-RDX17	17 / 30
SL-RDX20	20 / 35
SL-RDX23	23 / 40
SL-RDX27	27 / 45
SL-RDX30	30 / 50
SL-RDX36	36 / 60
SL-RDX39	39 / 65
SL-RDX46	46 / 75
SL-RDX55	55 / 90
SL-RDX62	62 / 100
SL-RDX78	78 / 125
SL-RDX94	94 / 150
SL-RDX109	109 / 175
SL-RDX125	125 / 200



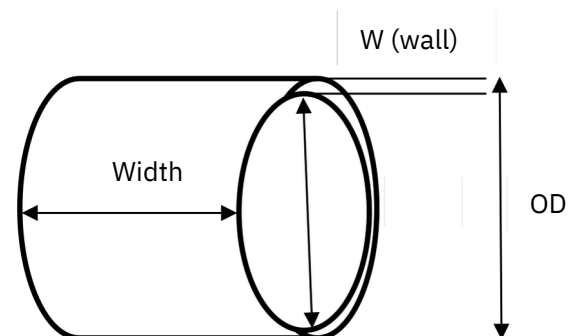
All test reports are available on request.



ALUMINIUM FERRULES:

Material: Aluminium alloy of EN AW-6060 T6 – EN AW-6005A T6 / EN AW-6082 T6
 (EN 573-3, 755-1, 755-2, 755-8)

Safeplast article no.	OD mm	ID mm	W mm	Width mm
ALUHO 20	20	17	1.5	27
ALUHO 25	25	22	1.5	27
ALUHO 30	30	27	1.5	27
ALUHO 35	35	32	1.5	27
ALUHO 40	40	36	2.0	27
ALUHO 45	45	39	3.0	30
ALUHO 50	50	46	2.0	27



SAFE-SLEEVE MSHA

MSHA-accepted Safe-Sleeve is a textile hose protector which is produced from recyclable polyester. It is easy to install and its abrasion resistance is excellent (only 11 mg after 100,000 rubs).

In addition to protecting hoses, SAFE-SLEEVE MSHA protects people near-by a breaking hose and meets the requirements of standards EN ISO 3457, EN 4413 and EN 12999.

The recommended temperature range is from -40 °C to +120 °C.

SAFE-SLEEVE MSHA tolerates UV well and has low conductivity of electricity.

Test reports are available on request.

Colour black with white printing only.

Own printing possible!

Length 50m / roll.



SAFE-SLEEVE MSHA Product code	Inner diameter / flat (mm) Tolerance for ID +/- 0.5mm and for flat size +/- 5%
MSHA-RD17M	17 / 30
MSHA-RD20M	20 / 35
MSHA-RD23M	23 / 40
MSHA-RD27M	27 / 45
MSHA-RD30M	30 / 50
MSHA-RD36M	36 / 60
MSHA-RD39M	39 / 65
MSHA-RD46M	46 / 75
MSHA-RD55M	55 / 90
MSHA-RD62M	62 / 100
MSHA-RD68M	68 / 110
MSHA-RD78M	78 / 125
MSHA-RD109M	109 / 175
MSHA-RD125M	125 / 200

Aluminium rings (OD / ID):
 ALUHO 20 / 17mm ALUHO
 25 / 22mm
 ALUHO 30 / 27mm
 ALUHO 35 / 32mm ALUHO
 40 / 36mm
 ALUHO 45 / 39mm ALUHO
 50 / 46mm



SAFE-WRAP

SAFE-WRAP is produced from 100 % polyamide with PU coating and Velcro®-brand fasteners which make it very easy and fast to install on hose assemblies afterwards and repeatedly. This makes Safe-Wrap a very cost-effective solution for hose protection and hose bundling. It can be equipped with mounting eyelets and / or straps, too.

Safe-Wraps tensile strength is excellent (EN ISO 13934-1) and water repellence of the fabric is 100 % (EN 24920).

The operating temperature is between -20 °C to +120 °C.

Safe-Wrap also fulfils the demands of standard ISO 3457 (pin hole –approved).

This product is very abrasion resistant.



Safeplast article no. for standard sizes

	in 25m rolls	in 10m rolls:
40mm	WR-RD40R25 /	WR-RD40R10
60mm	WR-RD60R25 /	WR-RD60R10
80mm	WR-RD80R25 /	WR-RD80R10
100mm	WR-RD100R25 /	WR-RD100R10
120mm	WR-RD120R25 /	WR-RD120R10



Other diameters (Ø 20mm to 400mm, in 5mm intervals) are offered on request.

Standard roll lengths:
10m and 25m

Other roll lengths up to 50m and fixed lengths are produced after order.



SAFE-FIRE SLEEVE & SAFE-FIRE WRAP

Safe-Fire Sleeve and Safe-Fire-Wrap are our high-temperature resistant sleeves produced from high bulk braided glass fiber with a custom compounded silicone rubber coating. Safe-Fire Wrap is equipped with velcro fasteners.

These fire sleeves are designed to protect hoses, wires and cables from molten metal splash, high heat hazards and occasional exposure to flame in steel plants, foundries, mining, offshore, aerospace, cutting and welding shops and wherever hoses, cables and wires may be exposed to high temperatures.

Safeplast Code	DESCRIPTION	m / roll
SFS-RD10	SAFE-FIRE SLEEVE, RED ID 10mm	20
SFS-RD15	SAFE-FIRE SLEEVE, RED ID 15mm	20
SFS-RD20	SAFE-FIRE SLEEVE, RED ID 20mm	20
SFS-RD25	SAFE-FIRE SLEEVE, RED ID 25mm	20
SFS-RD30	SAFE-FIRE SLEEVE, RED ID 30mm	20
SFS-RD35	SAFE-FIRE SLEEVE, RED ID 35mm	20
SFS-RD40	SAFE-FIRE SLEEVE, RED ID 40mm	20
SFS-RD45	SAFE-FIRE SLEEVE, RED ID 45mm	15
SFS-RD50	SAFE-FIRE SLEEVE, RED ID 50mm	15
SFS-RD55	SAFE-FIRE SLEEVE, RED ID 55mm	15
SFS-RD60	SAFE-FIRE SLEEVE, RED ID 60mm	15
SFS-RD65	SAFE-FIRE SLEEVE, RED ID 65mm	15
SFS-RD70	SAFE-FIRE SLEEVE, RED ID 70mm	10
SFS-RD75	SAFE-FIRE SLEEVE, RED ID 75mm	10



Heat resistance / Temperatures:
 260°C continuous 1000 °C / 20
 min 1600 °C / 30 sec



SAFE-FIRE WRAP

Safeplast Code	DESCRIPTION	m / roll
SFSWV-RD10	SAFE-FIRE WRAP, RED ID 10mm	20
SFSWV-RD15	SAFE-FIRE WRAP, RED ID 15mm	20
SFSWV-RD20	SAFE-FIRE WRAP, RED ID 20mm	20
SFSWV-RD25	SAFE-FIRE WRAP, RED ID 25mm	20
SFSWV-RD30	SAFE-FIRE WRAP, RED ID 30mm	20
SFSWV-RD35	SAFE-FIRE WRAP, RED ID 35mm	20
SFSWV-RD40	SAFE-FIRE WRAP, RED ID 40mm	20
SFSWV-RD45	SAFE-FIRE WRAP, RED ID 45mm	15
SFSWV-RD50	SAFE-FIRE WRAP, RED ID 50mm	15
SFSWV-RD75	SAFE-FIRE WRAP, RED ID 75mm	15



Heat resistance / Temperatures:

260°C continuous

1000 °C / 20 min

1600 °C / 30 sec



Safe-Fire tape (art. no SFS-TE3) is made of 100 % silicone rubber with heat resistance +260° C in continuous exposure. It is meant to seal the ends of fire sleeve and is available in 3 m rolls.



SAFEPLAST BINDING SPIRALS

Safeplast binding spirals are meant for bundling of electric cables and wires. With Safeplast binding spirals, cables and wires can be also protected against abrasion and shocks. They ease the handling and maintenance of electric cables.

Binding Spirals are produced by cutting from plastic pipe and the material is frost and heat resistant PE.

SAFEPLAST BINDING SPIRALS

- tolerate well acids, oils and solvents
- are very flexible
- are UV-tolerant
- usable in temperatures from -30 °C up to + 80 °C
- are recyclable

Outer diameters (nominal):

6 mm	15 mm
8 mm	20 mm
10 mm	25 mm
12 mm	

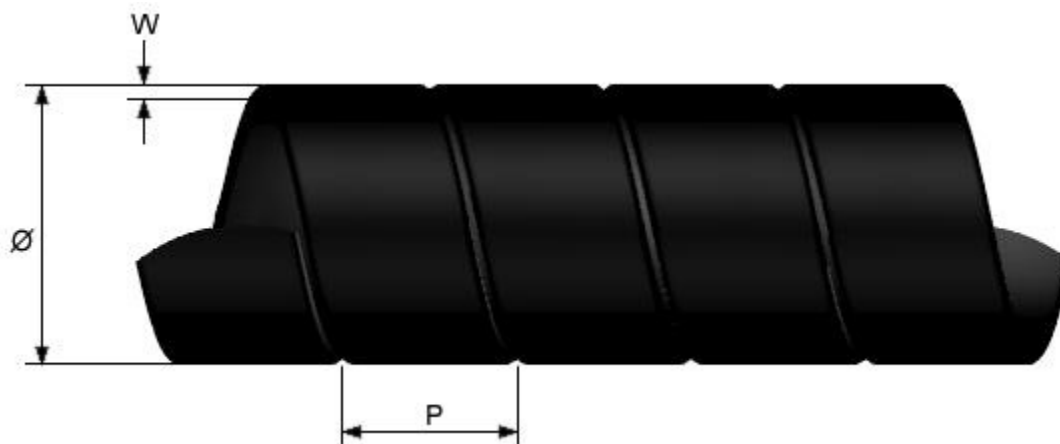
Lengths:

6mm	100m
8 – 15 mm	50m
20 – 25 mm	25m

Colour: available only in black



SAFEPLAST BINDING SPIRALS – TECHNICAL INFORMATION



Material: Polyethylene

Nominal outer / inner \varnothing	Wall mm	Pitch mm	Colour	Length	Safeplast article no.
6 / 4 mm	1.0	5.5	black	100m	N06R100MU
8 / 6 mm	1.0	5.5	black	50m	N08R50MU
10 / 8 mm	1.0	8.0	black	50m	N10R50MU
12 / 10 mm	1.0	8.0	black	50m	N12R50MU
15 / 12.5 mm	1.25	10.0	black	50m	N15R50MU
20 / 16 mm	2.0	18.0	black	25m	N20R25MU
25 / 21 mm	2.0	18.0	black	25m	N25R25MU

SAFE-STRIP x 3 versions

When you handle long and/or heavy hoses, you should always fasten them together to make the handling easier and safer. Mounting of spirals on a hose bundle can be done much quicker if the hoses are tied together.

Note: plastic cables ties should never be used to bundle hydraulic hoses, because they may wear out the hose surface.

SAFE-STRIP bundling straps are convenient for multi-hose bundles and can be used over and over again. There are three different types of Safe-Strips: Safe-Strips with or without a mounting eyelet are produced from polypropylene and have Velcro® -brand fasteners. Breaking strength of Safe-Strips is average 1500 N. The buckle is stainless steel and the width of the band 40 mm.

Safe-Strip, standard

Product code	Length	Bundel max
ST-RD70	310mm	70mm
ST-RD100	435mm	100mm
ST-RD125	505mm	125mm
ST-RD155	605mm	155mm
ST-RD180	680mm	180mm



Safe-Strip with mounting eyelet

Product code	Length	Bundel max
ST-RDR70	340mm	70mm
ST-RDR100	455mm	100mm
ST-RDR125	540mm	125mm
ST-RDR155	660mm	155mm
ST-RDR180	765mm	180mm



Safe-Strip text is woven with blue yarn.

Sales unit for Safe-Strips with Velcro fasteners is 10 pcs / size .

Third type of Safe-Strip is equipped with a quick-release buckle. The width of the band is 25 mm and it is also woven with a blue Safe-Strip text.

Great advantage of our straps is the taper cut edge for much easier threading into buckle which make this product very user-friendly. There is also a loop to hold the band end.

Safe-Strip with buckle

Product code	Length
ST-FLL30	300mm
ST-FLL50	500mm
ST-FLL100	1000mm
ST-FLL150	1500mm



Sales unit for Safe-Strip with buckle is 25 pcs / size.

All of these Safe-Strips are possible to have with the customer name, logo and / or colour (the other colour is always black). Minimum order quantities apply.



Safeplast Binding Straps

Safeplast has a range of Binding Straps which can be used for many different kind of purposes, for example for bundling of hydraulic hoses or electrical cables together.

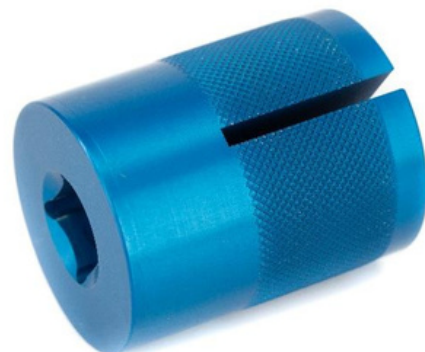
You can handle long and heavy hose bundles easier by strapping them before mounting spiral on the bundle.

Safeplast Binding Straps are made of very durable and flame retardant woven polyester (PES). All the straps have adjustment holes (except the smallest size, which is meant for bundling of electric cables).

Tensile strength is 3000 – 4200N.



Article no.	Length	Width	Thickness	Material	Buckle	Package size
ST-UR250	250mm	9mm	1.4mm	polyester	spike	100 pcs
ST-UR400	400mm	20mm	1.8mm	polyester	spike	50 pcs
ST-UR600	600mm	20mm	1.8mm	polyester	spike	50 pcs
ST-UR800	800mm	20mm	1.8mm	polyester	spike	50 pcs
ST-UR850	850mm	23mm	2.5mm	polyester	spike	50 pcs



There is also a tool available to help tighten the straps, operable by a ratchet.

SAFE-STOPPER

“Safe-Stopper” is a product meant to stop Whip Lash -effect when a hose gets detached. This hose restraint keeps the hose from harming the person working in proximity of the hose.

Textile material is gentle the hoses, because it is light and soft. The assembly is easy and quick and does not require any tools. Also, one size can be used for most hoses.

There are two models available:

1) Bolt fix “SA-STBF60”



2) Double loop “SA-STDL90”



“Safe-Stopper” can be used for all low-pressure hydraulic hoses up to 500 bar. It should be replaced at the time of changing the hose.



*Product is painted yellow for visibility in the photo

Material:	polyester, black
Width:	20mm
Thickness:	1.8mm
Tightening piece:	neoprene 60 sha, thickness 10mm (+/- 0.8mm)
Bolt:	surface treated steel, welded, for bolt size M6
Sales unit:	50 pcs / model

“SAFE-BUNDLER” for fast & easy mounting

(Utility Model no. FI 11986) The “Safe-Bundler” tool is designed to be used

for mounting of Safe-Spirals

on hydraulic hoses and especially for hose bundles. The tool opens the spiral to be moved forward by an electric drill. It does not require much working space, but can be used in limited space.

In addition to being very fast and easy, the mounting is ergonomic and reduces the physical strain on the operators’ wrists.

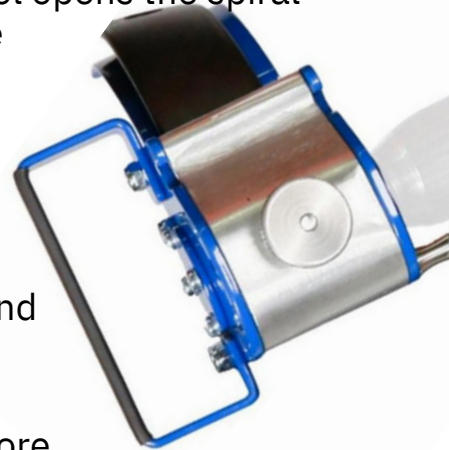
There are two tool sizes (small for spirals OD 32 – 50mm and large for 50mm – 140mm). You can mount Safe-Spirals on hose bundles with a maximum diameter of 180mm.

You can even use one spiral size for a wider range than before.

It is highly recommended to bundle the hoses together with straps first to

help

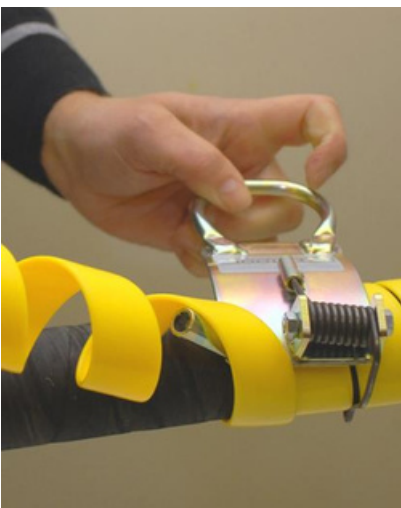
keep the hoses together during the mounting process and to guarantee a safer and smoother mounting.



“SAFE-TOOL” for easier mounting



Start by rotating the spiral 1-2 rounds onto the hose / hose bundle (if the spiral is long it is better to start from the middle). Lift the spiral on top of the pin, the pin towards the mounting direction. Holding spring follows the hose. Turn the tool by its handle.



Available in two sizes:
HAKOP – smaller tool for spirals OD 20 – 50mm
HAKOI – larger tool for spirals OD 63 – 140mm

REACH & RoHS Compliance Statement

REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) is a European Union Commission (EUC) Regulation on chemicals and their safe use (EC 1907/2006) entered force on 01 June, 2007.

Safplast Oy supports the basic aim of REACH in improving the protection of human health and environment through the better and earlier identification of intrinsic properties of chemical substances. Safplast Oy meets all applicable REACH requirements and is committed to provide our customers with information about substances in our products as required.

REACH requires actors in the supply chain to identify the presence of Substances of Very High Concern (SVHCs) that are published in the Candidate List. We review the (SVHC's) list on regular basis and in accordance with Article 33 of REACH, communicate the presence of any Candidate List substances present in the product at a concentration of >0.1% by weight.

The updated SVHC Candidate List of substances can be found at the URL below

<https://echa.europa.eu/en/candidate-list-table>

Under REACH, registration of substances which are used in the manufacturing of articles do not apply to Safplast operation. We are a downstream user (any natural or legal person established within the Community, other than the manufacturer or the importer, who uses a substance, either on its own or in a preparation, in the course of his industrial or professional activities) as a "Producer of articles". Downstream users of substances generally do not have registration obligations.

Safplast Oy products are "articles" as defined in REACH Article 3(3) and do not release substances under their normal use.

Safplast Oy products do not contain substances that would exceed defined limits of the chemicals currently listed SVHC's. Safplast Oy will continue to work with our suppliers to ensure that all SVHC's are notified to the European Chemicals Agency, if necessary, to comply with the REACH requirement.

Restriction of the use of certain hazardous substances (RoHS) Directive 2011/65/EU, earlier 2002/95/EC, (short for Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment), i.e.

Lead (Pb)
Mercury (Hg)
Cadmium (Cd)
Hexavalent chromium (Cr6+)
Polybrominated biphenyls (PBB)
Polybrominated diphenyl ether (PBDE)

for which the maximum permitted concentrations in non-exempt products are 0.1% or 1000 ppm (except for cadmium, which is limited to 0.01% or 100 ppm) by weight, we confirm that the concentrations of our products stay below the maximum permitted concentration levels of the above-mentioned substances.

Safplast Oy assures its customers that our products are in full compliance with the EU REACH & RoHS requirements.

TOLERANCES FOR OD, WALL AND PITCH

Product	Ø Outer mm	Tolerance mm	Wall mm	Tolerance mm	Pitch mm	Tolerance mm
Safe-Spiral	12	± 0.6	1.2	± 0.3	10.0	± 1.0
Safe-Spiral	16	± 0.8	1.3	± 0.3	12.0	± 1.2
Safe-Spiral	20	± 1.0	2.0	± 0.3	20.0	± 1.3
Safe-Spiral	25	± 1.5	2.2	± 0.3	21.0	± 1.5
Safe-Spiral	32	± 2.0	2.5	± 0.4	22.0	± 1.5
Safe-Spiral	40	± 2.0	2.7	± 0.4	24.0	± 2.0
Safe-Spiral	50	± 2.5	3.4	± 0.4	30.0	± 2.0
Safe-Spiral	63	± 3.5	3.7	± 0.4	37.0	± 2.0
Safe-Spiral	75	± 3.5	4.4	± 0.6	42.0	± 2.0
Safe-Spiral	90	± 4.5	4.9	± 1.0	45.0	± 2.0
Safe-Spiral	110	± 5.5	5.5	± 1.0	50.0	± 2.0
Safe-Spiral	125	± 6.5	5.9	± 1.0	52.0	± 2.0
Safe-Spiral	140	± 7.0	6.5	± 1.0	55.0	± 2.0
ECO-FLEX ECO-FLAT	16	± 1.3	1.5	± 0.3	11	± 1.0
ECO-FLEX ECO-FLAT	20	± 1.5	1.9	± 0.4	16	± 1.5
ECO-FLEX ECO-FLAT	25	± 2.0	2.2	± 0.4	18	± 1.0
ECO-FLEX ECO-FLAT	32	± 2.0	2.6	± 0.4	23	± 1.5
ECO-FLEX ECO-FLAT	40	± 3.0	2.7	± 0.5	24	± 1.0