/// SAFEPLAST OY

Suonsivunkatu 14, FI-33420 Tampere, Finland





LILKOHANKINTA E PERTTUNEN OY SUDMEN NAUHATEHDAB (LTK) LANKATUONTI (LTK) TEN NAUHALIIKETOIMINTA (LTK) URVIKKO OY (OKK) ILARI SYVÄPURO OY (OKK)



SAFEPLAST OY

- Head office Tampere, Finland
- Safeplast NA in Essex, Canada
- Safeplast Shanghai Ltd.
- Safeplast Asia Pacific Pte Ltd.
- Operation started in 1987
- In Tampere since 2004
- Sales c. 85% exported from FI





Business Idea:

Safeplast Oy specializes in producing high-quality plastic spirals and textile products for various hose protection purposes. The products are designed to meet the requirements of machine and equipment manufacturers. Safeplast focuses in customer needs and in creating long-term customer relationships.



Safeplast customers:

Safeplast customers include <u>hydraulic retailers</u> and world's leading <u>machine manufacturers</u>. Forestry, agriculture and mining machine manufacturers have been pioneers in using Safeplast spirals.

Spirals and sleeves can be used to protect all types of hoses and cables, such as air plane ground cables, tractors, excavators, forklifts and different kind of earth moving and construction machines, big or small.



Quality:

High product and operational quality is a significant factor in the customer satisfaction of Safeplast.

Management System Certificates ISO 9001:2008 & ISO 14001:2004

Safeplast Spirals are manufactured exclusively from a high-grade polyethylene plastic and the product quality is monitored throughout the production process. Safeplast spirals are manufactured by extrusion. Due to this method the products have round edges and a very durable construction. Continuous product development ensures the high and competitive quality of Safeplast protective spiral products.



MAIN PRODUCT LINES: HD PE -plastic spirals

Textile sleeves





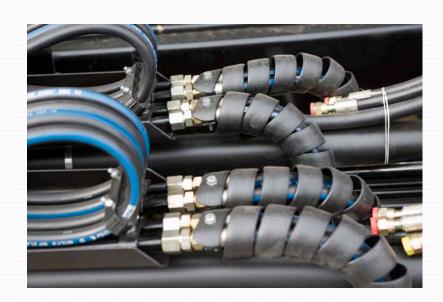
SAFE-SPIRALS: why and where to use?

why?

- **PROLONG THE LIFE OF YOUR HOSES**
- NO WORKING DELAYS CAUSED BY HOSE BREAKAGE
- **ECONOMICAL AND SAFE CHOICE** for HOSE PROTECTION

where?

- Forest Machinery
 Agricultural Machinery
 Mining Machinery
 Earthmoving Machinery
 Air Plane Ground Current Cables
- Tractors
- Excavators
- **Forklifts**
- **Construction Machines**



SAFE-SPIRALS: why and where to use?





/// SAFEPLAST OY

SAFE-SPIRALS: why and where to use?





SAFE-SPIRALS

- Protect hydraulic and pneumatic hoses from deterioration, shocks and abrasion
- Improve the visibility of hoses ->prevent dangerous situations
- easy to install either before or after hose installation
- manufactured by extrusion of HDPE
 - -> more durable construction
 - -> round edges do not damage the hoses



SAFE-SPIRALS

- resistant to acids, oils and solvents
- flexible
- UV protected
- Antistatic (not permanent feature)
- made of HD PE plastic
- temperature range -50 °C -> +100 °C.
- recyclable





SAFE-SPIRALS

Nominal <u>Outer</u> Diameters:

12mm, 16mm, 20mm, 25mm, 32mm, 40mm, 50mm 63mm, 75mm, 90mm, 110mm, 125mm and 140mm



- In coils or pre-cut lengths up to 6 meters.
- Pre-cut Safe-Spirals (OD 75mm 140mm) are equipped with a **hole** to join several protectors together in order to achieve the desired length or to fix the protector at its location.

Colors:

Standard colors: yellow and black, other colors upon request

SAFE-SPIRALS

Coils

| Diameter (| (outer) | <u>Length</u> |
|------------|---------|---------------|
| | | |

12 - 20 mm 25 m

25 / 32 / 50 mm 25 m and 50 m

40 / 63 mm 25 m

75 / 90 mm 20 m

110 mm 15 m

125mm 12m

140 mm 10 m



FLEX-SPIRAL

- Flex Spirals are produced in the same way as Safe-Spirals
- same profile and round edges
- Flex –Spiral is more flexible than Safeplast hose protector because of
 - narrower pitch
 - thinner wall



FLEX-SPIRAL

can be recommended for such application where easy installation is more important than heavy protection.

- Diameters 20mm, 25mm, 32mm, 50mm, 75mm
- black or yellow
- Only in coils of 25 m (75mm in 20m coils)
- time of delivery always agreed upon (not a stock item)

SAFE-SPIRAL MINE

 Safe-Spirale MINE has been developed especially for the mining industry. The product is made by extrusion and has MSHA-acceptance!





SAFE-SPIRAL MINE +

 Safe-Spirale MINE + has been developed especially for the mining industry. In addition to MSHA-acceptance this spiral is permanently antistatic.





SAFE-SPIRAL MINE and MINE +

• COLOUR: Brownish grey

DIAMETERS: OD 16 – 110mm

• LENGTHS: only in rolls (25 – 15m)



SAFE-SPIRAL ABRA

is a 2-coloured (black/yellow) wear indicator spiral which helps you to identify problem spots where the abrasion is uneven. Once the yellow color can be seen underneath the black surface, you need to observe this area and if needed, replace the spiral with a new one before any harm is caused to the hose.

• Diameters: OD 20 – 110mm

• Lengths: available only in coils (25 / 20m)

• Colors: black surface, yellow interior

Delivery time: produced only after order

Material: HD polyethylene

SAFE-SPIRAL ASTA

is a 2-coloured (black/green) permanently antistatic spiral which is designed for underground mines and other special environments that demand surface conductivity. Safe-Spiral ASTA is in conformity with **PN-EN 13463-1** which is the ATEX matching standard for "Non-Electrical Equipment for potentially Explosive Atmospheres".

• Diameters: OD 20 – 110mm

• Lengths: available only in coils (25 / 20m)

Colors: black surface, green interior

Delivery time: produced only after order

Material: HD polyethylene



SAFE-SLEEVE

VTT Technical Research Centre of Finland states that hydraulic oil fluid can pierce human skin with <u>only 7 bar</u> pressure. When the oil penetrates dermal tissue and tendons for example through your finger tip it can only be removed in an operation.

- Normal operating temperature of hydraulic systems is 50-60 °C, which causes a second degree burn in 0.5 - 1 second
- Standards SFS-EN 474-1 (earth movers) and SFS-EN 12999 (loading cranes) consist of similar demands for protection



SAFE-SLEEVE (MSHA-accepted & normal)

Safe-Sleeves fulfil the demands of standard SFS-EN ISO 3457 according to which hydraulic <u>hoses must be protected</u> in following cases:

- operating pressure exceeds 5 MPa 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.



SAFE-SLEEVE, textile hose protector protects also people near-by a breaking hose and meets the requirements of EN 12999 and EN ISO 3457 standards.





SAFE-SLEEVEs, textile hose protector

- Easy-to-install
- produced from polypropylene / polyester
- very hard-wearing
- Recyclable
- endures acids and alkalis in general
- excellent pressure resistance





SAFE-SLEEVEs, textile hose protectors

- recommended temperature range is -40...- +80°C
 (MSHA -> + 120°C)
- Standard type is UV-protected
- Abrasion resistance of SAFE-SLEEVE is excellent

- PP: colour plain black, NO printing
- MSHA: black with white printing
- Length 5om / roll (available in rolls only)





SAFE-SLEEVE, recommendations for hoses

| Diameter | Safe-Sleeve | Hose DN | Hose DN | Hose OD |
|----------|-------------|---------|---------|---------|
| | ID mm | mm | inch | mm MAX |
| RDX 17 | 17 | 8 | 5/16 | 14,0 |
| RDX 23 | 23 | 8 | 5/16 | 15,0 |
| RDX 27 | 27 | 10 | 3/8 | 22,0 |
| RDX 30 | 30 | 12 | 1/2 | 25,0 |
| RDX 36 | 36 | 16 | 5/8 | 30,0 |
| RDX 39 | 39 | 20 | 3/4 | 34,0 |
| RDX 46 | 46 | 25 | 1 | 40,0 |
| RDX 55 | 55 | 32 | 1 1/4 | 48,0 |
| RDX 62 | 62 | 40 | 1 1/2 | 55,0 |
| RDX 78 | 78 | 50 | 2 | 70,0 |
| RDX 109 | 109 | | | 100 |
| RDX 125 | 125 | | | 115 |

SAFE-WRAP

- produced from 100 % polyamide with PU coating and Velcro® -brand fasteners
- very easy & fast to install on hose lines afterwards and repeatedly which make it a cost-effective solution
- Tensile strength is excellent (EN ISO 13934-1) and water repellence of the fabric is 100% (EN 24920).
- made to order

STANDARD (inner) DIAMETERS AVAILABLE:

• 40mm, 60mm, 80mm, 100mm, 120mm (other sizes 20 – 400mm possible)



SAFEPLAST BINDING SPIRAL

- For protecting electric cables and wires from stress caused by abrasion and shocks
- produced from PE plastic pipe by <u>cutting</u>
- tolerate acids, oils and dissolvent
- flexible
- usable from -30 °C up to +80°C
- recyclable



SAFEPLAST BINDING SPIRAL

OUTER DIAMETERS (nominal):

6 mm 15 mm

8 mm 20 mm

10 mm 25 mm

12 mm 32 mm



LENGTHS: 6mm 100m

8 – 15 mm 50m

20 – 32 mm 25m

COLOUR: black



SAFE-STRIP x 3 versions

- bundles hose lines again and again
- produced from polypropylene and has Velcro® -brand fasteners or a buckle
- maximum force of Safe-Strip is average of 1500 N.





SAFE-STRIP

* with or without a **mounting eyelet**.

AVAILABLE FOR BUNDLES OF DIAMETER:

max: 70mm, 100mm, 125mm, 155mm, 180mm

*with a **buckle** in lengths 50cm, 100cm and 150cm

- White woven Safe-Strip logo
- Sales unit 10 pcs / size

- Safeplast Binding Straps
- for bundling of hydraulic hoses or electrical cables together.
- All the straps (except for the smallest one meant to bundle electrical wires) have adjustment holes.

• Tensile strength of these straps is 300-420 daN (1daN is c. 1kg).



| 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 |



INSTALLATION TOOL "Safe-Tool"

* designed to make the mounting of the spiral

on the hose easier

There are two sizes available:

Spirals diameter 20 - 50mm -> small installation tool Spirals diameter 75 - 140mm -> big installation tool





Exclusive distributor on the Russian and CIS market:



info@uhc-group.com

197341

Russian Federation, Saint Petersburg,

Kolomyazhsky pr. 27 lit. A

Tel./Fax: +7 812 702 12 41