# FLAGON
# BSL

TECHNICAL DATA SHEET

ANZ-TDS-27-FLAGON BSL

WATERPROOFING

APPLICATIONS

CIVIL WORKS

FOUNDATIONS

## DESCRIPTION

**FLAGON BSL** is a synthetic membrane of plasticised PVC with natural self-extinguishing properties manufactured by coextrusion which enables the production of a single layer membrane, each of the two surfaces being a different colour.
The upper surface has a thin colored layer (light green) that allows a quick visual check of any damage occurred on the membrane during the installation. The layer is called "signal layer".
The underside of **FLAGON BSL** (dark grey) is highly resistant to puncture and perforation by roots.
**FLAGON BSL** is not UV resistant.

- Excellent weldability
- Includes a signal layer
- High resistance to micro-organisms
- Root resistant
- Can be used in the Flag Vacuum system

## FIELD OF APPLICATION

**FLAGON BSL** is used as a waterproofing layer for foundations and below ground structures, such as:

- Tunnels and buried galleries
- Cut and cover
- Coverings of buried structures

## APPLICATION METHOD

**FLAGON BSL** membrane can be used as part of a single layer waterproofing system, compartmentalised or not, and in Flag Vacuum-system.
**FLAGON BSL** membranes are welded together by applying hot air or using hot wedge, with manual or automatic welder. The welding can be made either with a track that with double track. The double track allow to perform a pneumatic test with air.

## INSTALLATION PROCEDURE

### SUBSTRATE

- Concrete substrate must be fully cured before application of the membrane
- No work should be started until all surfaces are smoothed with a shotcrete layer or other compacting products. The laying surface obtained should be smooth, free from debris and any roughness that could punch and damage the waterproofing membrane. Where necessary to achieve the desired profile/surface, apply a fine sprayed concrete layer on the shotcrete surface with a minimum thickness of 3 to 5 cm and aggregate diameter not exceeding 8 mm. The minimum thickness, anyway, should not be lower than 20 mm. As soon as the thickness has been defined, the minimum thickness should never be lower than 2/3 of the average thickness previously defined. The relation between height and width of irregular areas, should be lower than 1:10. The minimum curving ray of irregularities (swellings or recesses) should be 20 cm.
- The metal false-works must be completely covered by shotcrete
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator

### INSTALLATION

- Unroll **FLAGON BSL** onto the GEOLAND PP FR or SOPRADRAIN and weld **FLAGON BSL** onto FLAGON PVC DISC gradually.
- The edge of the **FLAGON BSL** must overlap by at least 100-150 mm with double track welding using the Flag Saldamax equipped with double track welding with test channel or Leister double track automatic welder or manual welding with Leister manual welding machine for finishing.
- Control tests of the welds should be proceed with Welding tester, Pneumatic welding test and test of triple points with vacuum cap.
- All penetrations and upturn details should be waterproof as per SOPREMA Installation Guides and detail drawings.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

# FLAGON BSL

TECHNICAL DATA SHEET

ANZ-TDS-27-FLAGON BSL

WATERPROOFING

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## PACKAGING

| SPECIFICATIONS | FLAGON BSL |
|---|---|
| Thickness | 2.0 mm |
| Colour | Light green (surface)/ Dark Grey (underface) |
| Roll dimensions | 20 m x 2.10 m |
| Roll weight | 110 kg |
| Rolls per pallet | 14 |

## PROPERTIES

| PROPERTIES | STANDARDS | FLAGON BSL |
|---|---|---|
| | | 2.0 mm |
| Weight (kg/m²) | EN 1849-2 | 2.60 |
| Thickness with signal layer (mm) | EN 1849-2 | ≥ 2.00 |
| Appearance | EN 1850-2 | The signal layer is coextruded and homogeneous with the bottom layer.<br>The product is free from blisters, cracks and holes. |
| Straightness (mm)<br>Flatness (mm) | EN 1848-2 | ≤ 50<br>≤ 10 |
| Static puncture test (CBR method) (kN) | EN ISO 12236 | > 2.5 |
| Burst strength (%) | EN 14151 (D=1m) | ≥ 50 |
| Behaviour under hydrostatic pressure:<br>- 5 bar/72 hours or 10 bar/24 hours | EN 1928 meth. B | No leakage |
| Impact resistance on rigid support (mm) | EN 12691 meth.A / B | ≥ 900 / ≥ 750 |
| Compression resistance for 48 h (N/mm²) | SIA V 280 - 14 | ≥ 7.0 |
| Cold bending/low temperature behaviour | EN 495-5 | Without cracks at -20°C |
| Dimensional stability (6h at 80°C) (%) | EN 1107-2 | ≤ 2.0 Without bubbles or blisters |
| Resistance to roots | CEN TS 14416 | Resistant |
| Reaction to fire (class) | EN ISO 11925-2<br>EN 13501-1 | E |
| Smoke class | SIA 272 | Class 2 |
| Execution of welding joints | DVS 2225-5 | Perfect, break outside seam |
| Shear resistance of joints (N/mm²)<br>Breaking factor fz<br>Peel resistance of joints (N/mm) | EN 12317-2<br>EN 12316-2 | >10.5 (Breaking outside of the joint)<br>≥ 0.6<br>≥ 6.0 |
| Recycled material<br>DEHP (DOP) content<br>Lead and cadmium content | - | Absent<br>Absent<br>Absent |

# FLAGON
## BSL

TECHNICAL DATA SHEET

ANZ-TDS-27-FLAGON BSL

WATERPROOFING

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## PROPERTIES

| PROPERTIES | STANDARDS | FLAGON BSL |
|---|---|---|
| | | 2.0 mm |
| Resistance to micro-organisms:<br>- change of tensile strength (%)<br>- change of elongation at break (%) | EN ISO 527/3-5 | <br>≤ 10<br>≤ 10 |
| Tensile strength (N/mm²)<br>Longitudinal<br>Trasversal<br>Elongation at break (%)<br>Longitudinal<br>Trasversal<br>Elastic modulus (N/mm²) | <br><br>EN ISO 527-1<br>EN ISO 527-3<br>EN ISO 527-5 | <br>≥ 15<br>≥ 14<br><br>≥ 300<br>≥ 280<br><br>≤ 20 |
| Variation after long term exposure to elevated temperature (70 d at 70°C):<br>- change of weight (%)<br>- tensile strength (%)<br>- elongation at break (%)<br>- cold bending | EN 1296<br>EN 14575 | <br>≤ 2.0<br>≤ 20<br>≤ 20<br>Without cracks at -20°C |
| Variation after long term oxidation to elevated temperature (90 d at 85°C):<br>- tensile strength (%)<br>- elongation at break (%) | EN 14575 | <br>≤ 20<br>≤ 20 |
| Variation after thermal ageing in water (8 months at 50°C):<br>- tensile strength (%)<br>- elongation at break (%)<br>- change of weight (%)<br>- cold bending | SIA V 280-13<br>EN 14415 | <br>≤ 20<br>≤ 20<br>≤ 4.0<br>Without cracks at -20°C |
| Exposure to liquid chemicals, variation after immersion in saturated solution of $Ca(OH)_2$ (28 d at 23°C):<br>- tensile strength (%)<br>- elongation at break (%)<br>- cold bending | EN 1847 | <br>≤ 15<br>≤ 15<br>Without cracks at -20°C |
| Exposure to liquid chemicals, variation after immersion in solution of 5/6% sulphurous acid, $H_2SO_3$ (28 d at 23°C):<br>- tensile strength (%)<br>- elongation at break (%)<br>- cold bending | EN 1847 | <br>≤ 15<br>≤ 15<br>Without cracks at -20°C |
| Exposure to liquid chemicals, variation after immersion in NaCl solution at 10% (28 d at 23°C):<br>- tensile strength (%)<br>- elongation at break (%)<br>- cold bending | EN 1847 | <br>≤ 15<br>≤ 15<br>Without cracks at -20°C |
| Joint strength (N/50mm) | EN 12317-2 | ≥ 20 |
| Tear strength (N)<br>(N/mm) | EN 12310-2<br>ISO 34 sample fig.2 | >150<br>≥ 45 |

(All values are nominal)

TDS_FLAGON_BSL_04-2021_RA

# FLAGON
# BSL

TECHNICAL DATA SHEET

ANZ-TDS-27-FLAGON BSL

WATERPROOFING

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## PROPERTIES

| PROPERTIES | STANDARDS | FLAGON BSL |
|---|---|---|
| | | 2.0 mm |
| Durability<br>After thermal ageing<br>After immersion in chemicals | EN 1296<br>EN 1847 | Watertight at 2kPa and 60 kPa |
| Resistance to oxidation<br>variation in tensile strength (%) | EN 14575 | ≤ 25 |

(All values are nominal)

## ANNEX 1 : 408.922 FLAG Thermal Analysis

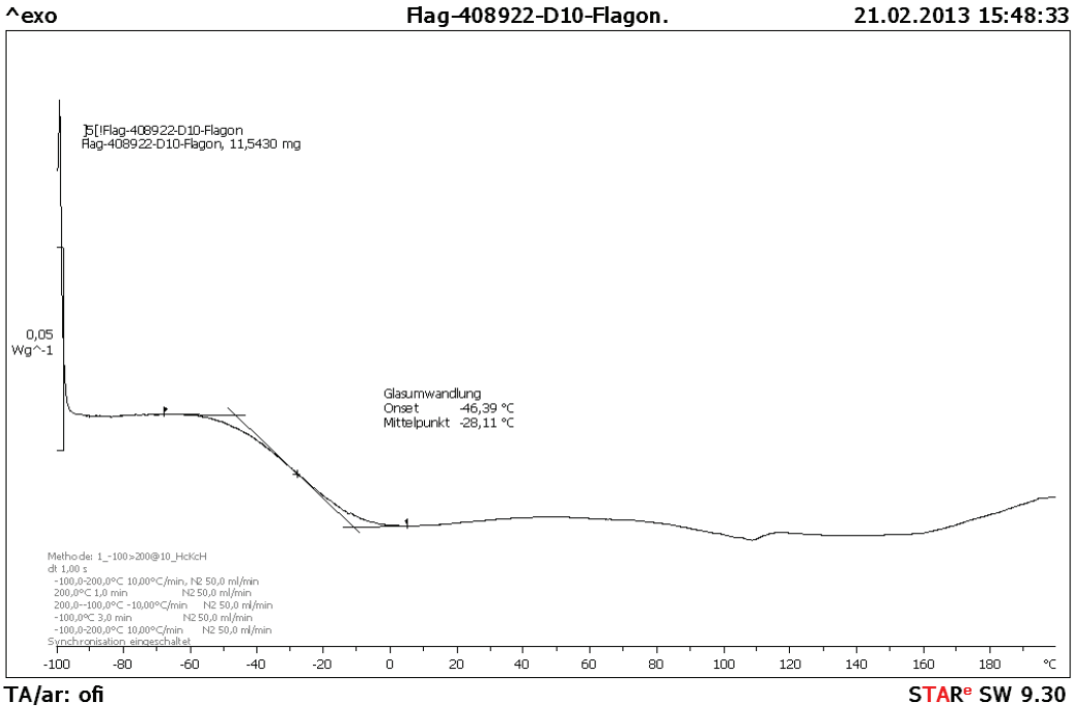
Identification: PVC-P membrane „Flagon BSL“ Date: 2013-02-21

Test: Differential Scanning Calorimetry

DSC (Differential Scanning Calorimetry)

The differential calorimetric examination was carried out on a type-scanning differential scanning calorimeter DSC1, Mettler Toledo, Thermoanalyse Excellence series, STARe system according to ISO 11357-2 (accredited test procedure) taking into account the internal SOP 112.017 in the temperature range from -100 ° C to 200 ° C in nitrogen atmosphere in a combined test by Heating - Cooling - Heating at 10 K / min in the aluminum crucible, evaluation at the 2nd heating-up process (see enclosed Thermogram).

Glass transition (step center) at -28 ° C




## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# ALSAN
# EP CAP

TECHNICAL DATA SHEET

ANZ-TDS-19 ALSAN EP CAP

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## DESCRIPTION

**ALSAN EP CAP** is a two-component, high performance, pre filled epoxy grout designed for general heavy duty civil engineering applications and for encapsulating pile tops.

**ALSAN EP CAP** is also used in void-filling applications in the construction industry. With exceptional resistance to aggressive chemicals such as acids, alkalis and sea water.

**ALSAN EP CAP** is an excellent choice for various civil engineering and industrial grouting applications.

- Safe and easy to use
- High tensile and compressive strength
- High chemical resistance
- Suitable for underwater application
- Great adhesion to a variety of substrates

## INSTALLATION PROCEDURE

SUBSTRATE:

- Clean the surface and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposits or algae. Roughen the surface and remove any laitance and expose aggregate by light scabbling or grit-blasting.
- Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of proprietary degreaser
- All residual ponding water must be removed; the substrate may be moist but not wet
- All anchor bolt holes must be free from water and debris prior to placing of **ALSAN EP CAP**
- Steel surfaces such as reinforcement bars should be grit blasted or scabbled to remove any corrosion

MIXING:

- The mix ratio is 4:1 by volume, 4 parts Part A and 1 part Part B by volume
- Any steel reinforcement and formwork should be prepared, cut to size and shape and made ready for assembly before mixing commences. Care should be taken to ensure that **ALSAN EP CAP** is thoroughly mixed.
- The hardener and base components should be stirred separately before mixing to disperse any settlement
- The entire contents of the hardener (Part B) tin should then be poured into the base (Part A) tin and the two materials thoroughly mixed using a suitable slow speed drill and high shear mixing paddle
- Mix for 2 minutes until fully uniform colour is obtained, the sides of the tin should be scraped, mixing should continue for a further 2 minutes. To facilitate mixing and application at temperatures below 10°C, the separate components should be warmed in hot water up to a maximum temperature of 25°C before beginning to mix.
- If heated to 25°C, the subsequent mixed material will need to be used more speedily as the pot life will be reduced
- Alternatively, the material should be stored in an environment controlled to 20°C and only removed immediately before use

  **Do no attempt to rework or re-temper any partially set product. Liquid epoxy grout will be exotherm and set prematurely if not used within the pot life.**

APPLICATION:

- Prior to pouring, ensure that the formwork is tightly sealed and rigid enough to prevent loss of material during application. Seal around form-work with a tight tape or other mortar material to avoid loss of product during curing of **ALSAN EP CAP.**
- Use an approved form release agent for internal lining of the formwork prior to pouring **ALSAN EP CAP** to avoid damage of material while removing the formwork.
- Immediately after the mixing procedure is completed, pour **ALSAN EP CAP** into the formwork. Pour slowly from the lowest point near the substrate to the specifi ed thickness. Do not pour from high point to avoid creation of air bubbles. No vibration is required.
- After pouring, finish with a trowel or brush and allow to cure.
- Fillers may be added to produce a trowellable high mortar or a pourable flowable grout for deep pour applications.

CLEANING:

Clean up uncured material and equipment immediately after use using Xylene. Do not use solvent on skin. Cured **ALSAN EP CAP** is difficult to remove via chemical means and mechanical means may be necessary.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

TDS_ALSAN_EP_CAP_11-2020_RA

SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# ALSAN
## EP CAP

TECHNICAL DATA SHEET

ANZ-TDS-19 ALSAN EP CAP

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## PACKAGING

| SPECIFICATIONS | ALSAN EP CAP |
|---|---|
| Appearance | Part A: White / Part B: Black / Grey when mixed |
| Coverage | 1 l/m² at 1 mm thick |
| Mix ratio | 4:1 (Part A:B) by volume |
| Packaging | 15 l<br>(11.9 l Part A & 3.1 l Part B) |
| Kits per pallet | 16 |

## PROPERTIES

| PROPERTIES | ALSAN EP CAP |
|---|---|
| Solid Content | 100% |
| Chemical Resistance | Very good |
| Heat Distortion Temp | 80˚C |
| Pot Life | 25 – 30 min @ 25˚C |
| Compressive Strength | 119 MPa |
| Flexural Strength | 30 MPa approx. |
| Modulus of Elasticity | 14 GPa |
| Hardness | >80 shore D |
| Service Temp | -10°C to +65°C |
| Min application temperature | 5˚C |
| Max. application temp. | 35°C |
| Flammability | Non flammable |
| Viscosity | Flowable, pourable |
| Tensile bond strength (indirect tensile) | 15 MPa approx. |
| Tensile strength (flexural) | 30 MPa approx. |
| Slant shear bond strength | 40 MPa (substrate failure) |
| Tack free time | 50 mins at 25°C |
| Water absorption | <0.2% (10 days at 25°C) |

TDS_ALSAN_EP_CAP_11-2020_RA

SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# ALSAN
## EP CAP

TECHNICAL DATA SHEET

ANZ-TDS-19 ALSAN EP CAP

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## IMPORTANT NOTES

- **ALSAN EP CAP** when mixed in large volumes, greater than 10 litres is highly likely to cure faster reducing the pot life of the mixed material in the tin
- Low temperature working: the minimum application temperature is 5°C. In temperatures below 10°C, the separate components should be heated in warm water (up to 25°C) or stored in a temperature controlled environment for 12 hours before use. These measures will facilitate mixing and application. Normal precautions for winter working with epoxy materials should be adopted.
- At ambient temperatures above 30°C, the material should be stored in the shade or in an airconditioned environment 12 hours before use
- DO NOT dilute **ALSAN EP CAP** with solvents as this will severely aff ect the ultimate performance of the product

## SAFETY & FIRST AID

Avoid contact with skin and eyes and avoid breathing the vapors. Store under cover, out of direct sunlight and in a well ventilated area. If poisoning occurs contact a doctor or Poisons Information Centre. If swallowed, DO NOT induce vomiting. Give a glass of water. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor. Refer to Material Safety Data Sheet for further information.

## STORAGE AND HANDLING

Shelf life of **ALSAN EP M** is 2 years, when properly stored in original unopened containers. Containers is stored between 5ºC and 35ºC in an unopened container. Must be stored above 5˚C.

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# ALSAN
## EP M

TECHNICAL DATA SHEET

ANZ-TDS-18-ALSAN EP M

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## DESCRIPTION

**ALSAN EP M** is a two component, non sag, high strength epoxy adhesive. It is intended for bonding of SOPREMA waterproofing bituminous and PVC membranes to a variety of common building materials on vertical and horizontal surfaces.

- Safe and easy to use
- Permanent bond in 5-6 hours
- High tensile and compressive strength
- Excellent chemical resistance
- Great adhesion to a variety of substrates

## FIELD OF APPLICATION

**ALSAN EP M** is recommended for the following general uses:

- Bonding SOPREMA waterproofing membranes to concrete and metal surfaces
- Crack repair
- Grouting/fixing anchor bolts

## INSTALLATION PROCEDURE

SUBSTRATE:

- Clean the surface and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposits or algae. Roughen the surface and remove any laitance and expose aggregate by light scabbling or grit-blasting.
- For painted surfaces: remove all paint or coatings using a paint stripper or mechanically abrade surface.

MIXING:

- The mix ratio is 1:1 by volume, 1 parts Part A and 1 part Part B. Care should be taken to ensure that **ALSAN EP M** is thoroughly mixed.
- The entire contents of the hardener (Part B) tin should be poured into the base (Part A) tin and the two materials thoroughly mixed using a suitable slow-speed drill and high shear mixing paddle.
- Mix for 2 minutes until a fully uniform grey colour is obtained; the sides of the tins should be scraped, mixing should continue for a further 2 minutes. DO NOT OVER MIX AS THIS MAY INCORPORATE AIR BUBBLES.
- To facilitate mixing and application at temperatures below 10˚C, the separate components should be warmed in hot water bath or conditions to room temperature, up to a maximum temperature of 25˚C before beginning to mix. If heated to 25˚C, the subsequently mixed material will have a pot life that will be reduced to 45 minutes.
- Alternatively, the material should be stored in an environment controlled to 20˚C and only removed immediately before use. Working time up to 45min at 25˚C. ONLY MIX MATERIAL THAT CAN BE USED WITHIN THE SETTING TIME.

APPLICATION:

- **ALSAN EP M** should be applied as soon as the mixing process has been completed.

CLEANING:

- Clean up should be done as soon as possible after mixing using warm water with soap or detergent.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

# ALSAN
## EP M

TECHNICAL DATA SHEET

ANZ-TDS-18-ALSAN EP M

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## PACKAGING

| SPECIFICATIONS | ALSAN EP M |
|---|---|
| Appearance | Part A: White / Part B: Black / Grey when mixed |
| Coverage | 1 l/m² at 1 mm thick |
| Mix ratio | 1:1 (Part A:B) by volume |
| Packaging | 20 l<br>(10 l Part A & 10 l Part B) |
| Kits per pallet | 16 |

## PROPERTIES

| PROPERTIES* | ALSAN EP M |
|---|---|
| Mixed consistency | Thixotropic paste with no sag or slump |
| Appearance | Part A: White / Part B: Black / Grey when mixed |
| Specific Gravity | 1.45 / Lt |
| Solid Content | 100% |
| Chemical Resistance | Excellent (see chart) |
| Heat Distortion Temp | 90˚C |
| Pot Life | 50-60 min @ 25˚C |
| Compressive Strength | 100 MPa |
| Flexural Strength | 22 MPa approx. |
| Modulus of Elasticity | Approx. 11x10³ MPa |
| Hardness | >80 shore D |
| Service Temp | -20˚C to +70˚C |
| Cure time @ 25˚C | 12 hours |
| Full cure @ 25˚C | 3 days |
| Min application temperature | 7˚C |
| Working time | Approx 45 min @ 25˚C |
| Bond Strength | >15 MPa |

* Tested to ASTM D570

# ALSAN
## EP M

TECHNICAL DATA SHEET

ANZ-TDS-18-ALSAN EP M

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## CHEMICAL RESISTANCE**

| CHEMICAL | ALSAN EP M |
|---|---|
| Citric Acid 100% | Excellent |
| Acetic Acid 5% | Excellent |
| Sodium Hydroxide 30% | Excellent |
| Diesel fuel/petrol | Excellent |
| Sugar Solutions | Very good |
| Tartaric Acid 100% | Very good |
| Hydrocarbons | Very good |
| Phosphoric Acid | Very good |

**Resistant to spillage. Surface staining may result from exposure to some aggressive chemicals. All spills should be quickly removed and washed. Over exposure may result in surface degradation.

## IMPORTANT NOTES:

- **ALSAN EP M** when mixed in large volumes greater than 10 litres, is highly likely to cure faster reducing the pot life of the mixed material in the tin.
- Low severely aff ect the ultimate performance of the product.
- Only mix as much **ALSAN EP M** that can be used within the pot life (45-60 minutes at 25˚C).
- Surfaces must be rigid. Not suitable for blueboard, cement sheeting or any other compressed material may cause substrate to internally delaminate under stress.
- Not recommended for sandstone and other fissile stones – these stones can be porous or veneered which will cause the bond to fail by delamination of the stone surface.

## SAFETY & FIRST AID

Avoid contact with skin and eyes and avoid breathing the vapors. Store under cover, out of direct sunlight and in a well ventilated area. Keep away from all sources of ignition – no smoking.
If poisoning occurs contact a doctor or Poisons Information Centre. If swallowed, DO NOT induce vomiting. Give a glass of water.
If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor. Refer to Material Safety Data Sheet for further information.

## STORAGE AND HANDLING

Shelf life of **ALSAN EP M** is 2 years, when properly stored in original unopened containers. Containers is stored between 5˚C and 35˚C in an unopened container. Must be stored above 5˚C.

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# DRAINI
## PVC

TECHNICAL DATA SHEET

ANZ-TDS-82-DRAINI PVC

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

## DESCRIPTION

**DRAINI PVC** rainwater outlets are composed of a flexible flange made from flexible PVC reinforced with fiberglass and an aluminium outlet pipe. The two components are assembled by a patented seam method.

**DRAINI PVC** rainwater outlet is used on roofs with PVC waterproofing membranes, for the vertical evacuation of rainwater in combination with FLAGON PVC waterproofing systems.

**DRAINI PVC** flange is compatible with all FLAGON PVC membranes.

## APPLICATION

### NON FLEECE BASED MEMBRANE

- Insert the **DRAINI PVC** in the drain pipe and mechanically fix the flange with 4 fixings, 1 in each corner.
- The fixing plates need to be positioned no less than 30 mm from the perimeter weld.
- The waterproofing membrane is fully welded with hot air on the flange of the **DRAINI PVC.**
- The weld is checked with a welding tester.

### FLEECE BASED MEMBRANE

- Install the waterproofing membrane and mechanical fix it with at least 3 fixings around the cut out of the drain pipe.
- The fixing plates need to be positioned no less than 30 mm from the perimeter weld.
- The flange of the **DRAINI PVC** is fully welded with hot air on the waterproofing membrane.
- The weld is checked with a welding tester.

ALWAYS CONSULT THE LOCAL REGULATIONS (LOCATION, SIZING, ...)
FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | DRAINI PVC | |
|---|---|---|
| | FLANGE | OUTLET PIPE |
| Material | PVC | aluminium |
| Reinforcement | fiberglass | - |
| Finish upper/lower side | flexible PVC | - |
| Thickness | 1,50 mm ±5 % | - |

## VISUAL

TDS_FLAGON_PVC_CLEANER_2021_RA

SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# DRAINI
## PVC

TECHNICAL DATA SHEET ANZ-TDS-82-DRAINI PVC

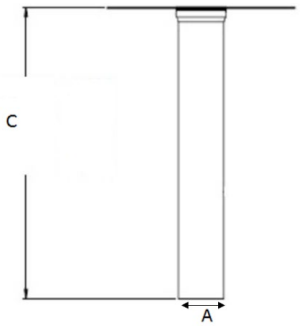
ACCESSORY PRODUCTS

APPLICATIONS

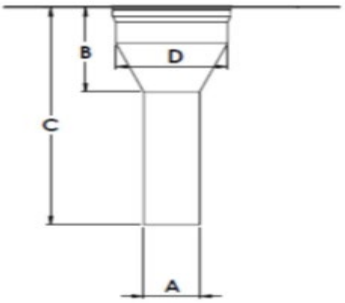
ROOFS

## PROPERTIES

| DRAINI DROITE PVC | | | DRAINI TRONCO PVC | | |
|---|---|---|---|---|---|
| Dimensions flange | Diameter outlet pipe (A) | Length outlet pipe (C) | Dimensions flange | Diameter outlet pipe (A / D) | Length outlet pipe (B / C) |
| 320 mm x 320 mm | 63 mm | 600 mm | 480 mm x 480 mm | 80 mm / 160 mm | 165 mm / 425 mm |
| 390 mm x 390 mm | 85 mm | | 480 mm x 480 mm | 95 mm / 190 mm | 185 mm / 445 mm |
| 390 mm x 390 mm | 95 mm | | 550 mm x 550 mm | 120 mm / 240 mm | 225 mm / 485 mm |
| 480 mm x 480 mm | 120 mm | | 550 mm x 550 mm | 145 mm / 290 mm | 260 mm / 520 mm |
| 480 mm x 480 mm | 145 mm | | 650 mm x 650 mm | 195 mm / 390 mm | 335 mm / 595 mm |
| 480 mm x 480 mm | 155 mm | | - | - | - |
| 480 mm x 480 mm | 195 mm | | - | - | - |




DRAINI DROITE PVC
with straight outlet pipe




DRAINI TRONCO PVC
with conical outlet pipe

## STORAGE AND HANDLING

DRAINI PVC rainwater outlets must be stored on a flat surface, protected against atmospheric conditions.
When exposed, the aluminium pipe can show white traces of corrosion, which however do not affect the functioning.

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# FLAG JOINT
## BR 500

TECHNICAL DATA SHEET

ANZ-TDS-58-FLAG JOINT BR 500

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## DESCRIPTION

**FLAG JOINT BR 500** is a waterproof, flexible and ready-to-use joint tape used to join SOPREMA bituminous and PVC waterproofing membrane systems, as well as PVC and PMMA resin waterproofing membrane systems.

**FLAG JOINT BR 500** is made of PVC-P with a central fiberglass reinforcement. A geotextile fleece is attached to one end of the tape, on both the surface and underface. On the other end, the surface is light grey and the underface is black.

- Resistance to atmospheric agents
- Resistance to stagnant water
- Root growth and UV resistance
- High movement absorption
- Wide range of temperatures

## FIELD OF APPLICATION

- Tunneling
- Foundations
- Other civil works

## INSTALLATION PROCEDURE

### SUBSTRATE

- No work should be started until the substrate is firm, even, clean and free from loose materials or any construction debris on the surface.
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator.

### INSTALLATION

- **FLAG JOINT BR 500** is used horizontal.
- On the geotextile end, **FLAG JOINT BR 500** is sandwiched between 2 layers of SOPREMA bituminous membranes which have previously been melted by a hand-held torch in order to obtain hot bitumen. PMMA resin can also be used on both surfaces of the geotextile to join to the PVC membrane systems.
- On the PVC end, FLAGON PVC membrane is welded onto the tape surface with a hot air welding machine.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | FLAG JOINT BR 500 |
|---|---|
| Thickness | 1.6 mm |
| Roll dimensions | 50 cm x 30 m |
| Rolls per pallet | 12 |
| Colour | The top side is light grey / the bottom side is black |

TDS_FLAG_JOINT_BR_500_11-2020

SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# FLAG JOINT
## BR 500

TECHNICAL DATA SHEET

ANZ-TDS-58-FLAG JOINT BR 500

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## PROPERTIES

| PROPERTIES | TEST METHOD | FLAG JOINT BR 500 |
|---|---|---|
| Water tightness (bar) | UNI EN 1928/B | 10 |
| Tensile strength (N/mm²) | UNI EN 527-1 | > 6.5 |
| Elongation at breack (%) | UNI EN 527-1 | > 200 |
| Joint strength | DIN 16 726 | Break ouside joint |
| Root resistance | SIA V280 | Compliant |
| Impact resistance | SIA V280 | > 650 (weight 500g) |
| Water vapour diffusion resistance | SIA V280 | ~17000 (μH2O) |
| Reaction to fire | SIA V280 | 4.2 |
| Behaviour in hot water | SIA V280 | Compliant |
| Ozone resistance | SIA V280 | Compliant |
| Heat resistance:<br>- heat ageing<br>- bending test<br>- artificial weathering | SIA V280 | Compliant<br>No cracks at < -25°C<br>5000 hours - compliant |
| Resistance to chemical agents<br>- long-term exposure a : | - | Water, sea water, alkaline water, di-icing salt solution, bitumen renders, water disperse bitumen-based coatings |
| Resistance to chemical agents<br>- temporary resistance to: | - | Diluted inorganic alkalis and minerals acids, mineral oils |
| Operating temperatures :<br>- minimum<br>- maximum | - | -25°C<br>+80°C |

## STORAGE AND HANDLING

Shelf life: 36 months from the date of production, in the original unopened and undamaged packaging.
Protect from direct heat and sunlight. Store at a temperature between +5°C and +40°C.

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# FLAGON ANCHOR

TECHNICAL DATA SHEET

ANZ-TDS-90-FLAGON ANCHOR

ACCESSORY PRODUCTS

APPLICATIONS

TUNNELS

UNDERGROUND STRUCTURES

## DESCRIPTION

**FLAGON-ANCHOR** is an anchoring system for PVC waterproofing membrane for tunneling. It allows the steel bars and other items to be fixed to support without penetrating waterproofing layer of the FLAGON BSL membrane.

**FLAGON-ANCHOR** is a completely sealed anchoring system made of a rigid PVC sleeve specifically designed for M-16 bolt. The flange of the sleeve is manufactured on a 280mm diameter of PVC-P membrane FLAGON BSL. Used with our FLAGON BSL system for tunnel, it maintains the complete integrity of the PVC waterproofing even under high water pressure.

## APPLICATION

- Once the waterproof membrane installation is completed, drill a 32 mm hole in the substructure with a length L=200 mm.
- Check and clean the hole with a brush or compressed air. Make sure there is no water in the hole.
- Inject a solvent free thixotropic epoxy resin (ALSAN ANCHOR EP3) up to the half of the hole (100 mm).
- Insert the **FLAGON-ANCHOR** prior curing of the resin. Make sure the PVC flange is flush with FLAGON BSL membrane.
- Clean the flange of **FLAGON-ANCHOR**, weld onto Flagon BSL membrane with hot air gun.
- Insert a M16x2.0 all-thread rod into the **FLAGON-ANCHOR**. The length and density of FLAGON-ANCHOR must be determined by the engineer.
- A pull out test must be performed to determine the maximum tensile load of the anchor.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | FLAGON ANCHOR |
|---|---|
| Appearance | grey / black & green |
| Packaging | 30 units per box |
| Box per pallet | 30 |

## PROPERTIES

| PROPERTIES | FLAGON ANCHOR |
|---|---|
| Sleeve material | PVC-P |
| Sleeve diameter | 28 mm |
| Sleeve length | 200 mm |
| Sleeve flange diameter | 120 mm |
| PVC flange material | FLAGON BSL |
| PVC flange thickness | 2 mm |
| PVC flange diameter | 280 mm |

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor is responsible for checking the suitability of products for their intended use.

TDS_FLAGON_ANCHOR_06-2021_RA

SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# FLAGON PVC
## CONNECTION PIPE COLLAR 80

TECHNICAL DATA SHEET

ANZ-TDS-96-FLAGON PVC CONNECTION PIPE COLLAR 80

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

### DESCRIPTION

**FLAGON PVC CONNECTION PIPE COLLAR 80** is a prefabricated element obtained by moulding, made of PVC FLAGON.

**FLAGON PVC CONNECTION PIPE COLLAR 80** is used on roofing or underground waterproofing systems assembled with FLAGON PVC synthetic membranes, to give continuity around the waterproofing that come out from the roof or foundations.

The presence of different section diameters allows, once a measurement has been cut, to better adapt **FLAGON PVC CONNECTION PIPE COLLAR 80** with the diameter of the elements that come out from the roof.

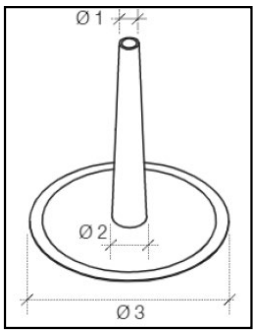
### APPLICATION

- **FLAGON PVC CONNECTION PIPE COLLAR 80** is welded with hot air all along the flange perimeter on the Flagon PVC membranes. Around the elements that come out from the roof or foundation, it is necessary to place a permanent elastic silicone between **FLAGON PVC CONNECTION PIPE COLLAR 80** and the element that comes out from the roof or foundation, and subsequently tighten the upper end with a stainless steel clamp.
- **FLAGON PVC CONNECTION PIPE COLLAR 80** is compatible with all accessories and membranes from the FLAGON PVC range.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

### PROPERTIES

| SPECIFICATIONS | FLAGON PVC CONNECTION PIPE COLLAR 80 | | | | |
|---|---|---|---|---|---|
| | H | Ø1 | Ø2 | Ø3 | PCS PER BOX |
| FLAGON PVC CONNECTION PIPE COLLAR 80 | 250 mm | 18 mm | 36 mm | 236 mm | 10 |
| | 250 mm | 28 mm | 46 mm | 246 mm | |
| | 400 mm | 80 mm | 83 mm | 276 mm | |
| | 400 mm | 110 mm | 113 mm | 312 mm | |




### STORAGE AND HANDLING

If **FLAGON PVC CONNECTION PIPE COLLAR 80** is stored outdoors, cover with an opaque protection after removal of the delivery packaging.

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# FLAGON PVC
# CONNECTION PIPE COLLAR

TECHNICAL DATA SHEET

ANZ-TDS-78-FLAGON PVC PIPE COLLAR

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## DESCRIPTION

The **FLAGON PVC PIPE COLLAR** is a prefabricated element obtained by moulding and it is made of PVC FLAGON.

The **FLAGON PVC PIPE COLLAR** is used on roofing or underground waterproofing system assembled with FLAGON PVC synthetic membranes to give continuity to the waterproofing around elements that come out from the roof or foundations.

The presence of different section diameters allows, once a measurement has been cut, to better adapt **FLAGON PVC PIPE COLLAR** with the diameter of the elements that come out from the roof.

- Easy and quick to install
- Rot-proof
- High puncturing resistance
- Excellent weldability

## APPLICATION

- **FLAGON PVC PIPE COLLAR** are welded with hot air all along the flange perimeter on the Flagon PVC membranes. Around the elements that come out from the roof or foundation it is necessary to place a permanent elastic silicone between **FLAGON PVC PIPE COLLAR** and the element that come out from the roof or foundation and, subsequently, tighten the upper end with a stainless steel clamp.
- **FLAGON PVC PIPE COLLAR** is compatible with all the accessories and membrane in the FLAGON PVC range.

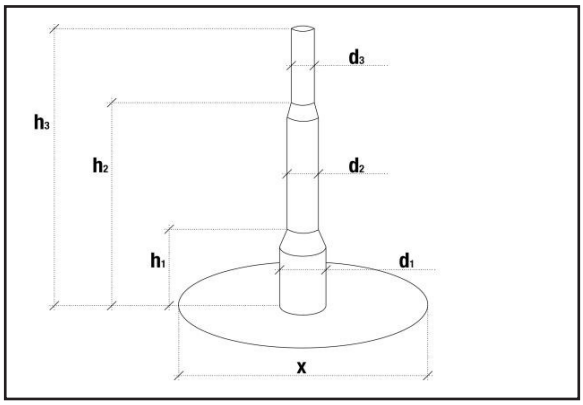
FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | FLAGON PVC PIPE COLLAR |
|---|---|
| Appearance | grey |
| Weight per piece | 0.124 kg |
| Packaging | 10 units per box |

## PROPERTIES

| PROPERTIES | FLAGON PVC PIPE COLLAR | |
|---|---|---|
| Width | x | 170 mm |
| Internal diameter | d1 | 29 mm |
| Internal diameter | d2 | 19 mm |
| Internal diameter | d3 | 10 mm |
| Height | h1 | 50 mm |
| Height | h2 | 150 mm |
| Height | h3 | 200 mm |
| Thickness | - | 3.0 mm |




## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# FLAGON
# PVC DISC

TECHNICAL DATA SHEET

ANZ-TDS-68-FLAGON PVC DISC

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

TUNNELS

UNDERGROUND STRUCTURES

## DESCRIPTION

**FLAGON PVC DISC** for underground lining are made in PVC-P, the same material that constitutes the FLAGON PVC waterproofing membranes.

**FLAGON PVC DISC** has a central cavity to take a washer for fixing nail. On the lower face it is ribbed to improve the adhesion to the support.

**FLAGON PVC DISC** has high flexibility, also at very low temperature. Its physical and mechanical characteristics do not change with time.

- Easy and quick to install
- Rot-proof
- High puncturing resistance
- Excellent weldability

## APPLICATION

- **FLAGON PVC DISC** is used to fix, at first, the protection, drainage felt or geocomposite layer to the primary lining of the underground vertical wall.
- **FLAGON PVC DISC** is fixed with a special gun with an explosive charge.
- Once nailed the washers to the primary lining, **FLAGON PVC DISC** serves as anchor point for the welding of the FLAGON PVC waterproofing membranes.
- FLAGON PVC waterproofing membranes are welded to **FLAGON PVC DICS** using hot hair with manual welder.

**FLAGON PVC DISC** is compatible with all the accessories and membrane in the FLAGON PVC range.

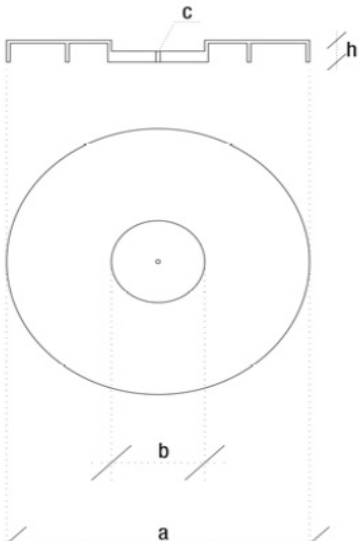
FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | FLAGON PVC DISC |
|---|---|
| Appearance | Black |
| Weight for piece | 0.035 kg |
| Packaging | 100 units per box |

## PROPERTIES

| PROPERTIES | FLAGON PVC DISC |
|---|---|
| Total diameter ( a ) | 80 mm |
| Cavity diameter ( b ) | 26 mm |
| High ( h ) | 10 mm |
| Diameter of hole ( c ) | 2.2 mm |




## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# FLAGON PVC
## PIPE COLLAR

TECHNICAL DATA SHEET

ANZ-TDS-125-FLAGON PVC PIPE COLLAR

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## DESCRIPTION

The FLAGON PVC PIPE COLLAR is a prefabricated element obtained by moulding and it is made of PVC FLAGON.

The FLAGON PVC PIPE COLLAR is used on roofing or underground waterproofing system assembled with FLAGON PVC synthetic membranes to give continuity to the waterproofing around elements that come out from the roof or foundations.

- Easy and quick to install
- Rot-proof
- High puncturing resistance
- Excellent weldability

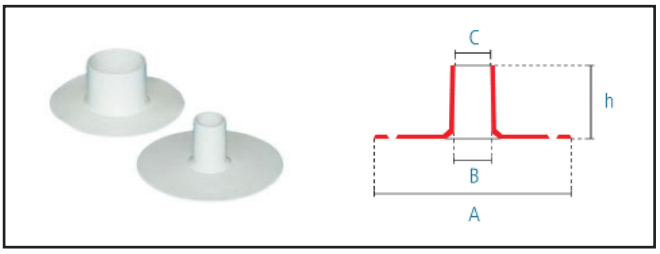
## APPLICATION

- FLAGON PVC PIPE COLLAR are welded with hot air all along the flange perimeter on the Flagon PVC membranes. Around the elements that come out from the roof or foundation it is necessary to place a permanent elastic silicone between FLAGON PVC PIPE COLLAR and the element that come out from the roof or foundation and, subsequently, tighten the upper end with a stainless steel clamp.
- FLAGON PVC PIPE COLLAR is compatible with all the accessories and membrane in the FLAGON PVC range.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | FLAGON PVC PIPE COLLAR |
|---|---|
| Appearance | grey |
| Packaging | 25 units per box |




## PROPERTIES

| PROPERTIES | | FLAGON PVC PIPE COLLAR | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C10 | C12 | C30 | C40 | C60 | C80 | C100 | C120 | C140 | C160 |
| Width at flange | A | 154 mm | 154 mm | 154 mm | 154 mm | 194 mm | 194 mm | 234 mm | 234 mm | 274 mm | 274 mm |
| Internal diameter at bottom | B | 11 mm | 14 mm | 32 mm | 42 mm | 62 mm | 82 mm | 102 mm | 122 mm | 142 mm | 162 mm |
| Internal diameter at top | C | 10 mm | 12 mm | 30 mm | 40 mm | 60 mm | 80 mm | 100 mm | 120 mm | 140 mm | 160 mm |
| Height | h | 60 mm | 60 mm | 60 mm | 60 mm | 60 mm | 60 mm | 90 mm | 90 mm | 90 mm | 90 mm |

## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

# GEOLAND PP FR 500/700/1000

TECHNICAL DATA SHEET

ANZ-TDS-64-GEOLAND PP FR 500/700/1000

ACCESSORY PRODUCTS

APPLICATIONS

FOUNDATIONS

CIVIL WORKS

## DESCRIPTION

GEOLAND PP FR 500/700/1000 is a geotextile fabric made of 100% highly needled polypropylene staple filament used for a wide range of geotechnical applications including separation, protection, filtration and drainage procedures.

GEOLAND PP FR 500/700/1000 non-woven geotextile is manufactured according to ISO 9001 quality standards.

## FIELD OF APPLICATION

- Separation: To prevent the transfer of particles between different layers. It prevents the contact between non compatible materials. It acts as permeable barrier only for water between soils of different structures.
- Protection: It provides puncture resistance to waterproofing membranes.
- Filtration and drainage: Transversal permeability allows the passage of the water through the material whilst retaining small particles.

## INSTALLATION PROCEDURE

INSTALLATION

- GEOLAND PP FR 500/700/1000 are loose laid without tension and must be free from folds and wrinkles; place in direct contact with the substrate avoiding any gaps or voids between the substrate and the geotextile. Continuity between sheets is maintained by simple overlap, seams or thermo-welding.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

## PACKAGING

| SPECIFICATIONS | GEOLAND PP FR 500 | GEOLAND PP FR 700 | GEOLAND PP FR 1000 |
|---|---|---|---|
| Roll dimensions | 6 m x 60 m | 6 m x 60 m | 2 m x 40 m<br>6 m x 20 m<br>6 m x 40 m |
| Roll weight | 198 kg | 241 kg | 84kg / 126kg / 252 kg |

## PROPERTIES

| PROPERTIES | TEST METHOD | GEOLAND PP FR 500 | GEOLAND PP FR 700 | GEOLAND PP FR 1000 |
|---|---|---|---|---|
| Mass | EN ISO 9864 | >550 g/m² | >700 g/m² | >1000 g/m² |
| Tensile Strength at 5% Elongation | EN ISO 10319 | >2.5 kN | >2.5 kN | >3.5 kN |
| Static Penetration Resistance (CBR) | EN 12236 | >7.0 kN | >8.0 kN | >12.0 kN |
| Dynamic Perforation Resistance | EN ISO 13433 | <10mm | <8mm | <6mm |
| Elongation (at failure) | EN ISO 10319 | >10% | >10% | >10% |
| Reaction to Fire | EN 13501-1 | Class E | Class E | Class E |
| Thickness (X) under Load | EN ISO 9863-1 | 100kPa, X > 3.1mm<br>200kPa, X > 2.7mm<br>500kPa, X > 2.1mm | 100kPa, X > 3.1 mm<br>200kPa, X > 2.8 mm<br>500kPa, X > 2.4mm | 100kPa, X > 3.5 mm<br>200kPa, X > 3.2 mm<br>500kPa, X > 2.6mm |

TDS_GEOLAND_PP_FR_HR_09-2021

SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# GEOLAND PP FR
## 500/700/1000

TECHNICAL DATA SHEET





### STORAGE AND HANDLING

Rolls must be stored in the delivery packaging, in a dry and protected environment.

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor is responsible for checking the suitability of products for their intended use.

# SOPRAHOSE 13
## RE-INJECTABLE HOSE

TECHNICAL DATA SHEET

ANZ-TDS-39-SOPRAHOSE 13 RE-INJECTABLE HOSE

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## DESCRIPTION

**SOPRAHOSE 13** is a re-injectable injection hose system, used to seal construction joints in concrete structures against water ingress.
**SOPRAHOSE 13** is used to carry injection grout materials along the length of the hose and disperse it into the concrete joint via micro-ports along the hose.

**SOPRAHOSE 13** is a highly durable, robust, single channel injection hose system, made from specially formulated PVC materials.

**SOPRAHOSE 13** can be flushed, which allows the system to be re-injectable for the lifetime of the structure. This is a great advantage if movement or shrinkage occurs between concrete joint faces of the structure.

**SOPRAHOSE 13** can be used with Acrylic Gel, Ultrafine Grout (Micro Cements) and PU Resin for SINGLE INJECTION ONLY.

- Fast and easy installation
- Low consumption of grouting material
- Maximum safety features
- Ultimate grouting process performed

## FIELD OF APLICATION

**SOPRAHOSE 13** can be used vertically and horizontally in the following general applications:

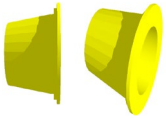
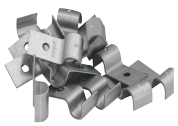
- Basements and below ground structures
- Tunnels and underground vaults
- Water and sewerage tanks
- Pools
- Suspended slabs and roof slabs

## PACKAGING

| SOPRAHOSE 13 RE-INJECTABLE HOSE | | | | | |
|---|---|---|---|---|---|
| **RE-INJECTABLE HOSE** | **CONNECTOR** | **FEEDER HOSE** | **END BOX** | **END CAP** | **HOSE CLIP** |
| RE-INJECTABLE HOSE is equipped with discharged ports equally spaced over its entire circumference | Plastic hose connector to join the FEEDER HOSE to the RE-INJECTABLE HOSE | Blue inlet and clear outlet FEEDER HOSE to join the END BOX to the RE-INJECTABLE | Collecting box for FEEDER HOSE and RE-INJECTABLE HOSE to allow the connection of the pumping equipment with the injection system | Plastic caps used to close the FEEDER HOSE before and after the injection | HOSE CLIP to ensure that the hoses do not float in the fresh concrete during casting process. |
| **PACKAGING / DIMENSIONS** | | | | | |
| 120 m | 50 units | 50 m | 58 mm × 10 cm × 10 cm | 50 units | 100 units |
| **UNIT PER KIT** | | | | | |
| 30 m | 6 units | 2 x 1.5 m | 3 units | 6 units | 150 units |





SOPREMA®

SYSTÈME QUALITÉ ISO 9001 QUALITY SYSTEM

SYSTÈME ENVIRONNEMENT ISO 14001 ENVIRONMENT SYSTEM

# SOPRAHOSE 13
## RE-INJECTABLE HOSE

TECHNICAL DATA SHEET

ANZ-TDS-39-SOPRAHOSE 13 RE-INJECTABLE HOSE

ACCESSORY PRODUCTS

APPLICATIONS

ROOFS

FOUNDATIONS

CIVIL WORKS

## PROPERTIES

| PROPERTIES | SOPRAHOSE 13 RE-INJECTABLE HOSE |
|---|---|
| Composition | PVC |
| Colour | Red |
| External diameter | 13 mm |
| Internal diameter | 6 mm |
| Micro-port length | 5 mm |
| Micro-port spacing | 15 mm |
| Micro-port opening pressure | 1 bar |

## SURFACE PREPARATION

The substrate to which **SOPRAHOSE 13** is fixed, should be uniform and free of dirt and debris. Surface irregularities should be removed and surface damage, cracks, holes and depressions should be made good with a suitable repair mortar. Concrete joint surfaces should have a surface finish that is uniform, dense and smooth.

## APPLICATION

- **SOPRAHOSE 13** is generally positioned in the middle of the substrate or in a position with a minimum of 100 mm concrete cover from any external edge.
- **SOPRAHOSE 13** must lay flat on the concrete surface with appropriate hose clamps mechanically fixed to the concrete substrate. HOSE CLIP should be spaced at 200 mm centres.
- **SOPRAHOSE 13** END BOX will be installed on the formwork flask with the internal side of the wall or slab
- Coloured PVC FEEDER HOSE is used to connect the **SOPRAHOSE 13** END BOX to the RE-INJECTABLE HOSE in order to deliver the injection resin to the joint.
- The standard installation length of **SOPRAHOSE 13** RE-INJECTABLE HOSE, between END BOX is 10 metres. This will help achieve an ultimate injection process.
- Where the hose ends overlap, a parallel overlap of 150 mm is required, with the two hoses laid parallel to each other with a 30-50 mm gap between the two parallel hoses.
- For improved performance, it is recommended that two rows of **SOPRAHOSE 13** RE-INJECTABLE HOSE are installed where the concrete thickness is greater than 1 meter.

## INJECTION PROCEDURE

- The concrete should be cued for a minimum of 28 days prior to the first injection.
- The contractor will identify the correct resin and apply in accordance with the application procedures of the chosen resin.
- Check the continuation of the hose by flushing with water or pressurising with air. The hose is injected via the injection ports until traces of the injected materials are discharged from the vent on the opposite end of the hose.
- The vent end must be closed by installing an injection nipple as soon as the injected material flows freely ensuring no air pockets are trapped in the injection hose.
- The flow of the injection material in the concrete joint can be monitored during the injection process by utilising the injection pump's pressure gauge.
- Continue the injection process until a constant pressure has been reached. The achievement of a constant pressure indicates the concrete joint is unable to absorb any further injection material, therefore signalling the end of the injection process.
- Injection material left within the injection hose is simply flushed out with clean water. Minimal pressure is required, and it is simple and easy to achieve. On completion of the flushing process, the injection hose is ready for future reinjections, if required.
- With correctly designed and well compacted concrete, a typical construction joint of 250 mm section will receive approximately 0.25-0.5 litres of resin per linear metre of hose.

### CLEANING

- Clean the pump and equipment as directed by the data sheet of the resin used.

### LIMITATIONS

- Do not apply **SOPRAHOSE 13** over contaminated substrates.
- Not compatible with solvent based materials, e.g. solvents, adhesives, sealants or coatings. **SOPRAHOSE 13** RE-INJECTABLE HOSE must never be flushed with solvents such as xylene, MEK or toluene. Only water may be used to flush **SOPRAHOSE 13**.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

### STORAGE AND HANDLING

Store the hose and ancillaries in dry conditions, not in contact with sunlight and protected from mechanical damage. If these conditions are maintained the product has a shelf life of 5 years.

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use. Field service where provided does not constitute supervisory responsibility.

Suggestions made by SOPREMA either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not SOPREMA, are responsible for carrying out procedures appropriate to a specific application.

# Flagonjoint S W6 600

## PVC ACCESSORIES FOR UNDERGROUND WORKS

### USE - APPLICATION

The FLAGONJOINT S W6 600 is a finishing element in PVC-P which is used in tunneling or foundation to prevent the passage of water in correspondence of joints or concrete casting joints.
It can also be used to define areas in compartmentalized systems or in Vacuum Flag system.

The FLAGONJOINT S W6 600 meets the specification according to the OBV tunnel waterproofing guideline regulation 2015.

The FLAGONJOINT S W6 600 are welded to the waterproofing PVC membrane by applying hot air with manual welder, over the entire length and on both sides.

The FLAGONJOINT S W6 600 are compatible with all the accessories and membrane in the FLAGON PVC range.

### DESCRIPTION

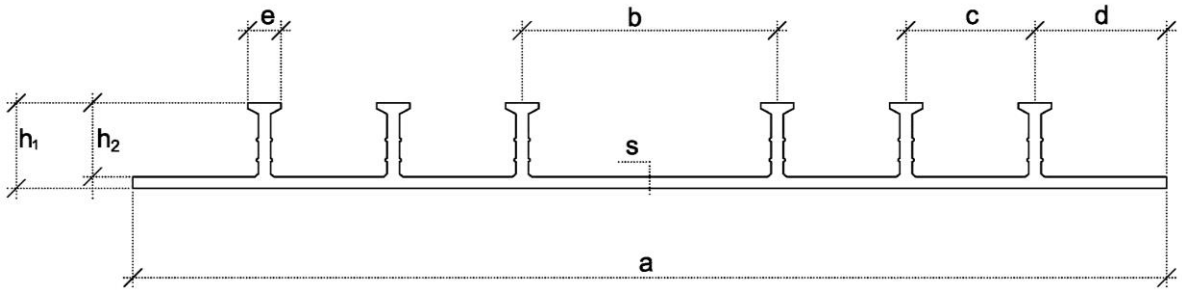
The FLAGONJOINT S W6 600 is a flexible element characterized by six T flaps.
SOPREMA prides itself in working with the highest quality products. We operate with specific quality assurance systems

### MAIN ADVANTAGES

- Flexibility at low temperatures
- High puncturing resistance
- Will not rot
- Excellent weldability

### CHARACTERISTICS

| | | |
|---|---|---|
| **Total width** | **a** | **≥ 600 mm** |
| **Width – partial 1** | **b** | **≥ 205 mm** |
| **Width – partial 2** | **c** | **≥ 70 mm** |
| **Width – partial 3** | **d** | **≥ 50 mm** |
| **Width – lateral flaps** | **e** | **≥ 12 mm** |
| **Total height** | **$h_1$** | **≥ 30 mm** |
| **Partial height** | **$h_2$** | **≥ 26 mm** |
| **Thickness** | **s** | **≥ 4,0 mm** |




N.B.: the dimensions are indicative and may change according to the supplier's availability.

Rev. 11.02.2021/EN

# Flagonjoint S W6 320

## PVC ACCESSORIES FOR UNDERGROUND WORKS

### USE - APPLICATION

The FLAGONJOINT S W6 320 is a finishing element in PVC-P which is used in tunneling or foundation to prevent the passage of water in correspondence of joints or concrete casting joints.
It can also be used to define areas in compartmentalized systems or in Vacuum Flag system.

The FLAGONJOINT S W6 320 are welded to the waterproofing PVC membrane by applying hot air with manual welder, over the entire length and on both sides.

The FLAGONJOINT S W6 320 are compatible with all the accessories and membrane in the FLAGON PVC range.

### DESCRIPTION

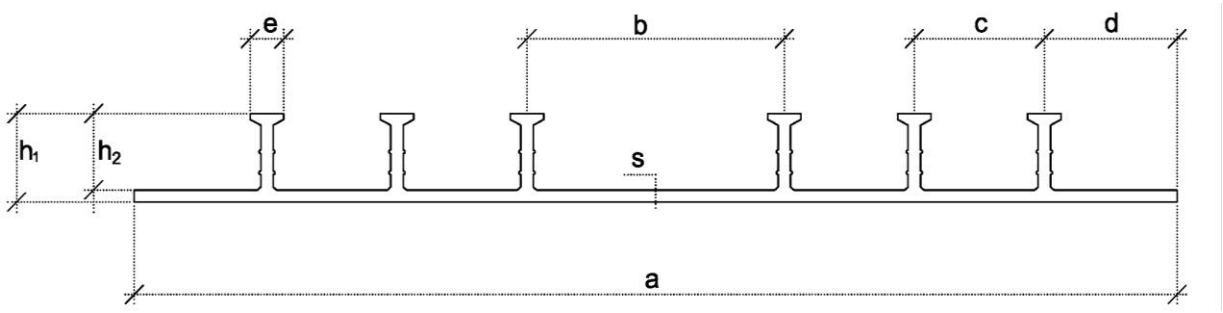
The FLAGONJOINT S W6 320 is a flexible element characterized by six T flaps.
SOPREMA prides itself in working with the highest quality products. We operate with specific quality assurance systems

### MAIN ADVANTAGES

- Flexibility at low temperatures
- High puncturing resistance
- Will not rot
- Excellent weldability

### CHARACTERISTICS

| | | |
|---|---|---|
| **Total width** | **a** | **≥ 320 mm** |
| **Width – partial 1** | **b** | **≥ 100 mm** |
| **Width – partial 2** | **c** | **≥ 40 mm** |
| **Width – partial 3** | **d** | **≥ 30 mm** |
| **Width – lateral flaps** | **e** | **≥ 12 mm** |
| **Total height** | **$h_1$** | **≥ 26 mm** |
| **Partial height** | **$h_2$** | **≥ 22 mm** |
| **Thickness** | **s** | **≥ 4,0 mm** |




N.B.: the dimensions are indicative and may change according to the supplier's availability.

Rev. 11.02.2021/EN

# Flagonjoint S W6 500 B

## PVC ACCESSORIES FOR UNDERGROUND WORKS

### USE - APPLICATION

The FLAGONJOINT S W6 500 B is a finishing element in PVC-P which is used in tunneling or foundation to prevent the passage of water in correspondence of joints or concrete casting joints.
It can also be used to define areas in compartmentalized systems or in Vacuum Flag system.

The FLAGONJOINT S W6 500 B are welded to the waterproofing PVC membrane by applying hot air with manual welder, over the entire length and on both sides.

The FLAGONJOINT S W6 500 B are compatible with all the accessories and membrane in the FLAGON PVC range.

### DESCRIPTION

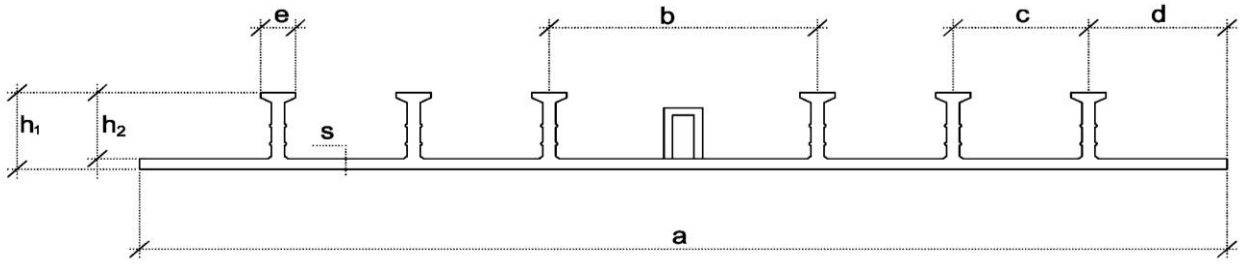
The FLAGONJOINT S W6 500 B is a flexible element characterized by six T flaps and a central bulb.
SOPREMA prides itself in working with the highest quality products. We operate with specific quality assurance systems

### MAIN ADVANTAGES

- Flexibility at low temperatures
- High puncturing resistance
- Will not rot
- Excellent weldability

### CHARACTERISTICS

| | | |
|---|---|---|
| **Total width** | **a** | **≥ 500 mm** |
| **Width – partial 1** | **b** | **≥ 130 mm** |
| **Width – partial 2** | **c** | **≥ 57 mm** |
| **Width – partial 3** | **d** | **≥ 70 mm** |
| **Width – lateral flaps** | **e** | **≥ 12 mm** |
| **Total height** | **$h_1$** | **≥ 30 mm** |
| **Partial height** | **$h_2$** | **≥ 26 mm** |
| **Thickness** | **s** | **≥ 4,0 mm** |




N.B.: the dimensions are indicative and may change according to the supplier's availability.

Rev. 11.02.2021/EN