



## Technical Bulletin

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### Waterproofing Membrane –

### Colphene ICF

By SOPREMA



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# Waterproofing Membrane

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## Overview:

All foundation walls that retain earth and enclose habitable or useable spaces located below grade shall be dampproofed or waterproofed from the top of the footing to the finished grade.

## Description:

Soprema Colphene ICF is a self-adhesive waterproofing membrane for use on the exterior face of an Arxx Wallsystem. It is composed of SBS modified bitumen and a polyethylene woven complex facer sheet. This facer sheet provides 100% protection\* from UV radiation. A removable silicone release paper protects the adhesive side.

Colphene ICF is available in both Winter Grade and Summer Grade formulation.

**Winter Grade:** minus 10 °C to 38+°C (14 °F to 100°+F)

**Summer Grade** 10 °C to 45+°C (50 °F to 115°+F)

\*Colphene ICF membrane is 100% UV protected, however it is not designed for permanent exposure. Backfilling is recommended to take place within 1 week of installing the membrane.

## Delivery and Storage:

The product is delivered in rolls 36" x 75' , net coverage of 206 sq.ft.

Care should be taken to protect the material on site from moisture and general wear and tear. It is recommended to store the material on pallets, off the ground and protected by a weatherproof covering.

In cold weather (1 °C, 35 °F) it is recommended to store the material in a heated space prior to installation.

## Preparation of the Wall:

Inspect the wall prior to installing the membrane. The surface shall be reasonably smooth, free from holes and projections which might cause a puncture. The wall shall be dry, free from frost, dust, dirt, and any other impurities that may cause bad adhesion or damage to the membrane.

The membrane can be installed over the Arxx exposed web form or the buried web form.

If the EPS surface has been exposed to the sunlight for extended periods of time, the resulting yellow powder must be fully removed before the membrane is installed. Clean the wall with a brush and/or use a mild soap and water.

Installation Instructions:



1. Establish the finished grade around the entire perimeter and install a chalk line.
2. Begin material installation by first cutting strips of membrane 16” to 24” wide. Fold these strips in half. These will be installed horizontally between the footing and the wall and may also be used vertically (item 4) on inside and outside corners.
3. Fig. 1, install the cut strips horizontally between the footing and the wall as a base strip. This horizontal base strip should cover the top surface of the footing and go up the wall by a min. of 6”. If the concrete footing is not clean and dry a primer (Elastocol 350) may be required to get good adhesion.
4. (Optional Best Practise) At each inside and outside corner, starting at the chalk line, peel release paper away and install a cut strip vertically. Install the strip so that an equal amount of material is applied to either side of the corner. Take care to press the fold tightly into the corner so that no air pockets are trapped behind, then press the membrane flat to the wall. Each strip of material should lap the base strip by a minimum of 2”.
5. Fig. 2 – Select an outside corner for the start of the full membrane installation. Measure from the chalk line to the top of the footing. Roll out the membrane on a flat surface, cut sheets neatly to the required length.
6. Start at the top along the chalk line, peel the release paper back about 1 foot from the top edge of the membrane. (Installation works most efficiently with a 2 person crew – one handling the material for each side.)
7. Fig. 3 - Align the top edge of the membrane with the chalk line so that one side of the membrane extends past the corner by approx. 5” or overlaps the corner strip. Use the bar lines on the Arxx forms as a guide to keep the membrane straight, vertically. Peel the release paper back and firmly press the membrane smoothly on the wall working your way down the wall to the footing.
8. Fig. 4 -Try to keep the membrane tight, but not stretched, and smooth out the application with your hand or a rubber roller as you move down the wall.
9. If you did not install the optional corner strips (item 4) press the 5” side of the material into place down the opposing wall from the corner. Try to make the edge vertically down the corner as smooth as possible.
10. With the first sheet installed, working continuously in one direction, install the next sheets with a 2” overlap, sheet to sheet. Pay extra attention to ensure solid adhesion of all seams, eliminate any bubbles or wrinkles at these lap joints.



Note: Fig 4 & 5

Installation works most efficiently with a 2 person crew – one handling the material from each side.

Smoothing out the membrane works best with a 5” rubber roller.

Ensure in all cases a minimum 2” overlap to provide continuous coverage.

Ensure that all seams are smoothly adhered.

## Installation Instructions continued:

11. For service or utility penetrations that project outward through the wall:
  - (a) Cut a 12" x 12" (300mm x 300mm) piece of membrane- then use the pipe as a template to cut 2 cross cut slits at the center of the piece just short of the full pipe diameter.
  - (b) Peel the backing paper away and slide the piece into place over the projecting pipe penetrating it through the center of the slits.
  - (c) Press the membrane piece firmly into place, sealing the flaps against the pipe.
  - (d) Apply the standard sheet membrane (cut to required length) following the same procedures as outlined above, except at the pipe location - peel back the paper clear of the pipe, lower membrane to pipe and cut a cross slit right over pipe and seal around, then continue the installation procedure
  - (e) After applying the membrane, use Colphene LM300 to seal around any openings.
12. For sites with coarse backfill or risk of sharp edged aggregates, Soprema recommends that a backfill protection layer be installed over the waterproofing membrane consisting of an approved protection board.

## Sloped Grade Application

For sloping grades, lightly tack the top straight edge portion of the membrane to the wall, above the sloped chalk line. Trim the membrane to the chalk line after the rest of membrane is secured in place.

## Horizontal Application

If a horizontal application of the product is preferred or required in some locations, be sure to work from the bottom of the wall to the top and lap material a minimum of 2" in a shingle fashion so that water is shed downward and OVER the layer below.

## Winter Grade and Summer Grade

Both materials can be used may be used all year at typical temperatures and can be used with each other. When ordering product, specify which Grade is required.

## Additional Applications

This membrane may also be used above grade as flashing membrane around windows and doors. Cut the membrane into 8" to 12" wide strips and install on the Arxx wall and over vinyl or metal window and door flanges. For an installation over openings the joint between the membrane and the Arxx wall should be sealed with caulking, to ensure moisture flows over the joint.

## Tips!

### Exposure to sun

Recommended that membrane not be left exposed to ultraviolet rays for an extended period of time.

### Exposure to Heat

In warm temperatures 37°C (100°F) the membrane should be stored in the shade, or an area at a reduced temperature.

### Cold Weather Application

For applications at temperatures below minus 10 °C (14 °F) temporary tenting and heating may be required and/or a hot air gun may used.

### Cold Weather Storage

Store the membrane inside or near room temperature to make for an easier application.

### Prior to backfill

Thoroughly inspect the membrane and seals around penetrations prior to backfilling.

Install a protection barrier over the membrane to prevent puncture of the membrane from the backfill material.

Properties – Colphene ICF – Table 1

Property	Typical Value	Test Method
Dimensions	36 inch wide x 75' long roll (0.91 x 22.9 m)	–
Thickness	1.0 mm (40 mils)	–
Gross/Net Coverage per Roll	20.8/19.1 m <sup>2</sup> (225 / 206 sq ft)	–
Roll Weight	20Kg (44 lb)	–
Static Puncture	400 N (90lb)	ASTM D 5602
Tear Resistance, MD/XD	375 / 400 N (84 / 90 lbf)	ASTM D5601
Breaking Strength MD/XD	11.3 / 15.4 kN/m (64 / 88 lbf/in)	ASTM D5147
Ultimate Elongation, MD/XD	52 / 24%	ASTM D5147
Flexibility at Cold Temperature	-30°C (-22°F)	ASTM D5147
Lap Adhesion	2000N/m (11.4 lbf/in)	ASTM D 1876
Peel Resistance	3050N/m (17.5 lbf/in)	ASTM D903
Water Absorption	< 0.1% max.	ASTM D5147
Water Vapor Permeance	<0.92ng/Pa•s•m <sup>2</sup> (<0.016 Perms)	ASTM E 96, Method B
Recommended Application Temperature	Summer Grade 10°C (50F) and above	
	Winter Grade Minus 10°C (23°F) and above	

- MSDS available upon request.

### Accessory Materials

Elastocol 350 - water based primer if required for alternative surfaces other than EPS.

Sopraboard - protection board

Colphene LM300 – water based sealant to seal edges of seams and around openings (Alternative – water based caulking)

### Reference:

See the Arxx Installation Guide – Section 1.17 Below Grade Moisture Protection for wall preparations and installation instructions for this product.

Soprema – [www.soprema.com](http://www.soprema.com)