

## ▼ PROBLEM

The drainage of rain water at the bottom of foundation walls is a recurring problem. If the water is not drained, serious problems can be created for rooms below ground level due to the accumulation of water against the walls. Especially when the bituminous sheath has been damaged during unloading of drainage material, water infiltration can damage the sustaining walls of the building.

Drainage canals made of drainage material which are often, but not always, constructed near the waterproof sheath, can become clogged with soil and debris deposited by rain water.

Furthermore, water accumulation makes the soil very heavy, to the detriment of the walls below ground level which are stressed by pressure from the earth which can be double the normal amount.

A valid drainage system which will drain off water and water vapour is absolutely necessary.

## ▲ SOLUTION

TEFOND DRAIN PLUS is a product derived from combining TEFOND PLUS with a polypropylene geotextile.

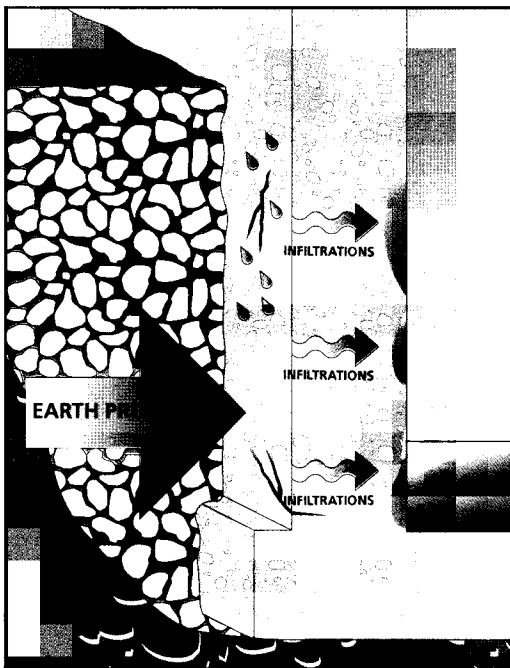
Due to this symbiosis it is possible to combine the *waterproofing* properties of TEFOND PLUS with the principle *filtering* characteristic of a polypropylene geotextile. This geotextile weighs 100 gr/m<sup>2</sup>, its production is porometrically controlled, and it has excellent functional and technical properties.

The geotextile placed over the studs, forms an air chamber between the drainage material and the waterproofing sheet. This air chamber helps direct the water towards the drainage pipe located next to the foundation.

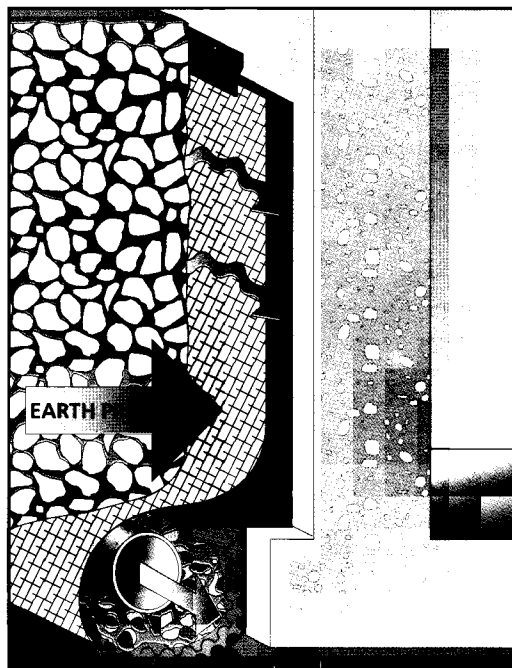
In fact, the geotextile functions as a filter for rain water, which collects in the soil, and against small debris which normally impedes the flow of water and clogs the spaces between drainage material placed against the walls.

Waterproofing obtained through the double seal between the sheets guarantees that the walls will remain dry in ground where water-bearing strata are not present.

without drainage



with drainage



# INSTALLATION INSTRUCTIONS



## VERTICAL INSTALLATION

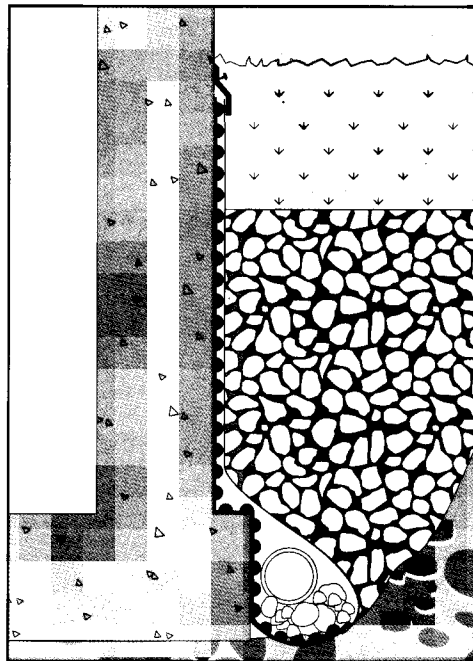
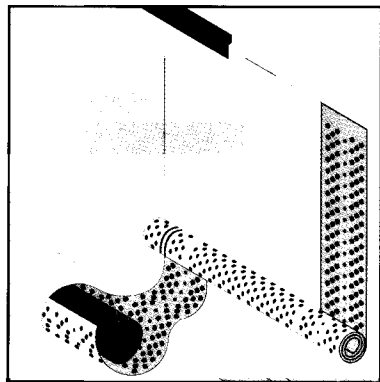
Follow the Vertical installation instructions given in chart A.2.

To correctly install TEFOND DRAIN PLUS against face walls, certain other instructions must also be followed:

- when measuring the dimensions of the sheet of TEFOND DRAIN PLUS to be cut, bear in mind that a flap of at least 40 cm must be folded back around the drainage pipe;
- lay the sheet with the studs and the geotextile towards the soil;
- to join the drainage pipe to the inside of the geotextile, detach the polypropylene

from the TEFOND PLUS up to about one meter in height;

- place the drainage pipe on the TEFOND PLUS after having first placed a bed of drainage material under the pipe;
- wrap the detached geotextile around the pipe;
- cover the pipe with some drainage material to keep everything in place before back-filling.



## OTHER USES FOR TEFOND DRAIN PLUS

- Drainage, waterproofing and root resistance in roof-gardens;
- Drainage and waterproofing of canals;
- Drainage and waterproofing of face walls;
- Drainage and waterproofing of tunnels.

## TECHNICAL SPECIFICATIONS

MATERIAL	HDPE with sealant combined with polypropylene geotextile
COLOUR	BLACK + BLACK
LENGTH	20 m long rolls
WIDTH	2,07 m
COVERAGE WITH DOUBLE OVERLAP	1,89 m
THICKNESS OF THE STUD MEMBRANE	8 mm
TOTAL WEIGHT	800 gr/m <sup>2</sup>
MEMBRANE WEIGHT	700 gr/m <sup>2</sup>
GEOTEXTILE WEIGHT	100 gr/m <sup>2</sup>
WATER PERMEABILITY	17 l/m <sup>2</sup> s
TENSILE BREAKING LOAD	(Polypropylene geotextile) 400 N/5 cm (TEFOND PLUS) 900 N/5 cm (Polypropylene geotextile)
ELONGATION AT BREAKING POINT	25% (TEFOND PLUS) 25% (Polypropylene geotextile)
COMPRESSION RESISTANCE	300 KN/m <sup>2</sup>
AIR VOLUME	5,7 l/m <sup>2</sup>
WORKING CONDITIONS	from -30° C to +60° C.

### TEFOND DRAIN PLUS SPECIFICATIONS

High density extruded polyethylene (HDPE) membrane with sealant and a polypropylene geotextile (TEFOND DRAIN PLUS type) on raised 8 mm studs. Sides mechanically joined by overlapping the edges. Height 2,07 m, weight 800 gr/m<sup>2</sup>, and compression resistance 300 KN/m<sup>2</sup>.

### TEFOND PROFILE SPECIFICATIONS

200 cm long, 7 cm high finishing profile density extruded polyethylene (HDPE) with fixing holes along the top side every 24,5 cm.

### TEFOND PLUG SPECIFICATIONS

Semispherical fixing plugs for stud membrane in solid high density extruded polyethylene (HDPE) complete with 25 mm steel nails.