

# **HYDROPRUFE 6000**

# FLEXIBLE HYDROCARBON RESISTANT MEMBRANE

## DESCRIPTION

HYDROPRUFE 6000 is a high-performance high density polythene membrane which is suitable for use on brownfield sites that require protection from dangerous contaminants and ground gases. HYDROPRUFE 6000 has outstanding chemical resistance and mechanical properties, making it suitable for use where high levels of total petroleum hydrocarbons are present. The membrane also provides protection from ground gases in accordance with BS 8485:2015 and ground moisture. HYDROPRUFE 6000exhibits outstanding flexibility to provide ease of installation.

## **USES**

HYDROPRUFE 6000 is designed to protect structures from the ingress of VOC's, hydrocarbons and dangerous gases. It is suitable for use beneath concrete ground floor slabs in both commercial and residential applications. It will also provide effective resistance to ground moisture for the lifetime of the structure to which it has been applied.

#### **ADVANTAGES**

- Excellent chemical resistance to VOC's.
- Robust but flexible membrane.
- Ease of installation.
- Resistant to ground gases including methane and carbon dioxide.

| Property                            | Value                           |
|-------------------------------------|---------------------------------|
| Weight                              | 562gm/ M <sup>2</sup>           |
| Thickness                           | 0.565mm                         |
| Maximum Break<br>Elongation MD      | 677%                            |
| Maximum Break<br>Elongation CD      | 755%                            |
| Tear Resistance (Nail shank)        | 495 N                           |
| Carbon Dioxide<br>Transmission Rate | 30.7 ml/M <sup>2</sup> .day.atm |
| Hexane Transmission<br>Rate         | 0.113 mg/(m <sup>2</sup> .day)  |
| VOC Methane<br>Permeability         | 19.9 ml/m <sup>2</sup> .day.atm |

Structural Waterproofing | Gas Protection | Concrete Repair
Technical Grouts | Joint Sealants | Protective Coatings | Admixtures



| Determination of Chemical Resistance  |                         | Control | Exposed | % Retained |
|---|-------------------------|---------|---------|------------|
| BS EN 14414 Method A –<br>Hydrolysis under Acid Conditions                          | Tensile Strength MPa MD | 23.9    | 25.2    | 105%       |
|   | Tensile Strength MPa CD | 22.8    | 21.8    | 96%        |
|   | Tensile Elongation % MD | 51.5    | 46.9    | 91%        |
|   | Tensile Elongation % MD | 36.7    | 34.6    | 94%        |
|   | No Visual Degradation   |         |         |            |
| BS EN 14414 Method B –<br>Hydrolysis under Basic Conditions                         | Tensile Strength MPa MD | 23.9    | 24      | 100%       |
|   | Tensile Strength MPa CD | 22.8    | 22.9    | 100%       |
|   | Tensile Elongation % MD | 51.5    | 45.7    | 89%        |
|   | Tensile Elongation % MD | 36.7    | 34      | 93%        |
|   | No Visual Degradation   |         |         |            |
| BS EN 14414 Method C –<br>Solvation & Swelling<br>(Diesel/Paraffin/Lubrication Oil) | Tensile Strength MPa MD | 23.9    | 23.7    | 99%        |
|   | Tensile Strength MPa CD | 22.8    | 20.1    | 88%        |
|   | Tensile Elongation % MD | 51.5    | 46.7    | 91%        |
|   | Tensile Elongation % MD | 36.7    | 34.9    | 95%        |
|   | No Visual Degradation   |         |         |            |
| BS EN 14414 Method D –<br>Synthetic Leachate 30%                                    | Tensile Strength MPa MD | 23.9    | 25.4    | 106%       |
|   | Tensile Strength MPa CD | 22.8    | 21.1    | 93%        |
|   | Tensile Elongation % MD | 51.5    | 48.3    | 94%        |
|   | Tensile Elongation % MD | 36.7    | 36.3    | 99%        |
|   | No Visual Degradation   |         |         |            |

#### **PROCEDURE**

Surface Preparation: The sub-base should be well compacted and blinded using sand to provide a soft surface free from sharp protrusions. If the membrane is to be laid directly onto a concrete blinding or floor slab, then the concrete should be trowelled to a smooth finish without excessive surface undulations. It may be necessary to install PREMCRETE PROTECTION BOARD 300 to the substrate to provide an effective barrier to minor projections which may result in puncturing the membrane during installation.

Application: HYDRORPUFE 6000 should be loose laid to the prepared sub-base, taking special care to ensure the membrane is not punctured during the installation phase. Adjacent sheets of membrane should be lapped by 150mm and the joints should be sealed using HYDROPRUFE HCR BUTYL TAPE, a double-sided tape which is placed 50mm from the edge of the sheet. The lap joint should have pressure applied to ensure a good quality seal is achieved, preferably by use of a lap roller. The lap should then be over-taped using HYDROPRUFE HCR GIRTH TAPE, to ensure the integrity of the lap joint during concrete placement. Alternatively, the membrane maybe welded using specialist hot air welding equipment. Special care should be taken around penetrations and junctions to ensure the integrity of the seal.

HYDROPRUFE TOPHAT pieces should be used to seal pipe penetrations and pre-formed internal and external corners. Corner pieces may be used to provide robust detailing. Once the membrane installation is complete, PREMCRETE PROTECTION BOARD 300 should be used to protect the installed membrane from puncture during the fixing of reinforcement steel.

#### **PACKAGING & COVERAGE**

Pack Size: 2m x 50m roll.

HCR BUTYL TAPE: 100mm x 15m roll.

HCR FOIL GIRTH TAPE: 100mm x 15m roll.

HCR DETAIL STRIP: 300mm x 15m roll.

#### **STORAGE & SHELF LIFE**

Store in dry conditions at temperatures between 10°C and 30°C, when stored in good conditions the product has a shelf life in excess of 1 year.

## **HEALTH & SAFETY**

See separate material safety datasheet.

