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# Xtra-Load® GRM

## Structural Waterproofing Systems

### Introduction

Xtra-Load® GRM is specifically designed for use as a waterproof membrane in critical areas such as internal and external tanking of underground structures, reservoirs, subways, liftshafts and retaining walls.

### Description

Xtra-Load® GRM is a white surfaced high performance, self-adhesive, flexible waterproofing membrane, manufactured from a 0.9 mm thick layer of modified rubber bitumen adhesive, laminated with an aluminium foil and finished with a tough, cross-laminated 0.1 mm thick HDPE film. The product is finished on the underside with a protective release paper.

### Durability

Xtra-Load® GRM, when fully protected and subjected to normal service conditions, will provide an effective barrier to the transmission of water and water vapour for the lifetime of the structure in which it is incorporated.

### Compatibility

Xtra-Load® GRM is compatible with concrete, smooth brick and blockwork or screeded substrates, and is resistant to those chemicals with which it is likely to come into contact. However, care should be taken to prevent contact with mould oil and hydrocarbons.

### Resistance To Puncture

Provided sharp objects are not present prior to and during installation of the protective layer, the membrane will not be damaged by normal foot traffic, but should be protected as soon as possible.

### Resistance To Moisture

When completely sealed and consolidated Xtra-Load® GRM will meet Building Regulations requirements in the resistance of the passage of moisture from the ground. The membrane is impervious to water.

### Properties

Roll Size	19.05 m x 1.05 m
Roll Weight	34 kg
Membrane Thickness	1.0 mm
Radon Diffusion Coefficient	$\leq 1.0 \times 10^{-14} \text{ m}^2 \cdot \text{s}^{-1}$
Methane Permeance	$< 0.03 \text{ ml} \cdot \text{m}^2 \cdot \text{day}^{-1} \cdot \text{atmos}^{-1}$
Water Vapour Resistance	892 MN·s·g <sup>-1</sup>

### Installation Details

Xtra-Load® GRM must be installed in accordance with the requirements of 'BS 8102: Code of practice for protection of below ground structures against water from the ground' and 'BS 8000-0: 2014. Workmanship on construction sites. Introduction and general principles', and in accordance with the BBA certificate. Tanking should be externally applied wherever possible and immediately protected.

### Preparation Of Surface

All surfaces should have a smooth finish, free from cavities, projections and mortar deposits. Surfaces should be dry and free from dust and frost. Concrete surfaces should be dense.

Vertical surfaces of brick and blockwork should be dry and rendered to provide an even surface. Brick or blockwork not rendered must be flush pointed to give a smooth surface without sudden changes in level.

### Priming

Prior to application of the membrane, a priming coat of Icopal SA Primer must be applied to all surfaces and allowed to dry.

### Angles And Corners

At changes of direction, for example where the horizontal surface meets the vertical surface, a 50 mm by 50 mm fillet should be used, reinforced with a strip of membrane. Reinforcing angles can be formed by cutting a 300 mm strip of Xtra-Load® GRM from the roll.

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### Membrane Application

The ideal application temperature range is 5°C to 35°C. At low temperatures the products will become progressively stiffer, which may make it difficult to handle. The membrane rolls should be left in a heated storage area until immediately before application.

The membrane should be applied only when atmospheric and substrate temperatures are greater than 5 °C. The surface of the substrate should be clean and dry and must be 3 °C above the dew point. If the surface is below or at dew point temperature then moisture can form at the surface and affect membrane adhesion.

Apply Icopal SA Primer by brush or roller and leave until dry (primer remains tacky when dry to touch). The release paper should be removed in a continuous strip for the first 500 mm of the roll and the membrane pressed firmly into position to ensure no air pockets are formed.

Xtra-Load® GRM self-adhesive membrane is supplied with a selvedge. Align adjacent rolls of Xtra-Load® GRM tacky side down, allowing a side overlap of 100 mm and end overlaps of 150 mm. Peel back the release paper and the selvedge as laying progresses. Press down roll joints firmly to develop and immediately bond, and to ensure a water-tight seal. The use of a hand roller will aid in providing a firm seal.

Vertical work: The membrane should be applied starting at the top of the section of vertical wall. Using the action of gravity to aid installation, the backing sheet should be removed and the membrane well rolled down working from the middle to the edges to remove any pockets of air and to ensure a full bond to the substrate.

### Membrane Protection

On completion, the membrane must be immediately protected following a detailed inspection for damage and faults. To ensure Xtra-Load® GRM is not damaged during backfilling or by following trades, a screed, or non-rot protection board, such as the Xtra-Load® Protection Board, should be laid immediately following application.

### Typical Specification

The horizontal and/or vertical damp-proof membrane to be Xtra-Load® GRM, as manufactured by Icopal Limited, Barton Dock Road, Stretford, Manchester M32 0YL. Tel: 0161 865 4444 Fax: 0161 865. The membrane is to be installed in accordance with the manufacturer's instructions, *BS 8000-0: 2014*, and the requirements of *BS 8102: Protection of buildings against water from the ground*.

NOTE: This information is given in good faith being based on the latest knowledge known to Icopal Limited. Whilst every effort has been made to ensure the contents of the publication are current while going to press, customers are advised that products, techniques and Codes of Practice are under constant review and liable to change without notice. Up to date information is available from our Technical Services Department on request.

Responsibility cannot be accepted for the application of products, and no claims can be considered, where the manufacturer's instructions have not been followed. The user should not assume; based on information provided in this sheet, that the product is suitable for any abnormal use.

All products are sold subject to our standard conditions of sale, available on request.

### NBS Specification

Xtra-Load® GRM is specified using the following:

**Clause:** J40/180

**Product:** Xtra-Load® GRM

**Manufacturer:** Icopal Ltd. Barton Dock Road, Stretford, Manchester, M32 0YL. Tel: 0161 865 4444.



### Quality Assurance

Xtra-Load® GRM membranes are supplied under a Quality Management System approved to *ISO 9001: 2004* by BSI Quality Assurance.



QMS: Q5556

### Health and Safety

Health and safety data sheets are available for all materials. Please contact Icopal's Technical Services Department for further information.

In normal use, Icopal tanking membranes are not hazardous to health. However, they contain some materials for which Exposure Limits have been established by the local Health and Safety Executive. Please refer to the relevant health & safety data sheet. Refer to the separate health & safety data sheet for Icopal SA Primer.

### Technical Services

Specialist advice and design guidance on all matters relating to Xtra-Load® GRM is freely available from our Technical Department at the address below.

### Availability

Item Code	Description	Roll Weight
3100407	Xtra-Load GRM	34 kg