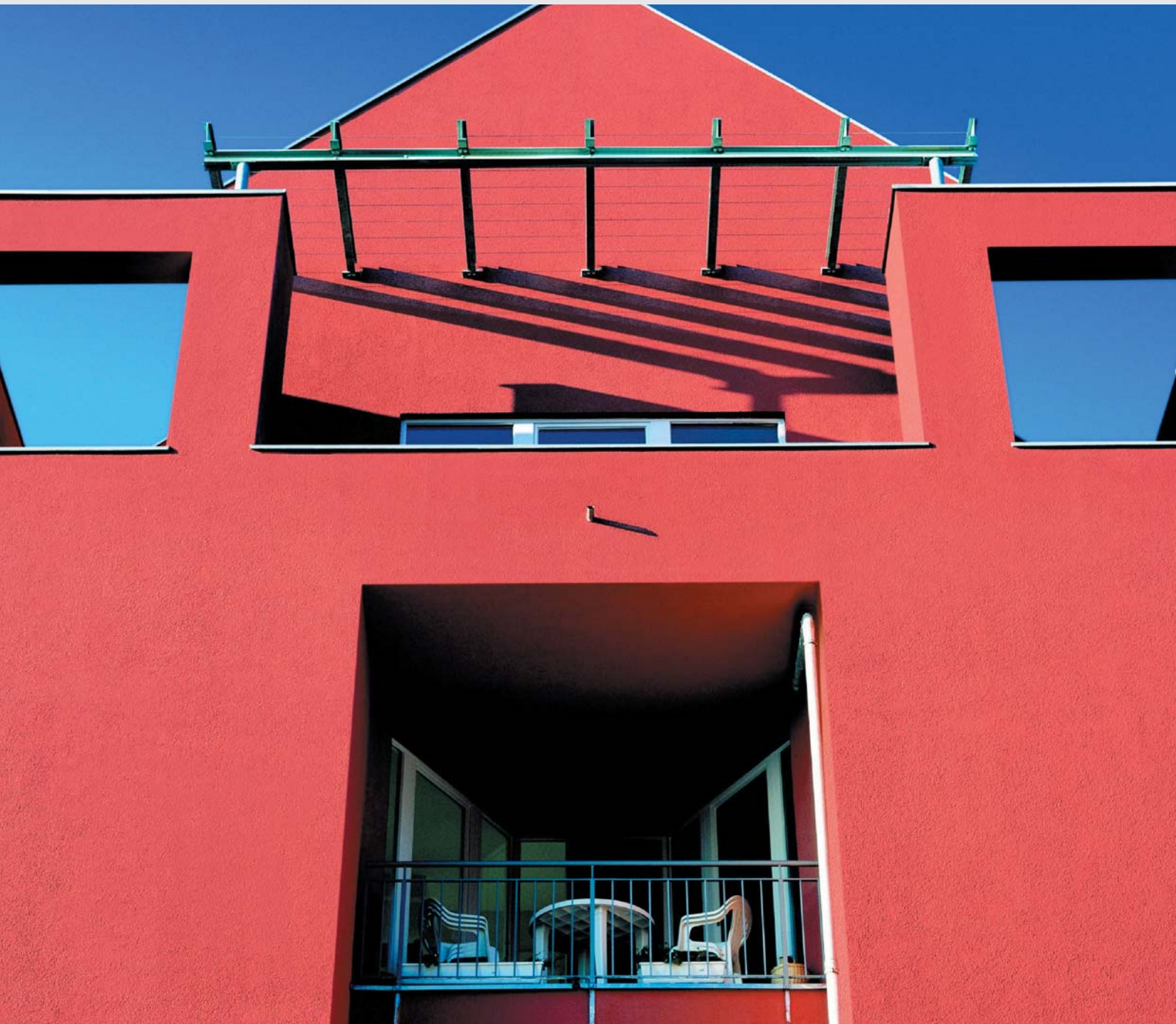


**PERMAROCK**  
**INNOVATION DESIGN EXCELLENCE**

TRACK



# INNOVATION



PermaRock continues to lead the field in the provision of innovative and technically superior external wall insulation (EWI) and architectural façade systems in the United Kingdom.

PermaRock was the first British company to achieve BBA accreditation for an external wall insulation system, first to achieve accreditation with BRE-Certifications (WIMLAS), and the first to achieve third party accreditation for insulated render systems on timber and metal frame constructions.

PermaRock now introduces two new systems for specifiers designing new buildings and for the remodelling of existing façades.

The PermaRock Track Systems – rail-mounted insulated render systems that provide additional benefits over conventional adhesive and mechanically fixed systems.

The PermaRock Track-MF System incorporates fire-safe mineral fibre insulation boards, manufactured from rock filaments without the use of CFCs/HCFCs and which have zero Ozone Depletion Potential (ODP). Insulation boards are water repellent yet totally breathable, allowing the passage of water vapour through the system.

The PermaRock Track-EPS system is a high performance, low density EWI composite system, based on expanded polystyrene insulating panels which are pre-aged and flame retardant.

Both systems employ a rail or track fixing mechanism to secure the insulation panels to the substrate. This approach enables the creation of a drained cavity space behind the insulation panels to meet the specific requirements of NHBC and Zurich Insurance for insulated render system applications to timber and metal frame constructions. In addition, the use of rail mounting enables façades to be created that are truly plumb and flat, overcoming deficiencies in irregular or uneven backgrounds.

As with all other PermaRock systems, PermaRock Track Systems can be finished with acrylic, silicone or silicate decorative renders / plasters, mineral aggregate renders, silicone paints, stone paints as well as with brick, stone and tile effects giving unrivalled scope to the architect or designer to create interesting façades.

PermaRock Track Systems offer a number of key advantages:

- Low thermal conductivity insulation materials ( $\Lambda = 0.040 \text{ W/mK}$ ).
- True surface flatness can be achieved.
- Suitable for solid or cavity walls, timber or metal frame buildings.
- NHBC/Zurich compliant drained cavities can be created on timber or metal frame constructions.
- Extensive range of colourfast decorative finishes available.
- Suitable for new build and refurbishment, high rise and low rise.
- Low environmental impact: CFC/HCFC Free and Zero ODP.
- Can be applied to uneven surfaces



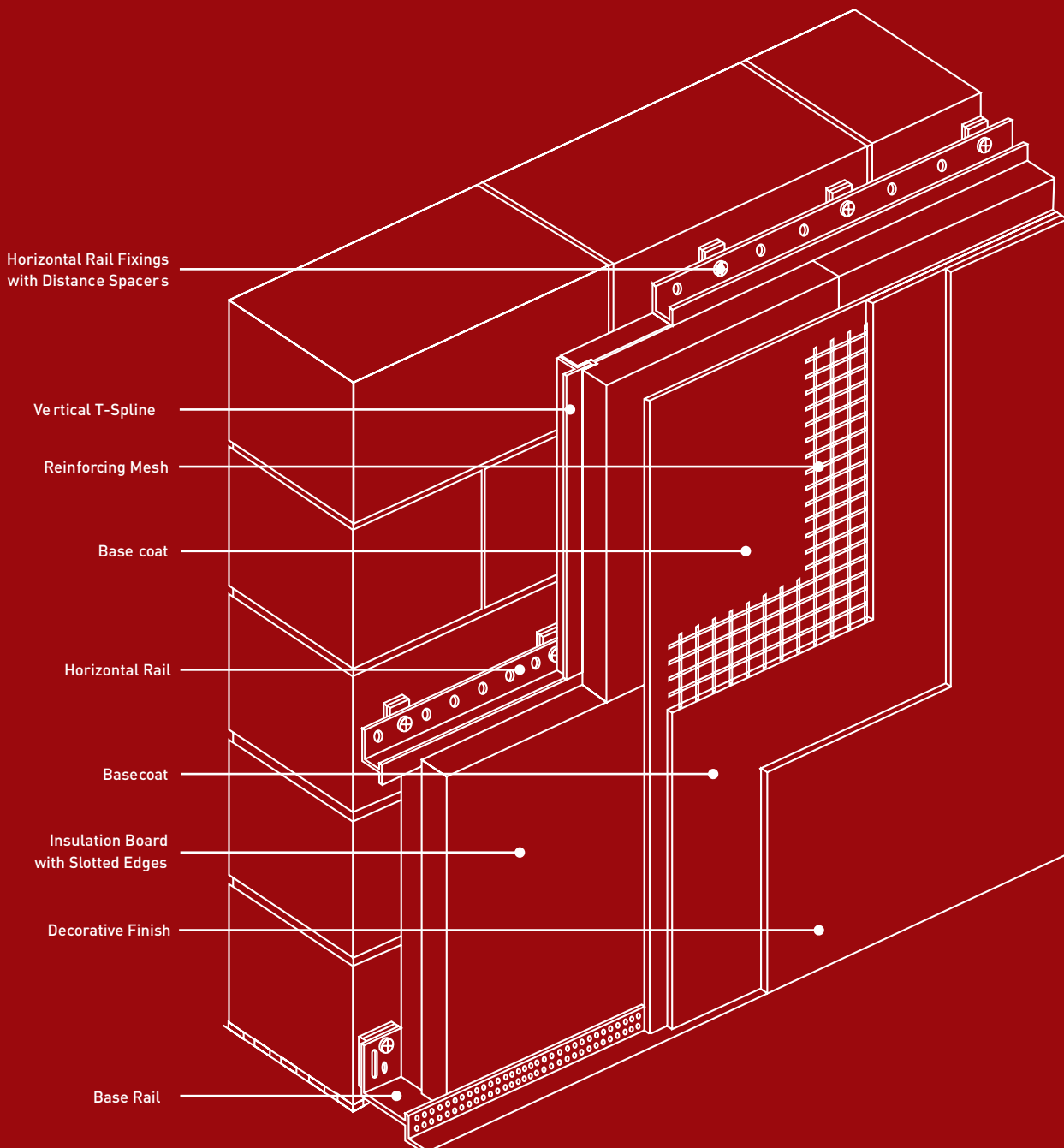
# DESIGN

## APPLICATIONS

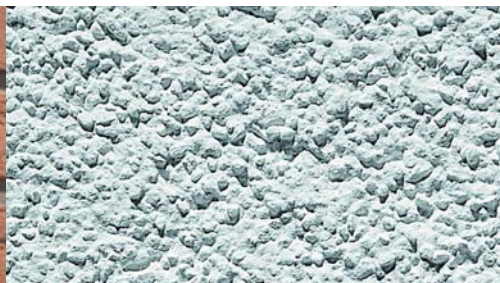
The PermaRock Track Systems combine high performance thermal insulation with track mounting that allows the creation of flat, plumb façades.

PermaRock Track Systems are suitable for use on new build projects and for remodelling existing buildings, both high-rise and low-rise, and for most construction types including solid and cavity wall construction, timber and metal frame.

PermaRock Track Systems are particularly suited to lightweight metal frame constructions where some building insurers require there to be a drained cavity space behind the insulation system.



# DECORATIVE



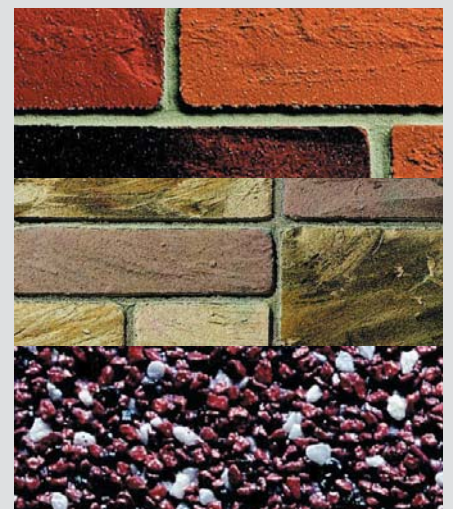
The extensive range of decorative renders, coatings, finishes and effects available from PermaRock provides the designer with unprecedented freedom of expression to create unique façades and interesting architectural designs.

Surfaces can be finished plainly or with texture, in bright, bold colours or in neutral or earth shades, with decorative tiles or aggregate, brick or stone effects.

Three dimensional texture can be introduced in the form of architectural profiles, allowing the creation of stylish detailing, mouldings, cornices and the like.

Simulated blockwork, ashlar, relief banding or sweeping curves can be introduced to add further expression.

Our Decorative Options brochure provides further information on the range of decorative finishes and effects that are available with PermaRock systems.





# EXCELLENCE

## GUARANTEES & WARRANTIES

In addition to the PermaRock warranty which provides up to 20 years guarantee on all PermaRock Track System materials, PermaGuard insurance schemes are available through QANW Services Ltd, to provide an added level of assurance to our Clients.

The PermaGuard Schemes are available on selected PermaRock systems installed by our national network of trained, approved applicators for periods of cover of 10, 15 or 20 years.

The PermaGuard Schemes attract single premiums, they do not depend upon the clients, PermaRock or on the approved installer continuing to pay annual premiums for the duration of the policies to maintain the insurance cover. The protection is fully transferable in the event of a change of ownership.

For further details on the PermaGuard Schemes contact Seth Jee, QANW Services Ltd, on 01273 833173.

PermaRock and its Approved Applicators have been authorised by the Schemes' technical auditors in order to be able to make PermaGuard available to Clients through QANW Services Ltd.

## TECHNICAL AND DESIGN SERVICES

PermaRock provides a full technical service to its clients at all stages of the procurement and installation process.

PermaRock's area managers are available to discuss and establish your specific project requirements. From this, we can make product recommendations and develop a detailed technical specification tailored to the specific needs of the project. Where required, CAD-detail drawings, colour concept designs and U-value calculations and condensation risk analyses can be provided.

Budget costings can be prepared in conjunction with any of our national network of approved applicators, and we can provide details of trained installers for inclusion on your tender lists.

Once work commences on site, our Technical Services Systems Technicians can visit the site to carry out pull-out strength tests for mechanical fixings, should they be required.

## SPECIALIST INSTALLATION

PermaRock approved applicators operate in all areas of the UK and PermaRock can provide details, on a project-by-project basis, of approved applicators capable of carrying out the installation of any PermaRock System for any project, based on project size, location and program requirements.

Many of PermaRock's applicators are of sufficient size and calibre to undertake general building works and to take on the main contractor role, providing a full package of access, site supervision and management, etc.

Many applicators are subscribers to Constructionline, and operate in accordance with the technical requirements of the Insulated Render and Cladding Association, INCA, the national trade association for our industry.

## ON-SITE TECHNICAL SUPPORT

PermaRock Technical Services department provides a range of technical services in support of the client and the specialist applicator during the course of the contract. The Department is responsible for providing initial training in all aspects of the installation of PermaRock products and systems. Training is effected and maintained by our Systems Technicians, skilled in the practicalities of installation of the wide range of PermaRock products and systems. Training forms an integral part of the service provided to our approved applicators, and the provision of training is included in our registration to BS EN ISO 9001: 2000 Quality Management Systems - *Requirements*.

Training is not only provided for specialist approved contractors, but tailored training courses can also be provided for designers and architects, clerks of works and site agents, etc. – training courses are open to all key personnel involved in projects with PermaRock products and systems.

Whether it is advice on application, a product demonstration or familiarisation with application techniques, one of our Technical Services Systems Technicians is available to answer your questions.

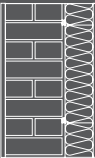
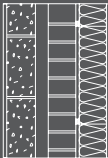
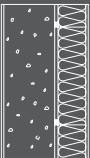
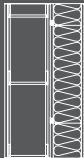
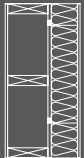
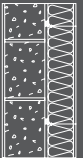
## QUALITY ASSURANCE

PermaRock's policy of maintaining the highest levels of quality is reflected in our embracing the principles of the international standard BS EN ISO 9001: 2000 Quality Management Systems – *Requirements* and our position as a founder member of INCA, the Insulated Render and Cladding Association, a body established to monitor, maintain and promote standards throughout the industry.

Our registration to BS EN ISO 9001: 2000 ensures that PermaRock's working procedures are fully documented and that a consistent quality of management, product and service is provided at all times.

# PERFORMANCE

## PERMAROCK TRACK SYSTEMS: INSULATION THICKNESS REQUIRED TO ACHIEVE TARGET U-VALUES \*

U-VALUE (W/m <sup>2</sup> K)	 solid 229 mm brick	 102 mm brick 50 mm cavity 100 mm block	 200 mm no-fines concrete 17 mm render	 150 mm lightweight metal frame 10 mm Pyrok	 89 mm timber stud frame 12 mm plywood	 140 mm aerated concrete block (7 N/mm <sup>2</sup> )
0.35	100	90	100	100	90	80
0.32	110	100	110	110	100	90
0.30	110	110	110	120	110	100
0.27	125	120	130	130	120	110
0.25	140	130	140	140	140	120
0.20	180	170	180	180	170	160
0.15	240	240	240	240	240	220

\* Based on PermaRock Track Systems incorporating either Mineral Fibre or EPS Insulation Boards. The U-values shown are indicative only. For complete U-value and condensation risk analyses for specific wall constructions please contact PermaRock's Technical Department.

### THERMAL PERFORMANCE

The thermal insulation requirements of the Building Regulations call for levels of thermal resistance for walls that can easily be achieved through the use of external wall insulation.

PermaRock Track Systems employ either Mineral Fibre Insulation (0.04 W/mK) or EPS Insulation (0.04 W/mK) and boards are available in a range of thicknesses from 40mm to suit individual project requirements.

Thermal calculations are carried out for each project to determine the optimum thickness of insulation required to achieve the required U-value.

The table above shows indicative insulation thicknesses required to achieve a range of U-values for six different theoretical wall constructions using the PermaRock Track Systems.

# TECHNICAL

## ACCREDITATION

A number of PermaRock Track Systems have accreditation under the German Certification scheme: Zulassung Z-33-42-131

## COMPOSITION

The PermaRock Track Systems incorporate either rigid MF or EPS insulation boards in thicknesses to suit individual project requirements. Boards are secured to the façade using a combination of vertical interlocking T-splines and horizontal aluminium (for the PermaRock Track-MF System) or PVC (for the PermaRock Track-EPS System) tracks which are fixed to the background using mechanical screw fixings or impact dowels, depending on the substrate type and subject to in-situ pull out testing. Packing spacers are used to achieve a plumb surface. After fixing, the boards are ready to receive a PermaRock high polymer content cement-based base coat or flexible fibre-reinforced cement-free base coat (EPS insulation only) and reinforcing mesh. Corners are reinforced with pre-formed protection profiles and the system comes complete with a full range of profiles, trims, base support rails and sealing strips to achieve weather-tight and durable details in compliance with the principles of robust construction.

The system can be designed to create a drained cavity behind the insulation to comply with the requirements of some buildings insurers. Please contact PermaRock for details.

## CONDENSATION CONTROL

PermaRock advises assessment of condensation risk in accordance with BS 5250. Full and comprehensive condensation risk and U-value analyses can be provided for specific wall constructions under any combination of environmental conditions and for any building usage.

## DENSITY

PermaRock Track-MF Insulation Boards have an average density of approx. 140 kg/m<sup>3</sup>. PermaRock Track-EPS Insulation Boards have an average density of approx. 15 kg/m<sup>3</sup>.

## DURABILITY

PermaRock Track-Systems have a life expectancy in excess of 30 years.

## ENVIRONMENTAL

Buildings insulated with the PermaRock Track Systems can achieve very low U-values resulting in considerable reductions in heat losses, savings in energy consumption and lower CO<sub>2</sub> emissions.

PermaRock Track Systems employ insulation materials that are CFC and HCFC free and these systems do not employ materials that are damaging to the ozone layer.

The mineral fibre insulation employed in the PermaRock Track-MF system has an embodied energy of approx. 91.2 MJ/m<sup>2</sup> at 60 mm thickness.

The expanded polystyrene insulation employed in the PermaRock Track-EPS system has an embodied energy of approx. 92 MJ/m<sup>2</sup> at 60 mm thickness.

## FIRE PERFORMANCE

PermaRock Track Systems incorporating cement based base coats achieve a Class O surface when tested in accordance with BS 476: Parts 6 and 7.

Where the PermaRock Track-EPS system is used on buildings over two storeys, non-combustible fire breaks are required. Cavity fire barriers may also be required where the system incorporates a drained cavity.

The PermaRock Track-MF system incorporating mineral fibre insulation boards is non-combustible and does not require fire breaks. However, where the system is employed to create a drained cavity, the incorporation of cavity fire barriers may be necessary.

## IMPACT RESISTANCE

The resistance of the systems to hard body impact is adequate when assessed in accordance with BS 8200. Increased levels of impact resistance can be achieved through the use of PermaRock Armour Mesh incorporated into the basecoat layer.

## PERFORMANCE

PermaRock Track Systems have an anticipated lifetime in excess of 30 years when designed and installed in accordance with PermaRock's recommendations. Systems can be designed to withstand very severe exposure conditions and high levels of impact damage.

## WATER RESISTANCE

PermaRock Track Systems are suitable for all geographical locations. PermaRock is pleased to advise on specifications to suit particular exposure conditions.

## WATER VAPOUR PERMEABILITY

PermaRock Track Systems are capable of water vapour diffusion.

## WIND RESISTANCE

Systems are designed to withstand high wind load and suction pressure. The values should be calculated in accordance with BS 6399: Part 2.

The information in this brochure was correct at time of going to press. We reserve the right to modify or alter technical information based on further laboratory testing, etc.

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