

Rebund: modular, retrofit bund system for secondary containment and flood defence



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Regulations state that all oil storage tanks above ground MUST have secondary containment. As a site operator you have a duty of care to prevent leaks from equipment such as transformers polluting the environment.

ReBund from Andel Ltd is a well tried and tested, easy to install, low-cost bunding or containment system which is equally effective in keeping water out. Developed along with the Green Business Network, **ReBund** not only makes a major contribution to second-life, recycled products but is also a first-class, strong, durable and economic long-term solution.

ReBund is a heavy-duty, modular, bolt-together on-site system made from recycled post-industrial plastic-waste sections for either new or existing installations. It can be configured easily with various support brackets.

ReBund is supplied in two options

1. LEVEL 1: Wall sections sealed to an existing suitable base (or a suitable concrete base can be installed)
2. LEVEL 2: Wall sections and our unique key base slab units sealed with a cold fusion membrane system for guaranteed 100% liquid retention.

ReBund is a lower cost option than normal construction and is equally effective. It benefits your budget and the environment.

CONTROL COSTS

- lower site preparation costs
- lower material costs
- lower labour costs (faster installation than traditional methods)
- lower maintenance costs
- No need to suspend normal operations during installation

MINIMAL GROUND DISTURBANCE

ReBund is designed to fix to the ground with minimal ground disturbance. On very soft ground the support plates can be exchanged for special posts concreted-in to a suitable depth.

REDUCED ENVIRONMENTAL IMPACT

The environmental benefits of **ReBund** are more than using less concrete. Made of 100% high quality recycled plastic residue from post-industrial usage which would otherwise go to landfill, **ReBund** uses the disadvantage of plastic's long-life for a durable and robust product.

Additionally, any waste **ReBund** (offcuts or fully dismantled systems) can be returned to the factory for remoulding. For every tonne used, 1.6 tonnes of CO₂ is removed from the environment and 1.8 tonnes of oil are saved for every tonne of recycled plastic used.

ReBund is made of a proportion of LDPE (Low Density Polyethylene), HDPE (High Density Polyethylene), PP (Polypropylene), ABS (Acrylonitrile Butadiene Styrene Co-polymer), HIPS (High Impact PolyStyrene) and other thermoplastic materials.

The different polymers are ground, mixed and fused under high temperatures and pressures then processed into moulds.

The surface is knot-free, evenly coloured and shows a textured structure.

A 3-hour flame retardant version is available if fire is a significant risk.

Key base, interlocking slabs are mounted on beams and then sealed with a cold fusion membrane

ReBund can be installed on most surfaces from soft ground to asphalt to concrete

Posts can be mounted inside or outside the bund

- Hard wearing and non-porous
- No plant or special tools required
- No additional earthing required
- No ground penetration beyond usual preparation for laying slabs
- "Easy Build" bunding system, just a 2-man job

The modular nature of our system means it can be adapted to most shapes and sizes



Prefabricated sump to fit **BundGuard** Automatic Water Removal System

Protect anything; oil storage facilities, generators, transformers or other plant. **ReBund** can prevent contamination of the environment AND is equally reliable at preventing damage to your assets from water ingress.

| Technical Specification | |
|---|---|
| Material | Made up of 100% recycled plastic residue from post-industrial usages |
| Composition | LDPE & HDPA (low & high density polyethylene), PP (polypropylene), ABS (acrylonitrile butadiene styrene co-polymer), HIPS (high impact polystyrene) and other thermoplastic materials |
| Production | |
| Process | The different waste materials/polymers are ground, mixed and fused under high temperatures and pressures and pressed into moulds |
| Finish | The surface is knot/hole-free, evenly coloured with a textured structure |
| Support Posts, Brackets, Fixings, Accessories | |
| Posts | From recycled plastic material as main system |
| Panels (walls) | 150/300/600mm height 2000mm length 50mm thick. Water-tight friction fit. Sealed as required * |
| Panels (floor) (if used for containment) | 800/800 x 50mm, recycled plastic or concrete * |
| Fixings | Stainless or passivated steel |
| Gaskets (if used for containment) | Closed cell, oil resistant silicon rubber * |
| Liquid sealants (if used for containment) | Oil resistant silicone mastic, single/two-pack polyurethane/polysulphide according to site requirement |
| Sump boxes (if used for containment) | MDPE/HDPE one-piece welded construction |
| Sump box cover (if used for containment) | Heavy duty GRP grating to support 100Kgs + |
| Liner system (if used for containment) | Multi layer liquid/reinforcement/wearing surface |

| Performance | Property | Value | |
|--|-------------------------------------|--------------------------------|-----------------------------|
| All figures quoted are average and should be verified for specific applications. | Density | 0.924-0.966 kg/dm ³ | |
| | Linear expansion coefficient | 0.068-0.075 mm/m/ °C | |
| | Moisture absorption | Under 0.46% | |
| | Vicat temperature | ~ 107 °C | |
| | Pull out value (*) | 3095 N | |
| | E-module | 500-570 MPA | |
| | Breaking strength | 17.9-15.5 MPA | |
| | Elongation at break | 3.7-14.9% | |
| | Maximum pull strength | 15.5-17.8 MPA | |
| | Elongation at maximum pull strength | 3.5-4.8% | |
| | Impact resistance | average | 12.5-17.8 kg/m ³ |
| | | average | 0.48-0.7 J |
| | Bending test | e-module | 550 MPA |
| | | max. press force | 22.2 MPA |
| | | bend at max. press force | 7.5% |

| Chemical Stability | Property | Value |
|--|---------------------|-------------------|
| All figures quoted are average and should be verified for specific applications. | UV | Stable |
| | Water | No visible damage |
| | Methanol | No visible damage |
| | Methyl Ethyl Ketone | No visible damage |
| | Synthetic Thinners | No visible damage |
| | White Spirit | No visible damage |
| | Grease | No visible damage |
| | Oil | No visible damage |
| | Petrochemicals | No visible damage |
| | Bleach | Light damage |
| | Acids | Light damage |

* specifications may vary in accordance with site conditions and specific requirements

KEY BENEFITS

COST EFFECTIVE - material and labour costs combined are reduced compared to traditional bunding/containment systems.

LOWER ENVIRONMENTAL IMPACT - Rebund is made from post-industrial waste plastic and consists of LDPE, HDPE, PP and other plastics. Repurposing this waste results in a product that reduces landfill and benefits from the long-term degradation period. Additionally using rebund requires much less concrete than traditional methods contributing to CO₂ emissions reduction.

QUICK AND EASY to design, build and if needed move/reconstruct. Whilst a solid product when constructed, unlike concrete systems, rebund can be dismantled easily without any major plant equipment.