Pumatect

High build epoxy floor coating

Resin Development

Description

Pumatect is a two-component virtually solvent free epoxy floor coating offering excellent abrasion and chemical resistance. **Pumatect** provides a tough, hard wearing coating for medium duty traffic giving high film build and wear resistance.

Appearance

Gloss finish in a range of attractive colours.

Typical Uses

For medium duty areas requiring an easy to clean, tough and durable coating with excellent chemical resistance such as warehouses, factories, workshops, showrooms, packing and storage areas. Can also be used as a sealcoat for broadcast systems such as Intermediate Car Park Decks. **Pumatect** is suitable for regular foot traffic, light duty fork lift truck traffic and occasional hard plastic-wheeled trolleys.

Features & Benefits

- Protects concrete from oil and chemical spillages
- High build with excellent wear resistance
- Virtually solvent free
- Gloss, easy to clean finish
- Non-dusting
- Slip-resistant options available

Thickness

Approximately 400 microns from two coats.

Typical Properties, 28 days at 20 ºC

BS 8204-6	Type 3
Adhesion to concrete (BS EN 1504-2) (concrete failure)	> 1.5 MPa

The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary dependent upon site conditions.

Suitable Substrates

Concrete and polymer modified cementitious screeds.

Cure Schedule at 20 ºC

Working life of full packs *	25 minutes

* Usable working life of material following mixing and immediate spreading as per the application instructions.

Finished floor *	
Over coating time	16 - 36 hours
Cure time to pedestrian traffic	24 hours
Full chemical resistance	7 days

The floor should be protected from contact with water for at least 7 days.

* These cure times are approximate and given as a guide only. These times can vary due to prevailing site conditions. At lower temperatures curing times will be extended. If the over coating interval of 36 hours is extended, the first coat should be abraded to ensure inter-coat adhesion.

Coverage

The coverage rate will vary depending on the texture and porosity of the substrate, film thickness and application technique. Two coats are normally sufficient but on very porous substrates, an initial coat of **Pumaprime SF** may be required. As a guide:

Normal substrate:	1st coat - 375 g/m^2
	2nd coat - 250 g/m^2

Colours Available*

Available in a selection of standard colours. A large selection of BS 4800 or RAL colours are available upon request.

* **Pumatect** is not 100% colour fast and may yellow over time. The rate of change will depend on UV light and heat levels and cannot be predicted. This will be more pronounced with lighter colours and blue shades and does not compromise the product's performance or chemical resistance characteristics.

Application Conditions

Pumatect is a relatively viscous coating. Do not apply outside of the range 10 °C to 25 °C. Localised heating or cooling equipment may be required outside this range to achieve ideal temperature conditions. To reduce the risk of "blooming" caused by condensation, the climate above the uncured floor should be maintained at least 3 °C above the dew point for at least 48 hours after application.

Surface Preparation

Concrete & Polymer Modified Sand/Cement Screeds

Substrates in contact with the ground must incorporate a functional damp proof membrane in accordance with CP 102 or in the case of basement floors, BS 8102. The base should have a relative humidity at the surface of no more than 75% when measured according to BS 8203.

After surface preparation, substrates must exhibit readings of 25 or above when tested using a rebound hammer in accordance with BS EN 12504-2 type N and pull-off strengths in excess of 1.5 N/mm^2 when tested in accordance with BS EN 13892-8.

Fine concrete screeds should be designed and constructed in accordance with BS 8204-1 and should not contain water repellent admixtures. Unmodified sand cement screeds or those based on calcium sulphate are unsuitable.

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Substrates must be clean, dry and free of surface laitance and contaminants such as dirt, oil, grease, poorly bonded coatings and surface treatments. Inadequate preparation will lead to loss of adhesion and failure. In coatings, there is a tendency for the finish to mirror imperfections in the substrate. Grinding, or light vacuum-contained shot-blasting is therefore preferred over planing for these systems.

Mixing
Materials should be stored at 15 °C to 25 °C for a minimum of 8 hours prior to use. Pre-mix the coloured resin component before use. Add the hardener component to the coloured resin component and mix using a low speed electric mixer (200 - 500 rpm) for at least 3 minutes until homogeneous. Use a spatula to scrape the sides and bottom of the mixing vessel several times as unmixed material will result in uncured patches in the final finish.

Pot Life
Mixed material must be used immediately. When mixed, a chemical chain reaction takes place which creates heat and further reduces pot life. High ambient temperatures will also reduce pot life.

Application
Best results are obtained in warm conditions (minimum 15 °C). Apply with a medium pile simulated sheepskin roller working well into the surface taking care not to exceed the coverage rate. Edges and difficult to reach areas may be applied thinly by brush.

An anti-slip finish may be achieved by broadcasting the first coat to saturation, with kiln dried silica sand at 3 - 4 kg/m^2. Allow the first coat to cure for24 hours at 15 °C (or longer in colder temperatures) then remove all excess sand with a stiff broom and vacuum. Apply a second coat to encapsulate the grains.

The rate of coverage for the second coat will depend on surface profile but will be significantly reduced from the first coat. As a guide:

Sand Grading	Pumatect Coverage	Achievable PTV (BS 7976-2)	
mm	m^2/kg	Dry	Wet
0.3 - 0.6	2.5	≥40	≥40
0.7 - 1.2	1.5	≥55	≥55

Note: These coverage figures are approximate as silica sand grading can vary widely as can site conditions. If in doubt, order extra material to account for wastage or install a test area prior to starting works. The pendulum test values given above are derived from testing in a controlled laboratory environment and are given for guidance only. Results derived from testing field-applied samples may vary dependent upon site conditions and application technique. Slip resistance can reduce over time due to poor maintenance, general wear or surface contaminants. Good housekeeping practices should be observed.

Tool Cleaning
Tools and equipment should be cleaned whilst the resin is still wet with a suitable solvent.

General Maintenance
Pumatect can be easily cleaned using industry standard cleaning chemicals and techniques designed for epoxy resin flooring. Test cleaning agents prior to use. Do not steam clean or subject to temperatures in excess of 60 °C.

Precautions
Remove food products from the area during application and curing. As with all high gloss paint finishes, scratching of the surface may occur with use due to surface contamination and abrasion. In common with all smooth floor finishes, **Pumatect** may become slippery under certain conditions. In areas of chemical spillage, please consult our Technical Department for specific advice.

Technical Advice
For further information on this or any other Resdev product, please contact our office.

Health and Safety
Before using this product, please ensure that you have received and read the product Safety Data Sheet. Refer to hazard labelling on the product. Wear gloves and avoid contact with skin and eyes.

EU Directive 2004/42/EC
Complies with category j type SB (< 500 g/l).

Storage
Materials should be kept dry and stored in a weatherproof building maintained at 15 °C to 25 °C on pallets and away from walls. Consignments should be used in order of batch number. Protect from frost.

Shelf Life *
12 months if stored in accordance with the above recommendations.

Limitations
Do not proceed with application if atmospheric relative humidity is, or is anticipated to be >75% or if the surface temperature is <3 ºC above the dew point. Application should not commence when the substrate temperature or the ambient temperature is, or is anticipated to be <10 ºC during the application or within the curing period. The manufacture of **Pumatect** is a batch process and despite close manufacturing tolerances, minor variations in shade may occur between batches. Products from different batches should not be used on the same surface or surfaces close together. If mixed batches are unavoidable, it is best practice to use the different batches only in areas where the colour cannot be directly compared. /ctd

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Touching up should only be attempted using product from the same batch using the same application methods. Product should be reserved specially for this purpose. It is recommended that touching up is carried out up to a break in the floor or surface.

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CE	13	DOP RV0026
EN 13813 SR-B2,0-AR0,5-IR9 Synthetic resin screed material for use internally in buildings not subject to reaction to fire regulations		

Reaction to fire	E_{fl} [1]	Impact resistance	IR9
Release of corrosive substances	SR	Sound insulation	NPD
Water permeability	NPD	Sound absorption	NPD
Wear resistance	AR0,5	Thermal resistance	NPD
Bond strength	B2,0	Chemical resistance	NPD

[1] According to Commission Decision 2010/85/EU of 9 February 2010, the product satisfies all the requirements of the performance characteristic 'reaction-to-fire' class E_{fl} without need for further testing.

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