

Pumadur UNI-PAK MD

Heavy duty flow applied polyurethane floor topping



Description

Pumadur UNI-PAK MD is a four part presentation of a proven Polyurethane cement chemistry. This range of products are produced from common components with product specific aggregate packs.

Pumadur UNI-PAK MD is a heavy duty flow applied polyurethane floor topping for use on concrete and polymer modified cementitious screeds. **Pumadur UNI-PAK MD** is designed with the highest order of durability, impact, abrasion and chemical resistance. Its easy to clean, smooth, matt finish makes the product ideal for environments such as the food, beverage, engineering and chemical industries.

Appearance

Seamless, smooth, matt finish.

Features & Benefits

- Flow applied - rapid installation
- High chemical resistance
- Non-tainting and non-dusting
- Seamless
- High abrasion resistance
- Easy to clean

Thickness

4 – 6 mm

Chemical Resistance

Pumadur UNI-PAK MD is resistant to a wide range of commonly used chemicals in the food, dairy and pharmaceutical industries such as concentrated citric acid (fruits), spirit vinegar (50% acetic acid), lactic acid (food & dairy products) and common alcohols (methanol & ethanol). **Pumadur UNI-PAK MD** is also resistant to a wide range of inorganic acids, fuels, hydraulic oils, mineral oils and solvents. Good housekeeping practices should be employed. Please consult our Technical Department for further advice.

Some staining or discolouration may occur with some chemicals, depending on dwell time, temperature, type of chemical and degree of housekeeping employed. This does not affect the product's service integrity or durability.

Temperature Resistance

Pumadur UNI-PAK MD is resistant to cleaning temperatures up to 60°C when applied at a minimum of 4 mm thickness.

Typical Properties, 28 days at 20 °C

BS 8204-6	Type 7
Adhesion to concrete (BS EN 1504-2) (concrete failure)	> 1.5 MPa
Shore D hardness	75
Slip resistance (BS 7976-2)	Dry > 60

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. The slip resistance figures given above are affected by application techniques and prevailing site conditions. Slip resistance can reduce over time due to poor maintenance, general wear or surface contaminants. Good housekeeping practices should be observed.

Cure Schedule at 20 °C

Working life of full packs * 15 minutes

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

Finished floor †

Cure time to light pedestrian traffic	12 hours
Cure time to light wheeled traffic	24 hours
Cure time to heavy duty traffic	48 hours
Full chemical resistance	7 days

The above cure times are approximate and given as a guide only. These times can vary due to prevailing site conditions.

Pack Size

Polyol component (red cap)	1.95 kg
Hardener component (black cap)	2.25 kg
Pigment component (sachet)	0.50 kg
Aggregate component (bag)	14.00 kg

Coverage*

7.6 kg/m² at 4 mm or 11.4 kg/m² at 6 mm

* Coverage figures given are theoretical. Practical coverage rates may vary due to wastage factors and the type, condition, profile and porosity of the substrate.

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Colours

Pumadur UNI-PAK SL is available in a range of standard colours. Red, Green, Buff, Sahara' Mid Grey Dark Grey Charcoal Chelsea Blue

Pumadur UNI-PAK MD is not 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

Ideal ambient and substrate temperature range is 15 - 25 °C. Localised heating or cooling equipment may be required outside this range to achieve ideal temperature conditions. The aggregate can be stored in a cool area (or warm area in the case of low ambient temperature) in order to control product temperature and working life. The substrate and uncured floor must be kept at least 3°C above the dew point to reduce the risk of condensation or blooming on the surface, from before priming to at least 48 hours after application.

Substrate Suitability

Pumadur UNI-PAK MD can be applied to concrete which has a minimum tensile strength (pull-off) of 1.5MPa. The design strength of concrete surfaces must be a minimum of 25MPa compressive strength at 28 days. For concrete bases in contact with the ground, a functioning damp proof membrane should have been incorporated into the slab design, in accordance with the requirements of CP102 (Code of Practice for Protection of Buildings Against Water from the Ground).

Surface Preparation

Inadequate preparation will lead to loss of adhesion and failure. In flow applied systems 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. Percussive scabbling or acid etching is not recommended. The substrate should be finished to a surface regularity when tested according to BS 8204-1 of class SR1 otherwise a scratch coat will be required.

Anchorage grooves should be cut to a width and depth of twice the thickness of the floor finish up to a maximum of 10 mm at the edges, bay joints, up-stands, drains, doorways and at regular points across the floor, and all debris removed. Refer to the **Resdev Guide to Surface Preparation** for further information.

Application Instructions

Priming

(i) Where the concrete substrate has a relative humidity of <75%

Priming should be carried out using **Pumadur Primer** taking particular care to prime but not fill the anchor grooves (see separate data sheet). Spread onto the substrate and roll with a short-haired roller to ensure even coverage until the surface is completely wetted out, taking care to avoid pooling. Apply around the edges of and into anchorage grooves by brush, to allow even spreading and avoid pooling. If, when cured, there are dry patches, a further primer coat is required. Allow to cure for a minimum 12 hours at 20 °C. If the primer has been left to cure for >48 hours then the primer surface should be mechanically abraded and the area re-primed. Failure to do so may result in pin-holing of the surface topping.

(ii) Where the concrete substrate has a relative humidity of >75%

Pumadur UNI-PAK MD can be applied to 7 day old concrete which is visibly dry and having a minimum tensile strength (pull-off) of 1.5 MPa. All of the usual stringent surface preparation techniques should be employed. For concrete bases in contact with the ground, a damp proof membrane should have been incorporated into the slab design, in accordance with the requirements of CP102 (Code of Practice for Protection of Buildings Against Water from the Ground).

Pumadur UNI-PAK SL should be applied as a scratch coat at 1 mm nominal thickness to prime and seal the surface. If pin-holes are evident in the scratch coat indicating that air is rising from the substrate, remedial action should be taken. Allow to cure for a minimum 12 hours at 20 °C. If the scratch coat has been left to cure for >48 hours then the surface should be mechanically abraded and the area re-coated. Failure to do so may result in pin-holing of the surface topping.

Application of Pumadur UNI-PAK MD

Prior to mixing, the temperature of the four components must be between 15 and 25°C. Shake the polyol component (red cap) and mix with the hardener component (black cap) and the contents of the pigment sachet using a low speed electric mixer (300 - 400 rpm) for 30 to 60 seconds depending on the efficiency of the mixer. To open the pigment sachet, hold firmly between thumb and forefinger below the nick and, using the other hand, tear open the top in a horizontal motion. If the end remains attached it can easily be removed with a second ripping action.

Empty the sachet directly into the polyol and hardener mixture transferring as much of the contents as possible. Fold the sachet in half length wise and use the fingers of the other hand like a squeegee to expel the remaining contents. The empty sachet can be pushed into the polyol bottle for neat disposal. Mix for 30 seconds, the material may still not appear homogeneous.

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Transfer the mixed material into a suitable mixing container and add the aggregate component gradually, mixing for a minimum of 3 minutes until a uniform coloured, lump-free mix is obtained. Do not leave anything out of the mix or add anything to the mix.

Apply the mixture immediately onto pre-primed areas, level to the required thickness using a steel float then de-aerate using a spiked roller. Spiked rolling should be carried out within three minutes of application in order to avoid interfering with flow and surface finish. Ensure that anchor grooves are fully wetted out with material.

The cured product should be protected from other trades using Kraft paper or similar breathable material. Polythene should not be used. Protect the installed floor from damp, condensation and water for at least 4 days.

Cleaning

Regular cleaning is essential to enhance and maintain the life expectancy, slip resistance and appearance of the floor. **Pumadur UNI-PAK MD** can be easily cleaned using industry standard cleaning chemicals and techniques. Consult your cleaning chemical and equipment supplier for more information.

Health and Safety

Refer to product Safety Data Sheet before use.

EU Directive 2004/42/EC

Complies with category j type SB (< 500 g/l). The VOC content of **Pumadur UNI-PAK MD** is approx. 12 g/l (theoretical).

Storage and use of the UNI-PAK product range

Store off the ground in un-opened packs in a dry store, under cover between 10°C and 30°C out of direct sunlight. Protect from frost.

Every effort is made to produce consistent materials and colours over time. However some variation between batches may occur. It is therefore important to manage stocks of all components to ensure stock rotation. Materials should be stored and used in batch order, and where possible mixed batches, particularly of colours, should be avoided. Where possible individual batches of materials should be laid in discrete areas to defined edges.

Shelf Life*

Resin and hardener components	12 months
Aggregate component	6 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, >90% or if the surface temperature is <3 °C above the dew point. Application should not commence when the substrate temperature or the ambient temperature is, or is anticipated to be <5 °C during the application or within the curing period. The design strength of concrete surfaces must be a minimum of 25 MPa compressive strength at 28 days. The manufacture of **Pumadur UNI-PAK MD** is a batch process and despite close manufacturing tolerances, colour variation 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. 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 RV0001
EN 13813 SR-B2,0-AR0,5-IR20 Synthetic resin screed material for use internally in buildings not subject to reaction to fire regulations			
Reaction to fire	E _{fl} ⁽¹⁾	Impact resistance	IR20
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

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.

Technical Advice

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

Note

The information given in this datasheet is derived from laboratory testing and site experience and is based on the company's current state of knowledge. It is provided to assist the customer in the selection of product(s), and is intended to be read as a complete document. No legal responsibility or liability is implied or accepted by the company. This datasheet does not constitute a warranty or guarantee of performance. This product is manufactured from materials designed to achieve the required level of performance as safely as possible. Reactive components require appropriate transportation and storage on site and proper handling by competent operatives with suitable safety equipment. This information is given in the product safety data sheets which must be read before use.

Any specification or advice given by the company, its representatives or agents, is based on the information supplied by the purchaser. The company cannot be held accountable for errors or omissions as a result of that information being incorrect or incomplete. Some materials are derived from natural sources, and consequently variation may occur. Site conditions, site control and any labour used in the application process, are outside of the control of the company, and may also contribute to variation in performance, finish and colour.

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