

PUMEXPAND V

Polyurethane modified epoxy jointing compound



Resin Development

DESCRIPTION

Pumexpand V is a thixotropic, two part, polyurethane modified epoxy high modulus joint filling compound designed to provide good chemical resistance and durability together with a degree of flexibility. **Pumexpand V** is designed to create joints and seals with low movement accommodation in vertical situations.

APPEARANCE

Pumexpand V is available in the standard range of Resdev colours and has a smooth tooled finish.

THICKNESS

Pumexpand V may be applied between 6 mm and 20 mm wide in trafficked joints and up to 40 mm width in non-trafficked joints.

Although **Pumexpand V** is virtually solvent free, large volumes of the product will generate heat during cure and some contraction and/or slumping may occur as a consequence.

TYPICAL INSTALLATIONS

Pumexpand V is suitable for filling saw-cut day work and low movement joints in concrete subject to medium to heavy industrial use.

For joints up to 10 mm width a 1:1 width to depth ratio is recommended. For joints greater than 10 mm width, up to a 2:1 width to depth ratio can be used with a minimum depth of 10 mm. When filling joints, the surface of the **Pumexpand V** should be brought to just below the surface of the final finish so that passing traffic does not abrade the surface of the seal. If the seal is brought flush, this will provide a smooth transfer from section to section but may result in some accumulating damage to the joint surface with time.

SUBSTRATES

Pumexpand V will adhere well to a range of surfaces such as concrete, granolithic screeds, epoxy, polyurethane and polymer-modified floor and wall finishes. Significant concrete shrinkage will take place in the first 28 days and sealing should not commence before this period. It is recommended that joints are left until the final stages of construction when temperatures

have stabilised and initial concrete shrinkage has taken place.

JOINT PREPARATION

When re-sealing old joints, all existing sealant should be removed and the arris prepared back to sound concrete. All dust and debris should be removed from saw-cut joints by vacuum. The joint surfaces must be clean, dry and dust free. All contamination should be removed by wire brushing, grinding or shot blasting. A closed cell polyethylene foam backing rod should be used which is accurately placed, well compacted and should not be stretched on installation as this can result in gaps developing under the seal. Where a neat finish is required, mask the top face of the edges of the joint before priming and sealing and remove immediately after tooling is completed.

PRIMING

Apply **Pumaprime SF** to the walls of the joint using a clean, dry brush. Avoid applying too much causing puddles in the bottom of the joint. Ensure that a bond breaker or closed cell polyethylene backing strip is installed to the base of the joint after the primer has cured and prior to installation of **Pumexpand V**. This strip must fill the base of the channel.

MIXING

Prior to mixing, the temperature of the three components must be between 10 and 30 °C. Add the hardener component to the coloured resin component and mix using a low speed electric mixer (300/400 rpm) for at least 2 minutes until homogeneous. Keep the mixing paddle fully submerged to avoid the entrapment of air and scrape the sides and bottom of the vessel several times. Decant the mixed material to a second mixing vessel and mix as above for a further minute. Do not mix at high speed as this will result in air entrainment.

APPLICATION TECHNIQUE

Pour the mixed material into the joint to the level required and tool to the desired finish. After a few minutes it may be necessary to top up the level after it has flowed into the joint irregularities.

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COVERAGE RATES

Pumexpand V is supplied in 1 kg, 2.5 kg and 5 kg units.

The amount of **Pumexpand V** required can be calculated as follows:

Length in metres x Depth in mm x Width in mm divided by 1000 = kg of **Pumexpand V** required. e.g. 10 metres length x 10 mm depth x 20 mm width = 2 kg. Allowances of at least 5% should be made for wastage.

PHYSICAL PROPERTIES

Pot Life at 20° C	50 minutes
Recommended Application Temperature	5°C to 30°C
Initial Cure (Traffic) at 20° C	24 hours
Initial Cure (Traffic) at 10° C	48 hours
Full cure (Chemical Resistance) at 20° C	7 days
Movement Accommodation Factor	10 %
Shore A Hardness	55 - 65
Density (varies slightly with colour)	@ 1 g/cm ³

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.

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

Pumexpand V is designed to be used as a low movement joint filler for trafficked areas. It is not designed to accommodate high frequency movement or for high movement accommodation joints which require lower modulus materials. If the movement of the joint exceeds that capability of the product, mechanical failure will occur. If the cohesive strength of the sealant exceeds that of the substrate, substrate failure will occur. Joint sealants should not be over-painted as any movement may cause the coating to crack and may lead to premature cohesive failure of the sealant.

During the curing process, the surface of the sealant may retain a degree of surface tack which can accumulate dust. This will wear off the surface with time and usage.

Do not proceed with application if atmospheric relative humidity is, or is anticipated to be >75% 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 <10 °C during the application or within the curing period. The manufacture of **Pumexpand V** 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.

Note

The information contained in this document, and all further technical advice given is based on our present knowledge and experience. However, it implies no liability or legal responsibility on our part. In particular, no warranty or guarantee of product performance in the legal sense is intended or implied as the conditions of use and the competence of any labour involved in the application are beyond our control. Properties listed are for guidance purposes only. We reserve the right to make any changes according to technological progress or further developments.

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