

Expanseal* 225



CONSTRUCTION CHEMISTRY

High performance polyurethane joint sealant

Uses

For sealing movement joints in building, water retaining structures, pre-cast panels, glazing system and metal curtain walls, also suitable for perimeter joints around doors and windows.

Advantages

High movement capability, Excellent UV resistant, suitable for tropical countries. Confirms to international standards. Excellent adhesion to most common substrates. Available in wide range of colours. Suitable for use in light trafficked joints. Resistant to periodic water immersion. Suitable for use in wide joints.

Standards compliance

British Standard BS 4254: 1983.
U.S. Federal Specification TT-S-00227E Type II, Class A

ASTM C 920-87, Type M, Class 25.

Description

Expanseal* 225 is two component polyurethane based joint sealant which cures to produce long lasting elastomeric seals with excellent extension recovery, adhesion and UV resistance properties. When cures Expanseal* 225 can accommodate large cyclic movement over a wide range of ambient temperatures.

Expanseal* 225 is supplied as a gun grade non-sag sealant, suitable for both vertical and horizontal applications.

Properties

Specific gravity	: 1.20
MAF (Movement accommodation factor)	: 25 %
Shore 'A' hardness	: 20 to 25
Service temp. range	: -30 °C to +80 °C
Mini. Application temp.	: 5 °C
Pot life	: 2 hours at 25 °C/50% R.H. 1 hour at 35 °C/70% R.H.
Initial set	: 6-8 hours at 25 °C/50% R.H.
Tack free time	: 36 hours at 25 °C/50% R.H.
Standard colour	: Grey
Special colours	: On request

Design factors

Joints should be designed so that total movement due to concrete shrinkage and thermal changes does not exceed the 25%. Movement accommodation factor related to the joint width.

Minimum size of joint shall be four times the anticipated movement.

Joint width (mm)	Sealant depth (mm)
6 (min.) – 12	equal to joint width
12 – 50 (max.)	12 - 25

Sealant depth should never exceed joint width, all movement joints subject to trafficking shall be recesses 5 mm below flush so that during joint contraction the sealant does not protrude above the surface, for vertical joint greater than 50 mm wide, multiple applications may be necessary.



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Instruction for use

Joint Preparation

All joints faces must be clean, dry free from contamination, dust or laitance.

Porous Surface – if curing or release agent, waterproofing or other contaminants are present, prepare surfaces by either grinding or sand blasting.

All previous sealant, mastics or joint fillers should be mechanically removed, followed by either grinding or

In dusty conditions blow all joints clean using dry, oil-free compressed air.

Non-Porous Surface – if lacquers, oil or other contaminants are present, prepares surfaces by wiping with Expanchem Solvent 102 and abrading if appropriate.

The correct width/depth joint profile may be achieved by the installation of Expanchem Foam Backing Cord, where joint backing is not used, siliconised de-bonding tape should be positioned to cover the base of the joint.

To produce neat edges to the joint, masking tape is recommended prior to priming.

Priming

Although sealants can develop good adhesion to certain perfectly prepared surface, it is generally accepted that the application of low viscosity, penetrating or reactive primer will ensure maximum bond under site conditions. The following primers should be used with Expanseal 225:-

Expanprime 12: Concrete, Plaster, Masonry, Marble, Granite.

Expanprime 14: Aluminum, Glass, Glazed Surfaces.

Where restricted joints are involved between a porous and non-porous substrate use Expanprime 12.

Joints which are not sealed within the open time of the primer must reprimed. The open time of the primer is 30 minutes at 35°C. Joint sealing can be started as soon as the primer is dry, normally 5-15 minutes.

Mixing

The components of Expanseal 225 are supplied in the correct mixing ratio. Add the entire contents of the Colour Pack and the Hardener Container in to the Base Container. Mix together for 3 minutes using the recommended mixing paddle and slow speed electric drill (400/500 rpm). The sides of the container should then be scraped down to ensure that unmixed components do not remain around the sides. Mixing shall then continue for a further 3 to 5 minutes. Total mixing time 6 to 8 minutes.

Application

After thorough mixing, place the single hole follower place over the Expanseal and draw material in to a Expanchem Barrel Gun. Fill the sealant into the joint in a continuous bead taking care not to entrap air between the sealant and the joint backing. The sealant must be firmly pressed into the joints to achieve proper substrate wetting and maximum adhesion. Final tooling of the joint is best carried out some minutes after application using a suitable dry joint shaping tool. Strip off any masking tape immediately after tooling.

Cleaning

Uncured Expanseal 225 can be cleaned off with Expanchem Solvent 102.

Cured sealant can only be removed mechanically.

Precautions

Health & Safety

The Expanseal components and the mixed sealant should not be left in prolonged contact with the skin particularly open wounds. Gloves should be worn and the use of barrier creams is strongly recommended. Solvents should not be used for cleaning the hands, but an industrial cleaner such as Kerocleanse Standard Grade skin Cleanser and Rozaklens Industrial Sking Cleanser, followed by washing with soap and water. Wash any eye contamination with plenty of water and seek immediate medical advice. Ensure adequate ventilation when working



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Fire

Expanprime 12 and 14 and Expanchem Solvent 102 contain flammable solvents. Do not use near open flames nor smoke during use.

Flash point:

Expanprime 12	:	9°C
Expanprime 14	:	12°C
Expanchem Solvent 102	:	33°C

Storage

The shelf life of Expanseal 225 and Expanprime 12 and 14 is 12 months when stored in the original unopened containers at ambient temperatures below 25°C

Packaging

Expanseal 225	:	2.50 litre pack (Base, Hardener)
Expanprime 12	:	1 litre
Expanprime 14	:	1 litre
Expanchem Solvent 102	:	5 liter

Estimating

Expanseal 225 – No.of litres required=

Joint width(mm)xsealant depth(mm)xjoint length

Supply

Contact your local Expanchem office or representative.

Technical Service

The company provide a technical advisory service for on-site assistance and advice on evaluation trials and dispensing equipment.

Additional Information

Expanseal 225 is part of a wide range of joint sealants covering a variety of applications. In addition Expanchem produces waterproofing materials, admixtures, repair compounds, grouts and flooring products

* Denotes the trademark registered.

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