

Expanseal* 777*



CONSTRUCTION CHEMISTRY

Elastomeric fuel resistant joint sealant

Uses

For sealing joints in concrete pavements on roads, airfield aprons, runways and taxiways, cargo terminals, warehouse parking areas and service roads.

Advantages

- Highly resistant to weathering, will not flow, bubble or blister at high temperatures
- Maintains resilient, rubber like properties at sub-zero temperatures
- Outstanding resistance to petrol, oil and jet fuel spillage
- High productivity from extruder minimizes contract period
- Resistant to jet blast and penetration from stones and hard debris
- Self leveling; produces uniform, neat joints
- In excess of 20 years proven performance

Standards compliance

Expanseal* 777 complies with the performance requirements of: US Federal Specification SS-S-1614, 167b, 1401b 164 ASTM D7116-05. ASTM D3406-85. ASTM D3569 85. BS2499 1973 Types A1 and B1. DTp specification for Highway works 1986 clause 1016.

Description

Expanseal* 777 supplied as a single component liquid polymer is heated in an approved oil-jacketed extruder prior to extrusion into prepared joints. When using Expanseal* 777 through the extruder, outstanding daily application rates can be achieved.

Specification

Where so designated on the drawing, joints are to be sealed using Expanchem Expanseal* 777 elastomeric fuel resistant joint sealant. Expanseal* 777 shall comply with the requirements of ASTM D3569-85, ASTM D3406-85, BS2499 Types A1 and B1. ASTM D7116-05 Type I,II. US Federal specification SS-S-164, 167b, 1401b 164 and DTp specification for highway works 1986 clause 1016.

Design criteria

Joints should be designed so that total movement in the width of the joint due to concrete shrinkage and thermal change does not exceed the 25% movement accommodation factor, expressed as a percentage of the joint width.

Typical examples are identified as follows:

Joint width (mm)	Sealant depth (mm)
9 (min) - 12	As width + 3
13 - 15	15
16 - 25	As width
26 - 40 (max)	25 (max)

All joints should be sealed typically 5 mm below flush, however, this should be varied dependent upon the time of the year (i.e. ambient temperature) in which the application takes place, this is to ensure that the sealant does not protrude above the surface on joint contraction. New concrete should be allowed to dry for at least 14 days prior to the application of Expanseal* 777.

Properties

Specific gravity	:	1.26
Movement accommodation factor	:	25%
Resilience (ASTM D3569)	:	65 - 75%
(ASTM D7116-05)	:	>60%
Service temperature range	:	-20°C to 70°C

Instructions for use

Joint preparation

The substrate to which Expanseal* 777 is to be bonded must be clean and dry and the joint profile sound. Arris repairs where required should be effected using a recommended Expanchem Fospak repair compound.

Remove all dirt, surface laitance, residual joint former or other contamination from joint faces by power wire brushing, grinding, sawing or grit-blasting. Blow all joints clean using dry, oil-free compressed air.



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Joints which have been ground or wet sawn should be water jetted to ensure removal of all traces of cementitious slurry prior to continuing the sealant works. Manual wire brushing may only be used for the removal of filler boards. Blow all joints clean using dry, oil free, compressed air at a minimum pressure of 100 psi.

All joints must be completely dry prior to commencement of sealing works. Application can be undertaken when the substrate temperature is 5°C or above. Paper backing cord must be installed at the base of all joints.

Where existing joints are to be refurbished, all traces of joint sealing compound must be completely removed from the joint prior to proceeding.

Priming

Joints which have been sand/grit blasted, and which are perfectly clean and dry, can be sealed without the use of a primer.

Heating / application

It is essential that the correct heating and application equipment is used to ensure successful performance of the sealant. Expanseal* 777 should be poured directly into an approved oil jacketed heater / extruder.

The material must then be heated to a minimum temperature of 135°C (275°F) and extruded into the prepared joints using an approved application lance. All initial material which has been contaminated with flushing oil must be discarded.

The maximum safe heating temperature is 150°C (300°F), and the maximum safe heating period should not exceed 6 hours. These limits must not be exceeded, failure to adhere to this instruction could result in the properties of the material being affected.

Cleaning

Application equipment should be cleaned thoroughly using Expanseal* flushing oil. Ignition sources associated with the heater / extruder must be extinguished prior to the use of flushing oil. Following application Expanseal* 777 can only be removed mechanically.

Any spillages of Expanseal* 777 or flushing oil should be absorbed immediately with sand, sawdust or other suitable absorbent materials. Disposal should be in accordance with local regulations.

Technical support

Expanchem Fospak offers a comprehensive range of high performance, high quality repair, maintenance and construction products. In addition, Expanchem Fospak offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the world.

Estimating

Supply

Expanseal* 777 : 20 litre drums

Expanseal* flushing oil : 20 litre drums

Coverage

Expanseal* 777: Number of litres required =
$$\frac{\text{Joint width (mm)} \times \text{sealant depth (mm)} \times \text{joint length (m)}}{1000}$$

A further amount should be allowed for possible wastage.

Storage

Shelf life

12 months if stored in the original unopened containers in a cool dry place. Do not store in direct sunlight.

Precautions

Health and safety

Expanseal* 777 should not come in contact with skin and eyes or be swallowed. Avoid inhalation of vapours and ensure adequate ventilation.

Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams such as Kerodex Antisolvent or Rozalex Antipaint provide additional skin protection.

Should accidental skin contact occur, remove immediately with a resin removing cream such as Kerocleanse Standard Grade Skin Cleanser or Rozaklens Industrial Skin Cleanser, followed by washing with soap and water. Do not use solvent.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.

If swallowed, seek medical attention immediately - do not induce vomiting.



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Fire

Expanseal* 777 does not readily support flame.

For further information, refer to the Product Material Safety Data Sheet.

Additional Information

Expanchem Fospak manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized flooring materials

Expanchem Fospak additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Expanchem Fospak's 'Systematic Approach' to concrete repair features the following :

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Expanchem Fospak office.

* Denotes the trademark registered.

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