



# Expanseal\* 200\*

**Cold applied, high performance, hydrocarbon resistant, polyurethane pavement joint sealant**

## Uses

For the horizontal & vertical sealing and maintenance of joints in concrete roads, concrete runways and hard standings. The excellent fuel resistance of Expanseal\* 200 makes it particularly suitable for sealing areas where fuel and oil spillage might occur such as:

- Aircraft fuelling areas
- Oil terminals
- Concrete roads for medium and heavy traffic
- Parking and cargo areas
- Docks and harbors
- Warehouses

## Advantages

- Cold applied - no heating equipment required
- Fuel, oil and hydraulic fluid resistant
- Self-leveling
- Tough rubbery seal
- High performance - less maintenance

## Standards compliance

Expanseal\* 200 complies with U.S. Federal Specification SS- S-200E:1984 and British Standard 5212:1990 - types N, F and FB. ASTM-1850

## Description

Expanchem Fospak Expanseal\* 200 cold applied, two part polyurethane sealant is designed for joints in concrete paved areas, available in pouring & gun grades

The capability of accommodating cyclic movements is retained by Expanseal\* 200 throughout extremes of temperature conditions.

Expanseal\* 200 is resistant to fuel, oil and hydraulic fluid spillage, will not harden in cold weather nor become excessively soft or pick up in hot conditions. Expanseal\* 200 has high durability and long service life which significantly reduces maintenance costs.

## Specification

Where so designated on the drawing, joints are to be sealed using Expanchem Fospak Expanseal\* 200, pavement sealant manufactured by Expanchem to BS 5212: 1990 and to U.S. Federal Specification SS-S-200E:1984. Joints shall be prepared and the sealant mixed and applied in accordance with the manufacturer's current data sheet.

## Design Criteria

Expanseal\* 200 has a movement accommodation factor of 25% in butt joints. In designing joint spacing and dimensions, consideration should be given to the likely uneven distribution of movement.

To ensure the sealant operates within its stated movement capacity of 25%, the width of sealing slots should be designed in accordance with the recommendations of BS 6093. In trafficked areas the expansion joint width should not generally exceed 30 mm - for wider joints consult local Expanchem Fospak office.

Joint depth: In trafficked areas the sealing slots should be constructed so that at no time during the anticipated operating cycle of the joint will the sealant protrude above the surface of the concrete pavement. It is necessary to recess the level of the sealant 5 to 8 mm below the pavement surface, dependent on the time of year and temperature prevailing at the time of sealing.

The width to depth ratio of the Expanseal\* 200 seal should be 1:1 to 1½:1 subject to a minimum 10 mm depth of sealant (example, contraction joint: 15 mm wide x 13 mm depth; expansion joint: 25 mm wide x 20 mm depth).

## Properties

<b>Form</b>	: Two part compound Base compound: viscous liquid Curing agent: liquid
<b>Colour</b>	: Black & Grey

## Movement Accommodation

<b>Factor (BS 6093)</b>	: Butt joints 25%
<b>Physical or chemical cure</b>	: Chemical cure
<b>Setting time</b>	: After 10 to 16 hours @ 35°C Expanseal* 200PF will be tack free and can accept traffic.
<b>Application temperature</b>	: To avoid unacceptably prolonged cure times, do not apply at temperatures below 5°C.
<b>Hardness shore 'A' at 25°C</b>	: 14
<b>Solids Content</b>	: 100%
<b>Pot Life</b>	: 2- 3 hours @23°C



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#### **Chemical resistance to occasional spillage:**

<b>Aviation fuels</b>	:	resistant
<b>Hydraulic fluids</b>	:	resistant
<b>Skydrol</b>	:	resistant
<b>Kerosene</b>	:	resistant
<b>Petrol</b>	:	resistant
<b>Diesel fuels</b>	:	resistant
<b>Synthetic oils</b>	:	resistant
<b>Mineral oils</b>	:	resistant
<b>White spirit</b>	:	resistant
<b>Mid alkalis</b>	:	resistant
<b>Dilute acids</b>	:	resistant

All the above properties have been determined by laboratory controlled tests and are in excess of those expected in practice.

Nevertheless, success in use will be determined by the implementation of good housekeeping practices.

#### **Maintenance**

No special requirements. Any damage identified during normal inspections should be repaired or replaced as appropriate.

#### **Instructions for use**

##### **Joint preparation**

Joint sealing slots in concrete should be accurately formed and must be dry, sound, clean and frost free. Remove all dust and laitance by grit blasting or grinding. Avoid polishing the joint sides when grinding. The prepared sealing slot should be blown out with dry, oil-free compressed air.

Ensure that any expansion joint filler is tightly packed in the joint and at the required depth to provide the seal dimensions specified. Before sealing, insert a bond breaker caulked tightly into the base of the sealing groove to prevent the sealant from adhering to the base of the slot.

##### **Priming**

Prime sealing slot surfaces with Expanprime\* No. 20 using a clean dry brush. Expanseal\* 200; must be applied between 30 minutes and 2 hours after priming, depending on climatic conditions. Expanseal\* 200 must be applied when the Expanprime\* has become touch dry, that is after the evaporation of the solvent, but before the Expanprime\* film has completely reacted.

If the Expanprime\* film has become completely tack free, the surfaces must be reprimed before applying the sealant.

If the primed areas are left unsealed overnight the Expanprime\* film must be removed by grit blasting or grinding and the joint interfaces reprimed. Therefore, avoid priming more work than can be sealed within the time-scales above.

Avoid over application of Expanprime\* No. 20, as this may cause puddles of Expanprime\* to lie at the base of the sealing slot.

#### **Mixing**

Drain totally the contents of the tin containing the curing agent into the large base component tin. Using a hand held, slow speed drill (400 to 500 rpm) fitted with a Expanchem Fospak paddle blade stirrer, mix for approximately one minute, stop the mixer and scrape around the top of the tin to remove any remaining curing agent. Continue mixing for a further 3 minutes until the material is thoroughly mixed.

#### **Application**

When mixed, the sealant may be loaded into a Expanchem Sealant Gun after removing the nozzle and cap and pulling back the plunger rod. The nozzle cap is then replaced ready for application. In wider joints of 25 mm and above, the mixed sealant may be poured directly from the tin by bending the side to form a pouring lip. Apply mixed sealant into the sealing slot so that the finished level of the seal is recessed below the trafficked surface as specified.

BS 5212:1990 Pt 2 sets out a code of practice for the application and use of joint sealants for concrete pavements.

#### **Cleaning**

Clean equipment immediately after use with Expanchem Solvent 102\*. Remove mixed Expanseal\* 200 from the hands with 'Keroclense 22', 'Swarfega' or similar industrial hand cleanser.

#### **Ancillary materials**

Expanprime\* No. 20  
Expanchem Solvent 102  
Sealant Mixing Paddle  
Expanchem Sealant Gun



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### Limitations

Expanprime\* No. 20 is not compatible with bituminous surfaces. For situations where Expanseal\* 200 could come into contact with pavement asphalt (for example, in a transition joint between concrete and asphalt pavements), contact the local Expanchem Fospak office for advice.

### Technical support

Expanchem Fospak offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

### Estimating

#### Supply

**Expanseal\* 200** : 5 litre packs

**Expanprime\* No. 20** : 500 ml packs

**Expanchem Solvent 102** : 5 litre

\*\* 20 litre packs are also available subject to a minimum order.

Contact your local Expanchem Fospak office for recommendations on mixing, application and other requirements.

### Guide to Expanseal\* 200 quantities

Joint size in mm (w:d)	Litre per meter	Meter per 5.0 litre pack
10 x 10	0.100	50.00
13 x 13	0.169	29.58
15 x 15	0.225	22.22
20 x 15	0.300	16.66
20 x 20	0.400	12.50
25 x 20	0.500	10.00
25 x 25	0.625	8.00
30 x 25	0.750	6.66

1 litre of Expanprime\* No. 20 will be sufficient for 20 litres of Expanseal\* 200, independent of joint size.

These are theoretical yields. No allowance has been made for variations in joint dimensions or wastage.

### Storage

Expanseal\* 200: 12 months in original containers stored in cool, dry conditions, i.e. not exceeding 25°C. Storage above this temperature may reduce shelf life.

### Precautions

#### Health and safety

Expanseal\* 200, Expanprime\* No. 20 and Expanchem Solvent 102 may cause sensitisation by inhalation and skin contact. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. Use only in well ventilated areas.

For additional information see relevant Product Safety Data Sheet.

#### Fire

Expanprime\* No. 20 and Expanchem Fospak Solvent 102 are flammable. Do not expose to naked flames or other sources of ignition. No Smoking. Containers should be tightly sealed when not in use. In the event of fire, extinguish with CO<sub>2</sub> or foam.

#### Flash Point

**Expanprime\* No. 20** : 30°C

**Expanchem Solvent 102** : 33°C



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### 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 - as below.

\* Denotes the trademark registered.

### REGIONAL SALES OFFICES IN PAKISTAN:

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### Important note

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