



Fosroc® Thioflex 555

Fast curing, hand applied, two component, elastomeric, pavement joint sealant

Uses

Polysulfide sealant for the sealing and maintenance of joints in concrete roads, concrete runways and hard standings.

Particularly suitable for sealing areas where fuel spillage might occur such as aircraft fuelling areas, oil terminals, garage forecourts, parking and cargo areas.

Advantages

- High extrusion rates
- Fast cure and return to service
- Fuel and hydraulic fluid resistance
- Jet blast resistance
- Polysulfide - high stress relaxation
- High resilience
- Resistant to stone/ dirt pickup
- High durability and long service life
- High movement accommodation

Description

Thioflex 555 is a fast curing, two component, polysulfide self-levelling type sealant product designed to meet requirements in pavement applications. The product retains its movement accommodation of 35% on butt joints throughout temperature extremes. It does not harden in cold weather nor become excessively soft in hot conditions.

Design Criteria

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

Technical Support

Parchem offers a technical support service to specifiers, end-users and contractors, as well as on-site technical assistance.

Properties

The typical physical properties given below are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary - dependent on actual site conditions.

Form:	Two component product comprising liquids base and hardener
Colour:	Grey (Base White, Hardener Black)
Movement accommodation factor BS8449:	Butt joints 35%
Shore A Hardness at 20°C, approx.:	10
Service Temp. Range:	-40°C to +70°C
Flash point:	>65°C
Chemical resistance to spillage:	Aviation fuels, Skydrol, Kerosene, Glycols, Petrol, Diesel, De-icing salts
Resistance to flame, BS5212-1:	Pass - No combustion, flow, hardening or loss of flexibility
Mix Ratio:	Pre weighed units
Application Ambient Temp. Range:	5°C to 50°C
Application Material Temp. Range:	15°C to 40°C
Specific Gravity at 20°C:	Base 1.36 - 1.44 Hardener 1.68 - 1.76
Pot life	35-40°C: 40 mins 20-25°C: 120 mins
Return to service times*	35-40°C: 60 mins 30°C: 2 hours 20°C: 4 hours 10°C: 12 hours 5°C: 36 hours

* These times are approximate and dependent on ambient and substrate temperature and joint size. When applying at ambient and surface temperatures below 20°C, the return to service times can be improved by first storing the mixed material above 20°C for an hour before application.

Standards compliance

BS EN 14188-2:2004. Joint fillers and sealants. Specifications for cold applied sealants: Two component (M) / self levelling (sl type) / Class B, C and D.

British Standard 5212 : Part 1: 1990 Cold applied joint sealant systems for concrete pavements. Specification for joint sealants— types N, F and FB

US FED SPEC SS-S-200E: 2 component, Jet Blast Resistant, Cold Applied, for Portland Cement Concrete Pavement.

ASTM C920 Type M, Grade P, Class 25.

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CE	
Fosroc Ltd Drayton Manor Business Park, Coleshill Road, Tamworth, B78 3XN, UK 15 DOP: UK9-172	
EN14188-2	
Cold Applied Joint Sealant System: Type: Classes: Polymer Base:	Two-component (M) Self-levelling (SL) B, C, D Polysulfide
Rate of Cure: Tack-Free Time:	98% at 24 hours <3 hours
Bonding Strength and Cohesion: - Tensile Modulus at 23°C (MPa): - Adhesion/ Cohesion: - Tensile Modulus at -20°C (MPa): - Adhesion/ Cohesion:	0.16 No Failure 0.29 No Failure
Resistance to Deformation: - Elastic Recovery (%): - Loss of Volume (%):	91.7 4.9
Durability in Liquid Chemicals: Change in Mass (%); Volume (%); Adhesion/Cohesion: - Test Fuel I: - Test Fuel II: - Mono Ethylene Glycol 70%: - Potassium Formate 50% - Potassium Acetate 50% - Diesel - Hydraulic Oil Castrol AWS68	-9.0% ; -24.7%; NF -4.2% ; -18.9%; NF +2.5%; - 0.1%; NF -0.1%; - 0.3%; NF -0.1% ; -0.4%; NF -5.8% ; -6,2%; NF -4.7% ; -3.7%; NF
Resistance to Flame:	Pass
Durability of mandated characteristics against Ageing: - Hydrolysis, Change of hardness - Irradiation, Change of Tensile Modulus (%): - Adhesion/ Cohesion	0 15 No Failure

Application Instructions

Joint preparation

Joint sealing slots in concrete should be accurately formed and must be dry, sound, clean and free from frost.

Remove dust and laitance prior to priming. Grit blasting is an appropriate method for new and existing concrete pavement substrates. 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 insert a bond breaker or Expandafom cord caulked tightly into the base of the sealing groove to prevent sealant adhering to the base of the slot and provide the specified depth of sealant.

Priming

Prime concrete joint faces with Fosroc Primer 7E.

Empty the entire contents of the hardener tin into the base tin, and replace base tin lid. Mix thoroughly by shaking tin for approximately 2 minutes. Prime the joint face using a clean dry brush, or by spraying. Avoid over application of primer to prevent puddles forming in the bottom of the joint.

Fosroc Thioflex 555 should be applied between 20 minutes and 4 hours after priming. If the joint is not sealed within this time, the joint should be reprimed. If the joint is not sealed or reprimed within 24 hours, the cured primer should be removed and the joint reprimed.

The mixed Fosroc Primer 7E should be applied within one working day. Do not dilute Fosroc Primer 7E. Do not split packs of Fosroc Primer 7E.

Mixing

Empty the entire contents of the hardener tin into the base tin. Mix thoroughly for approximately 3 minutes using a slow speed drill (300 to 500rpm) fitted with a Sealant Mixing Paddle. Do not mix air into the product as far as is possible. Scrape down and mix for a further approximately 2 minutes. Only thorough mixing, including material at the bottom of the tin, will result in proper curing.

The mixed product may be poured directly from the tin into horizontal joints, or for application to horizontal joints less than 15 mm wide may be loaded into a bulk gun for application.

For optimum application properties in cold conditions, the components may be warmed to approx. 30°C, prior to use.

Application

Apply the mixed sealant so that the finished level of the seal is recessed 5-8mm below the pavement surface.

Cleaning

When necessary, clean equipment with Fosroc Solvent 10; ensure any mixed material is cleaned immediately after use. Cured material can only be removed mechanically.

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Limitations

Apply at substrate temperatures of minimum 5°C and rising. Material temperature should be in the range 15-40°C.

Do not apply direct heat to product.

Product is not compatible with bituminous surfaces.

Where product could come into contact with pavement asphalt, please contact the local Parchem office for advice.

When sealing trafficked joints >50mm wide at the time of installation, contact the local Parchem office for advice.

Estimating

Supply

Fosroc Thioflex 555 Base of 5L pack: FC900524-2.5L

Fosroc Thioflex 555 Hardener of 5L pack: FC900525-2.5L

Fosroc Primer 7E Base of 1L pack: FC900526-600ML

Fosroc Primer 7E Hardener of 1L pack: FC900527-400ML

Guide to sealant quantities

Joint size in mm	Litres per metre	Metre per 5 litre
10 x 10	0.10	50
13 x 13	0.17	30
15 x 15	0.23	22
20 x 15	0.30	17
20 x 20	0.40	13
25 x 20	0.50	10
25 x 25	0.63	8
30 x 25	0.75	7

1 litre pack of Fosroc Primer 7E will be sufficient for approximately 30 litres of Thioflex 555 sealant. Yields are theoretical; no allowance has been made for variations in joint dimensions or wastage.

Storage

Shelf life

Thioflex 555 has a shelf life of 12 months from date of manufacture if kept in a dry store <25°C, in the original unopened packs. Refer to the Use by Date indicated on the packaging.

Storage conditions

Store in dry conditions in the original, unopened packaging. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.