

# Tufflon® - JF90

Elastomeric, joint filler - medium to high hardness (90A)

**PRODUCT DESCRIPTION** Tufflon – JF90 is a two-component, 100% solids, pure polyurea joint filler designed for pour application through specialised, high or low pressure, plural equipment. Fills and seals joints and supports and protects them against damage by heavy traffic

- INTENDED USES**
- Joint filling, fast application, fast return to service of 30 min, durable long-term performance of many years
  - Stress crack filling, fast and permanent
  - Concrete floor construction and cold joints in commercial cold rooms and freezers

- FEATURES**
- Will fully cure in temperatures as low as -30°C making it suitable for cold rooms
  - 60 second gel time and fast cure. Tolerates light traffic after only 30 minutes and heavy traffic after 60 minutes
  - Fast installation of up to 8L per minute continuous pour using Graco plural equipment
  - Simple 1:1 mix ratio by volume with low A and B viscosities to facilitate easy processing
  - Application is not affected by temperature. The substrate should be clean and dry or moisture
  - Zero VOCs – non-flammable
  - High hardness and high compressive strength. Supports and protects joint edges from damage caused by heavy traffic
  - Permanent elongation of 430% tolerates cyclical movement of joint. High adhesion of 3 MPa prevents disbondment and cracking
  - High chemical resistance, suitable for bonded chemical storage areas with forklift traffic
  - Will not foam or bubble on damp surfaces
  - Low shrinkage of only 1% after application. Will not pull away from the edges

**PRODUCT DATA**

<b>Volume Solids</b>	100%
<b>Theoretical Coverage</b>	N/A
<b>Finish</b>	Pigmented
<b>Colour</b>	Black or Mid Grey
<b>Gloss</b>	Semi-Gloss
<b>Mixing Ratio</b>	1:1 by volume
<b>Gel Time</b>	60 Seconds
<b>Typical Thickness</b>	Up to 50 mm
<b>Cleaner</b>	Reactor Flush and Swell for cured product
<b>Flash Point</b>	>149°C
<b>VOC</b>	0 Grams/Litre
<b>Specific Gravity</b>	1.06

**CURE & RECOAT**

Tacked	Hard Dry	Full Cure	Walked on Time	Light Vehicle Traffic	Heavy Vehicle Traffic
60 sec	30 Min	24 Hrs	5 Min	30 Min	60 Min

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## ENGINEERING DATA

Property	Method	Typical Results
Hardness	ASTM D 2240-91 Shore A	90 - 93
Elongation at 24°C	ASTM D412-92	>430%
Abrasion Resistance	ASTM c501-84, 1,000rpm with 1,000g weight, H18 Wheel	58mg
Tensile Strength	ASTM D412-92	16 MPa
Tear Strength	ASTM D 624-86	98 N/mm
Cathodic Disbondment	ASTM G8-90 Method B using impressed current	Rating D
Early Fire Hazard	AS1530 Part 3 (1989)	2mm Sample

## LIMITATIONS

- Standard Aromatic based Polyurea products such as Tufflon – JF90 will change colour over time, with lighter colours changing more than darker colours. This does not affect the long-term physical performance of the lining
- If high joint movement is expected within first 8 hours, finish application of Tufflon-JF90 prior to midday
- Prior to overcoating, remove shiny surface with 80 grit sanding disc in order to aid adhesion of following coats
- Tufflon – JF90 will only achieve its full physical properties if applied by an experienced operator using properly functioning, plural-component, spray equipment
- Product requires up to 14 days to develop full physical properties and adhesion.

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## CONCRETE JOINT PREP

### Control Joints

Tufflon-JF90 will not foam or bubble when applied to wet concrete, however, its adhesion to the surface will be poor. For best results, ensure the concrete is older than 21 days and dry. Remove all debris and any old previously failed joint filler from the joint using a high-pressure water jet. To provide maximum protection to the top edge of the joint, it should be a sharp and clean 90° angle rather than bevelled. If necessary, saw-cut the joint to produce the correct profile and surface for the Tufflon-JF90 to adhere to. Vapour abrasive blasting, dry abrasive blasting or grinding may be used to produce suitable surface profiles.

Wait until the concrete is dry and vacuum clean. Priming the concrete surface is not required. Do not use backing rod or sand to partly fill the joint. Fill the joint with Tufflon-JF90 to its full depth and slightly overfill. Shave excess flush with surrounding concrete within 20 minutes. Tufflon-JF90 can only be processed through specialised plural equipment, operated by trained and experienced tradesmen

### Stress Cracks

Observe all information supplied above. Chase unintentional stress cracks in the concrete with a diamond saw to produce a sharp edged “U” shape. Use high-pressure water jet to clean cracks thoroughly. When dry, vacuum prior to filling saw-cut section with Tufflon-JF90 and shave excess flush with surrounding concrete

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## Calculation

### Usage Rate

Use the following formula to calculate how many meters of control or construction joint can be filled with 1 litre of Tufflon-JF90.

$$1 / ( (W \times D) / 1,000 ) = L$$

Where W=Joint Width (mm), D=Joint Depth (mm), L=Lineal Meters (m)

EXAMPLE Joint Width = 15mm and Depth = 50mm (on average)

Step 1:  $15 \times 50 = 750$

Step 2:  $750 / 1,000 = 0.75$

Step 3:  $1 / 0.75 = 1.33$

Therefore 1.33 Lineal Meters of joint can be filled with 1 litre of Tufflon-JF90

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## APPLICATION

### Equipment

Plural proportioning pump:	Graco E-XP2 or similar - heated, high-pressure, plural component
Gun:	Graco Fusion-AP or similar - Impingement mix, airless with pour nozzle extension fitted
Pressure of material at gun:	>2,000 psi
Temperature of material at gun:	65°C

### Environment

Relative humidity:	The relative humidity must be less than 85%
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### Mixing

Stir Part B at medium speed with a Graco Twistork drum stirrer for about 10 minutes then reduce speed to slow while pouring. Avoid air entrapment while stirring. For smaller containers use a mechanically powered flat paddle stirrer

### Thinning

Tufflon - JF90 should never be thinned

### Cleanup

Reactor Flush may be used for general clean-up of equipment and to flush the plural pumps and hoses. To remove cured polyurea and overspray from metal parts soak in SWELL. Use separate soak containers for part A and part B components. The use of plastic soak containers with removable baskets and clip-on lids makes the job easier. Replace the SWELL regularly as soon as it starts turning cloudy and dirty.

NOTE: NEVER USE SWELL TO CLEAN PAINTED SURFACES AS IT WILL STRIP THE PAINT. NEVER USE SWELL TO FLUSH PUMPS AND HOSES

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## COMPATIBILITY

### Primers

Civilox – LV100  
Civilox – LV110  
Civilox – HB200

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### Topcoats

Tufflon - PJF90

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## STORAGE & HANDLING

Store in dry, shaded conditions away from sources of heat and ignition and in the original properly sealed containers. Protect from heat and frost. Do not allow water to pond on the top of drums.

A shelf life of 18 months minimum is typical if stored under ambient conditions at 25°C

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## PACK SIZE

### 400L Kits

225Kg of Tufflon - JF90 Part A in a 200L Container

200Kg of Tufflon - JF90 Part B in a 200L Container

### 40L Kits

22.5Kg of Tufflon - JF90 Part A in a 20L Container

20Kg of Tufflon - JF90 Part B in a 20L Container

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## HEALTH & SAFETY

Tufflon - JF90 is for professional use only.

This product contains isocyanates and may require the use of air fed hoods.

This product should not be used without consulting the Safety Datasheet (SDS) as published on the Liquimix website first.

Observe all health and safety as well as environmental legislation

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