



FULAFLEX 650FC

Description

Fulaflex 650FC is a high performance, 1-part hybrid moisture curing construction sealant and adhesive, which cures to form a seal that is tough, elastic and weatherproof. Fulaflex 650FC is designed for multiple construction and industrial sealant/adhesive applications that require a fast-curing, tough and flexible finish in fabricating and caulking applications.

Standards Compliance

- **ASTM C-920** Type S, Grade NS, Class 25, Use: T1, A, G and O (Painted Metal) classification
- **ISO 11600** – Type F, Class 25, Subclass HM
- **ASTM C-719** – Highly Flexible - $\pm 25\%$ of original joint width (primed)
- **ASTM C794** (Adhesion in Peel) – PASS
- **ASTM C793** Weatherability - Excellent resistance to weathering and UV radiation, resists yellowing
- **ASTM C510** Staining and colour change - PASS

Benefits

- Isocyanate and solvent free
- Non-hazardous according to GHS classification
- Permanently flexible in temperatures ranging from -40°C to $+100^{\circ}\text{C}$ with short periods to 120°C
- No shrinking, no bubbling
- Excellent primer-less adhesion to many substrates
- No sagging
- High mechanical/dynamic stress resistance – Shock/Impact resistant
- Neutral adhesive – Does not attack bonded surfaces
- Vibration and sound-dampening properties
- Shore A Hardness ~ 55 . Suitable as an anti-pick sealant/adhesive in correctional facilities
- High bond strength - suited to Professional and DIY, construction, marine and automotive environments
- Excellent weathering resistance – Good colour stability and weather resistance
- Over-paintable wet-on-wet with many waterbased or solventbased paints (pre-testing recommended)
- Excellent chemical resistance properties* including but not limited to salt and chlorinated water, petrol and petroleum products, alkalis, acids, cleaning agents, lime water
- Excellent mould resistance properties
- Meets the criteria of a sealant for use in AS3740-2021 (Waterproofing of Domestic Wet Areas) waterproofing applications

*Refer to the HB Fuller Technical department for advice on the chemical resistance properties of Fulaflex 650FC.

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Uses

- Sealing expansion and control joints in floors, pavement, roadways, walls, roofs, wall and floor penetrations, cladding and brickwork
- Elastic bonding of metals, engineered plastics, wood and ceramic surfaces
- In applications where a level of chemical resistance is required
- In seals where acoustic properties are required
- Assembly of insulated and composite panels
- Vibration-proof bonding of metal components
- Multiple high performance bonding and sealing applications in transport – trains, buses, special purpose vehicles, caravans, 4 wheel drive trailers etc

Compatible Substrates

Concrete	GRP
Cement sheeting	Steel
Masonry	Plastics (pre-test)
Plasterboard	Galvanized Steel
Coated & other metals (pre-test)	Anodized Aluminium
ABS	Aluminium
Timber	Glass
Acrylic Sheet	Polystyrene

Performance Data

Property	Data
Specific Gravity	ca. 1.45
Sag	Nil
Shrinkage	0%
Skin Time	ca. 40-50 mins @ 23°C
Cure Rate	ca. 4 mm/day @ 23°C
Full Cure	After 7 days @ 23°C
Storage Life	12 months unopened
Durometer Hardness	Shore A ca. 55
Modulus 100% (ISO 37)	ca. 1.2MPa
Tensile Strength (ISO 37)	ca. 2.0MPa
Elongation (ISO 37)	ca. 300%
Service Temperature	-40°C to 100°C
Movement Capability	± 25%

Coverage

Joint Width mm	Joint Depth mm	Yield (300ml cartridge (Linear metres))	Yield (600ml sausage (Linear metres))
6 (min)	6	8.4	16.7
10	10	3.0	6.0
12	12	2.1	4.2
18	12	1.4	2.7
24	12	1	2.1
30	15	0.7	1.5

Approximate meters per liter of Fulaflex 650FC sealant as per table.

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Surface Preparation

All surfaces must be clean, dry, sound and free of dust, oil, old sealant or other contamination.

Lightly contaminated surfaces should be wiped with Isopropyl Alcohol (IPA) using the 2-rag wipe method. Apply IPA to a clean lint-free cloth and wipe onto the surface to be cleaned to solubilize and remove the majority of the contaminant. A clean dry cloth should then be applied to remove remaining contamination and dry the surface. Ensure wet cleaner is not allowed to dry on surface. For more heavily contaminated surfaces or where the IPA does not remove the contaminant, a generic wax and grease remover should be applied using the same 2-rag wipe method. Once this has been completed the surface should be given a final clean with IPA using the 2-rag wipe method to ensure the surface is adequately prepared. Adhesion to metals and some surface finishes can be further improved by light abrasion prior to cleaning with IPA using the 2 rag-wipe method. Manufacturers of plastics should be consulted about suitable cleaning solvents. Adhesion to plastics should be pre-tested. Mask either side of joint to produce a neat finish.

Use a suitable sized foam backing rod or polyethylene bond breaker tape to prevent three sided joint contact impeding the free and even deformation of the sealant in a cyclic joint. Open-cell polyurethane foam is recommended. Use a size 25% wider than the joint width that will compress when inserted into the joint.

Joint Design

Joint Width.	Recommended Joint Depth.
< 12 mm	Depth = Width
10 mm - 30 mm (max)	10 mm - 15 mm

A good joint design is imperative if a sound, durable seal is to be achieved. In general, joints should be designed to be at least 4 times as wide as the anticipated movement. Joint width and depth should not be less than 6 mm and depth should never exceed width.

Product Application

Cut tip off cartridge or end of sausage. Angle cut nozzle to desired size. Screw nozzle onto cartridge or set in sausage barrel gun. Apply sealant in a steady, continuous flow by pushing the sealant ahead of the nozzle so that it completely fills the joint and is in contact with both sides. Immediately after application, tool the sealant using a spatula. The use of water / soap solutions is not recommended. Avoid contact with alcohol or other solvent cleaners during cure. Remember to remove the masking tape before the sealant skins.

Painting

Flexible, acrylic-based emulsion coatings are best over Fulaflex 650FC, although pre-testing is always recommended to assess compatibility. Less flexible interior coatings are likely to crack due to their inflexibility. Oil based coatings and coatings containing a solvent are likely to remain tacky for an extended period when used over Fulaflex 650FC.

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Chemical Resistance

Fulaflex 650FC provides good resistance to salt and chlorinated water, petrol and petroleum products, alkalis, acids, many cleaning agents, lime water and is mould resistant. Some oils can cause change in appearance of the sealant (e.g. fading or expansion), although the mechanical performance of the sealant doesn't significantly change. Substrates exposed to chemicals must have adequate resistance to the chemicals involved. Consult the HB Fuller Technical Department for applications involving Fulaflex 650FC that require a level of chemical resistance.

Clean Up

Best results are obtained by masking prior to sealing to avoid the necessity for clean up. If sealant is applied to areas where it is unwanted, clean up using white spirits or another solvent cleaning solution that does not leave a residue. Cured product can only be removed mechanically.

Limitations

- Avoid prolonged exposure to high levels of chlorine
- Avoid contact with alcohol and other solvent cleaners during cure phase
- Pre-testing is required on marble or other highly porous stone - finish may be affected
- Solvent-based coatings may remain tacky
- Do not use on bituminous surfaces
- Do not use on materials that bleed oil and plasticisers or solvents, as this will affect adhesion (e.g. most rubbers)

- Not a fire rated or glazing sealant. Not suitable for glazing with glass, acrylic or polycarbonate sheets
- Not suitable for use in roofing lap joint applications where the sealant is feathered down to zero application weight – for such applications consider the use of silicone.
- Not suitable as a joint sealant or adhesive in applications of permanent immersion in salt or chlorinated water

Safety Information

This product is not considered hazardous under the classification of GHS WHS Version 8. Further safety information is available on the product SDS. Avoid contact with skin and eyes. Store in a dry place below 30°C. Keep out of reach of children. An MSDS is available from the H.B. Fuller representative in your state, HB Fuller Australia customer service, or downloadable from the HB Fuller web site, www.hbfuller.com.au.

Disclaimer

This technical data sheet summarises at the date of issue to the best technical knowledge of HB Fuller Australia. Since HB Fuller Australia cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this technical data sheet in the context of how the user intends to handle and use the product in the workplace. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company. Our responsibility for the products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

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TECHNICAL DATA SHEET

技术资料

Version 13
TDS Date: 03/12/2024

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