

MATRIX FC

FAST CURE POLYURETHANE ADHESIVE / SEALANT

2 January 2018

YOUR SMART ADVANTAGES

- Fast tack free time and cure speed
- Very high bond strength
- Excellent adhesion and sealing properties
- Good chemical resistance
- Excellent water resistance
- Paintable
- May be used in contact with both sea and fresh water
- One component, no mixing required
- Excellent resistance to weathering and aging
- Exceptional noise vibration and impact dampening characteristics
- Internal and external application
- Excellent acoustic properties
- Slump resistant
- Resistant to fungal attack

DESCRIPTION

Matrix FC is a high performance, fast cure, single component polyurethane adhesive/sealant.

Matrix FC exhibits exceptional adhesion capabilities and is suitable for a wide range of industrial and automotive adhesion applications for internal and external uses.

USES

- Automotive structural adhesive in bus, truck and industrial vehicle assembly.
- Marine commercial and pleasure craft
- Air-conditioning and refrigeration industrial and commercial applications.
- Metal working, joining and sealing metal panels storage vessels, heavy shipping container vessels requiring sealing or panel installation.
- General industrial and maintenance.
- For bonding sheet metal, aluminum, stainless steel, ABS, GRP, Injection molding PU and PVC as well as timber.
- Mining applications where sealing of cavities (joints) and adhering panels.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Clean all surfaces by removing foreign matter and contaminants such as oil, dust, grease, frost, water, surface dirt, old sealants and any protective coating. Porous substrates should be cleaned by grinding saw cutting or blast cleaning (sand or water). Dust, loose particles, etc should be blown out of joints with oil free compressed air or vacuum cleaned. Non porous and plastic surfaces should be cleaned by solvent or mechanical means. Cleaning solvents should not be allowed to air dry or evaporate without being wiped with a clean, dry cloth.

PRIMING POROUS SUBSTRATES

- Absorbent or porous substrates will allow a bead of water to easily soak into and wet out the surface of the substrate.
- For maximum performance on porous surfaces and, in all periodically immersed and submerged applications, use **Bostik N49 Primer**.
- Porous substrates not subject to immersion or ponded water, e.g. vertical expansion joints in concrete or masonry structures, do not require priming if clean, dry and uncontaminated.

PRIMING NON-POROUS SUBSTRATES

- **Bostik N40 Primer** is recommended for non-porous plastic and metal substrates.
- Prime all plastics and metallic non-porous substrates with **Bostik N40 Primer** using the two-cloth method described below.
- e.g. UPVC outlets and pipe work: brass, copper fittings, stainless steel trays and flashings.

TWO CLOTH METHOD – N40 PRIMER APPLICATION

- Dampen a clean and dry cloth with **Bostik N40 Primer** and spread evenly over the non-porous substrate using a cleaning/rubbing action.
- With a second clean and dry cloth, immediately wipe all primer residues off with a buffing action.
- Allow the substrate to dry for a minimum of 5 minutes before installing Bostik **Matrix FC**.
- Do not leave the primer longer than 4 hours before applying sealant/adhesive.

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- Clean and re-prime if the primed surface is contaminated before **Bostik Matrix FC** is applied.

Pierce the membrane completely from the top of the cartridge and screw on the supplied nozzle. (Having previously cut this to give the required angle and bead size.)

Place the cartridge in a suitable Bostik extrusion skeleton type gun and press the trigger.

For sausages, a barrel gun is required, which is also available from Bostik. Clip/cut the end of the sausage and place complete sausage with pierced end located at the top of the nozzle. Screw top of nozzle and housing on barrel of gun. Using the trigger on the gun, extrude product from the sausage. To stop product flow, depress using the thumb on to catch plate mechanism located at the very rear of the gun, directly above the trigger.

Apply a bead of Matrix FC to one surface to be bonded. Bring the opposite surface into contact with the wet adhesive and compress to give a glue line thickness of 1 to 2mm. Clamp together until cured, at least 8 hours at 20° to 25°C.

COVERAGE

The coverage below is approximate and is dependent on substrate conditions.

Pack Size	Lineal Meters		
	3mm bead	6mm bead	20mm bead
365gm cartridge	43	10	2.3
720gm sausage	81	19	4.4

PRECAUTIONS

- May be used for joints subjected to constant immersion in water, provided Matrix FC has achieved full cure (7 days at 20°C) prior to immersion.
- Do not apply Bostik Matrix FC to any material containing bitumen. **Do not** allow bitumen to contact Bostik Matrix FC.
- May be painted over after full cure however, Matrix FC is not recommended for use under solvent-based coatings such as gloss enamels. A field test is recommended to ensure compatibility.
- Matrix FC should not be applied with wet tooling techniques. Using solvents, water, detergent or soap solutions is not recommended.
- Matrix FC should not be applied to surfaces with special protective or cosmetic coatings such as mirrors, reflective glass surfaces coated with Teflon without prior consultation with a Bostik representative..
- Avoid contact with water prior to initial cure. Matrix FC can be affected by water before or during cure.
- Do not apply, store or cure Matrix FC in areas where unusually high humidity or free water are present during the application or initial cure.
- Matrix FC should not be used in highly chlorinated areas such as swimming pools, spas etc without prior consultation with a Bostik representative.
- Do not apply at temperatures below 5°C and temperatures above 35°C

- Ensure cartridge temperature and contents are between 10°C and 30°C prior to applications. This will eliminate curing problems.
- Ensure Bostik Primer Selection Guide is referred to prior to application of Matrix FC.
- Do not use alcohol based cleaners to prepare surfaces or to clean up uncured adhesive. Alcohols will inhibit the adhesives cure.
- Take care when using Matrix FC on 'colour bonded' or powder coated steel or aluminium. Always conduct tests to ensure adequate adhesion on the particular grade of metal to be used.
- As all substrates and conditions are different, it is strongly recommended that the applicator or end user conducts their own tests and ensure the product meets their own end use requirements.

PAINTABILITY

- Matrix FC can be painted after fully curing by most conventional coating systems including epoxy resins and acrylic coatings. Coatings containing high solvent contents such as gloss enamels or high oil-based undercoats may cause the surface of Matrix FC to react resulting in a tacky soft surface.
- A field test is recommended to ensure compatibility.
- To obtain best appearance and performance the paint must approximate the elongation capabilities of Matrix FC. Thin or watered down coatings will surface craze very quickly upon movement.
- For sections less than 3mm thickness Matrix FC may be painted in over 24 hours.
- For sections greater than 3mm thickness Matrix FC may be painted 48 hours after application.
- High build coatings with some elastomeric ability such as quality acrylic emulsions have the capability to absorb low movement without significant distortion of the paint film.
- For additional information contact a Bostik representative.

PRODUCT CHARACTERISTICS

Colour	Black, grey, white.
Product code	
300ml/365gm cartridge/20 per carton	
Black	30803254
Grey	30840099
White	30801127
600ml/720gm sausages/20 per carton	
Black	30840102
Grey	30840100
White	30840101
300ml/360gm sausages/20 per carton	
Grey	30840105
White	30840104

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TYPICAL PERFORMANCE DATA (approx.)

Appearance	Non-sag smooth Thixotropic paste
Stain and colour change	None
Chemical type	Polyurethane (1 component Moisture cure)
Tack-free time (skin time)	45 minutes
Full cure	7 days at 25°C and 50% RH
Service temperature	-40°C to + 80°C continuous
Chemical Resistance	Good
Specific Gravity	1.23 ± 0.03
Shore A Hardness	Approx. 45 – 50
Tensile Strength at Break	> 2.5 N/mm ²
Tool working time	30 minutes
Application temperature	+ 5°C to + 35
Elongation modulus at 100%	> 450%
Chemical Resistance	Resistant to dilute acids and alkalis, some solvents, intermittent contact with diesel and petroleum.
Potable water approval	AS4020

Matrix FC is tested to international and Australian Standards AS1527, ASTM D412, ASTM C719 and ASTM C793.

STORAGE & SHELF LIFE

Store in a cool, dry place, out of direct sunlight. Storage areas must be well ventilated and comply with Local, State and Federal regulations. For maximum shelf life, store between 5°C and 20°C. Shelf life is up to 12 months when stored in original, unopened containers, under the above conditions.

HEALTH & SAFETY

Please refer to the Safety Data Sheet prior to use.

CLEAN UP

Clean up uncured material and equipment immediately after use using **Bostik Handy Wipes**. Cured material can be removed by mechanical means only.

For emergency information contact the Poisons Information Centre, phone 131 126 or the Emergency Response Service, phone 1800 033 111.

BOSTIK HOTLINE

Smart help 1800 898 551



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