



a.b.e.® Construction Chemicals **flexothane 27**

POLYURETHANE CONSTRUCTION SEALANT

DESCRIPTION

flexothane 27 is an elastic, one part, low modulus, gun grade moisture curing polyurethane sealant.

USES

Flexothane 27 is designed for sealing of expansion and contraction joints, external walling cladding joints, sealing of window and door joints, sealing of connecting joints between wall and windows. Good adhesion properties on most common building materials.

ADVANTAGES

- One-component, easy to gun
- Non-sag consistency
- Non-tack/does not pick up dirt
- Good adhesion on the most common construction materials
- Over paintable with water, solvent based paints
- Good weathering and ageing properties
- Can be applied vertically or horizontally

PREPARATION OF JOINTS

Thorough preparation of joints is essential if a satisfactory seal is to be obtained. For concrete, stone or masonry surfaces, all traces of dust, laitance, mould release oil, previous sealant and all other foreign materials must be removed by sandblasting or mechanical abrasion, followed by blowing out the joints with dry, oil free compressed air. For glass, metal and other non-porous surfaces, ensure these are free of coatings, oils and grease by cleaning with a suitable solvent. Suitable solvents include **abe® thinners no. 3**, IPA or MEK. Ensure the solvent is compatible with the substrate prior to cleaning.

TYPICAL PHYSICAL PROPERTIES OF CURED MATERIAL

Chemical basis	Polyurethane
Cure mechanism	Moisture curing
Specific gravity	1.38
Tack free time at 23°C and 50% R.H.	Approx. 60 minutes
Curing at 23°C and 50% R.H.	3 mm/24hr
Hardness shore A (DIN 53505)	25
Elongation at break (DIN 53504)	> 700%
Tensile strength	Approx. 1.3N/mm ²
Elastic recovery (DIN EN 27389)	> 80%
Admissible joint movement	25% of average joint width
Application temperature	5°C to 35°C
Temperature resistance	-40°C to +80°C

PRIMING OF JOINTS

flexothane 27 generally has good adhesion properties without the use of a primer on most common building substrates. However, it is advisable to do a preliminary check to ensure adhesion to the substrate.

Porous substrates, such as wood, concrete, and fibre cement, should be primed with **flexothane porous primer U-110**. Using a brush spread a thin layer of primer into prepared joints, allow at least 30 minutes for the primer to dry. In the case of an excessively porous surfaces, a second coat should be applied. Sealant must be applied within 5 hours of priming. Non-porous surfaces such as glass, ceramics and metals must be primed with **flexothane non-porous primer U-120**. Surfaces must be wiped with a clean dry cloth moistened with **flexothane non-porous primer U-120**.

NOTE: flexothane 27 has been performance certified incorporating the use of primers. The use of primers can prevent the formation of bubbles and chemical reaction which may be caused by excess moisture, excessive heat and thermal movement during and after the application of sealant. Another important function of priming is the guaranteed long term adhesion of **flexothane 27** to joints. The primers also prevent staining in the case of porous substrates as well as migration of plasticizer to the substrates/sealant interface.

FILLETS

Where a triangular pointing fillet cannot be avoided, the fillet must be applied such that it is not less than 10 mm across the face and with a rounded (convex) surface. Where there is a gap greater than 5 mm between the adjoining surfaces, a back-up material must be inserted, and the sealant applied in a sufficiently large fillet to ensure adequate adhesion area on each surface.

BACK-UP MATERIAL

Suitable back-up materials must be used to adjust sealant depth in the joint. **abe® dura.®sheet** is self-releasing material, but if **abe® dura.®sheet** soft-board or cork has been used as the joint filler, a plastic strip bond breaker (polyethylene) must be placed on the filler surface before sealant is applied.

PROTECTION OF ADJACENT SURFACES

Masking tape applied to areas adjacent to the joint will protect them from contamination and enable the joints to be finished in a neat line. The tape should be applied after the joint has been prepared, prior to any priming or sealing operation and removed after all finishing and tooling operations have been completed, but before the sealant has cured.

COVERAGE

THEORETICAL COVERAGE FOR ESTIMATING PURPOSES	
Joint Dimensions (mm)	Metres per 600 ml sausage
25 x 12	2.00
20 x 12	2.50
12 x 12	4.17
6 x 6	16.67
NOTE: Allow 200 ml of flexothane porous primer U-110 for approximately 12 cartridges of flexothane 27 . Allow 200 ml of flexothane non-porous primer U-120 for approximately 24 cartridges of flexothane 27 .	

APPLICATION

Application can be by hand operated or pneumatic gun. It is essential to ensure complete contact between the sealant and the joint surfaces.

TOOLING

Tooling of sealants is necessary for complete air-free filling of voids and to assist in making contact to the surfaces to which the sealant is applied. The surfaces of the joint should be smoothed with a clean putty knife or spatula.

MIXING

Not required.

PAINTING OVER SEALANT

It is not recommended that a flexible sealant be over-coated by less flexible coatings as joint movement will cause rupturing of the coating. Also, plasticizer migration from the sealant into the coating could result in excessive dirt pick-up. Based on the outcome of preliminary tests the sealant may be over painted with a good quality water or solvent based paint.

CLEANING

Tools should be cleaned immediately after use, and before the material has cured, with **abe® super brush cleaner** followed by washing with soap and water.

MODEL SPECIFICATION

The one part polyurethane construction sealant will be **flexothane 27** a single-pack, medium modulus, moisture-curing polyurethane construction sealant as supplied by **a.b.e.® Construction Chemicals**.

flexothane 27 will be applied in accordance with the recommendations of **a.b.e.® Construction Chemicals**.

PACKAGING

600 ml sausages packed 20 per box.

HANDLING & STORAGE

This product has a shelf life of 12 months if kept in a dry cool place in the original packaging. In more extreme conditions this period might be shortened.



HEALTH & SAFETY

Uncured **flexothane 27** is toxic and should not be allowed contact with skin and eyes. The use of gloves and eye protection is advised. Splashes into eyes should be washed immediately with plenty of clean water and medical advice sought. Ensure the working area is well ventilated during application and drying. Always wear gloves when working with the material and avoid excessive inhalation and skin contact.

Cured **flexothane 27** is inert and harmless.

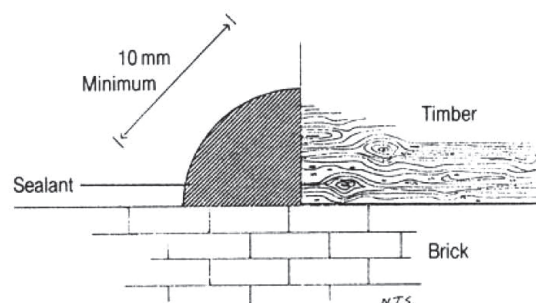
IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** endeavors to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot - because **a.b.e.®** has no direct or continuous control over where and how **a.b.e.®** products are applied - accept any liability either directly or indirectly arising from the use of **a.b.e.®** products, whether or not in accordance with any advice, specification, recommendation, or information given by the company.

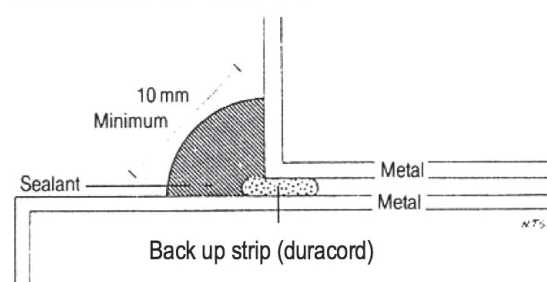
FURTHER INFORMATION

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. **a.b.e.® Construction Chemicals** has a wealth of technical and practical experience built up over years in the company's pursuit of excellence in building and construction technology.

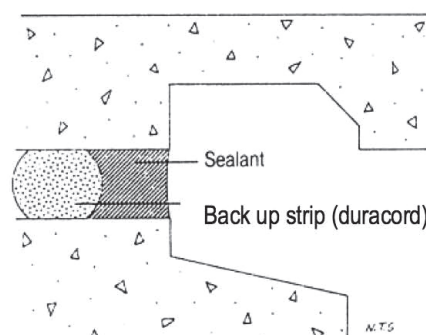
EXAMPLE OF VERTICAL JOINT



EXAMPLE OF VERTICAL METAL JOINT



PLAN VIEW OF VERTICAL EXPANSION JOINT



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