



a.b.e.® Construction Chemicals **flexothane G** Gun Grade

BIODEGRADATION RESISTANT POLYURETHANE ELASTOMERIC SEALANT

DESCRIPTION

flexothane G is a two component, elastomeric polyurethane joint sealant.

USES

- **flexothane G** is a sealant used for sealing expansion joints, stress relief joints and movement joints in building and other civil engineering structures.
- **flexothane G** is designed to meet many of the requirements of the water industry in non-potable water retaining structures e.g. sewerage treatment and effluent works.
- **flexothane G** is particularly suited for applications requiring resistance to bacteriological conditions such as in sewerage treatment works where it is resistant to aerobic and anaerobic bacteriological attack.

ADVANTAGES

- Forms a tough, elastic, rubber-like seal.
- Accommodates continuous and pronounced cyclic movement in all planes.
- Excellent adhesion to most common construction materials.
- High resistance to ageing and good resistance to extreme climatic changes.
- Specific primers for porous and non-porous surfaces ensure excellent adhesion.
- The product is **NOT** suitable for use in potable water.

JOINT GEOMETRY

Minimum width of any joint must be 6 mm. The width of joint to be sealed should be four times that of the calculated joint movement. For joints up to 12 mm in width the sealant depth equals the joint width; for joints greater than 12 mm in width, the sealant depth is half the width. The joint faces must be parallel.

JOINT PREPERATION

Thorough preparation of joints is essential if a satisfactory seal is to be obtained. For concrete, stone or masonry substrates, all traces of dust, laitance, mould oil, any previous sealant and all other foreign material must be removed by mechanical grinding, followed by blowing out with dry oil-free compressed air. All substrates must be completely dry.

BACK UP MATERIAL

Suitable back-up material, such as **abe® dura.®cord** or **abe® dura.®sheet** must be used to adjust sealant depth in the joint to comply with correct joint geometry. **abe® dura.®cord** is a self releasing material, but if soft board is used as the joint filler, a plastic bond breaker strip must be placed on the filler surface before sealant is applied. The use of bond breaking tape is not required in expansion joints where **abe® dura.®cord** or **abe® dura.®sheet**, cellular polyethylene fillers are used except where a tear off strip is employed on the **abe® dura.®sheet**. In this instance, it is recommended that a tape be placed over the cut edge of the **abe® dura.®sheet** to prevent a mechanical bond occurring.

Where the sealant is subject to a hydrostatic head then a 100-200kg/m³ density **abe® dura.®sheet** must be used.

Any expansion joint filler must be checked to ensure it is tightly packed and no gaps or voids exist at the base of the sealing slot before positioning a bond breaker.

PROPERTIES OF WET MATERIAL

Mixing ratios	Do not split kit
Density	1,45g/cm ³
Colour	Base: White Activator: Black Mixed: Grey
Dilution	Do not dilute
Flash point	>100°C
Toxicity	Uncured material is toxic

PROPERTIES DURING APPLICATION	
Application by	Extrusion gun
Pot life	2-4 hours @ 25°C
Slump resistance	Shows no slump in joints of 38 mm-19 mm cross section
Curing time	Tack free: 72 hours Full cure: 7 days
Application temp range	4°C to 35°C
Fire resistance of wet film	Non flammable

PROPERTIES OF CURED MATERIAL	
Service temperature	-5°C to +80°C
Movement tolerance	Total movement must never exceed 25% of neutral width of joint
Staining of porous surface	Does not stain
Shore A hardness	25
Chemical resistance	Resists: Dilute acids and alkalis, fats, vegetable oils, petroleum fuels, oils and greases
Water resistance	Excellent
Atmospheric oxidation resistance	Excellent

PRIMING OF JOINTS

Porous surfaces must be fully primed with **epidermix 326**, brushed well into the faces of the joint to ensure complete coverage. The primer film should be allowed to lose its solvent (approximately 30 minutes to 2 hours depending on the temperature and humidity) before sealant is applied.

Non-porous surfaces must be primed with **epidermix 391**, brushed well into the faces of the joint to ensure complete coverage. The primer film should be allowed to lose its solvent (approximately 30 minutes drying) before sealant is applied.

flexothane G must be introduced into the joint during this time period. Primer open time is 4 hours. If however, the primer is allowed to dry longer than 6 hours, then the surface must be re-ground and re-primed.

MIXING

flexothane G is supplied in a single container. The base is covered by a cellophane sheet. On top of the cellophane is a plastic container of activator paste. To prepare the material for use, remove the activator and cellophane sheet. Remove any base adhering to the cellophane and replace the base in the container. Remove the entire activator paste from its container and add to the base. Mix the material thoroughly, preferably with a slow speed drill (not in excess of 250 rpm) fitted with a suitable paddle, until an even, streak free colour is obtained. Periodically scrape the sides and base of the container with a spatula or small trowel to ensure complete blending of components, complete mix will take five to ten minutes of mixing.

NOTE: If material is not mixed thoroughly, its performance will be impaired.

PROTECTION OF ADJACENT SURFACES

Masking tape applied to areas adjacent to joint will protect them from smearing and enable the joints to be finished to a neat line. The masking 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.

APPLICATION

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

Tooling of sealant is necessary to avoid air entrapment and to assist in making contact by wetting the surfaces to which the sealant is applied.

The surfaces of the joint should be smoothed with a clean knife or spatula. A minimum of surface lubricant such as mild solution of liquid soap and water sprayed onto a knife or tooling spatula may be used to assist the process. Any masking tape should be removed immediately after tooling.

CLEANING OF TOOLS

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



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DATE UPDATED: 10/06/14

COVERAGE

Refer to “Quantities for Estimating Purposes” for anticipated coverage.

COVERAGE FOR ESTIMATING PURPOSES

Joint size in mm	Litre per Metre	Metre per 2 litre
10x10	0.100	20.0
15x10	0.150	13.0
20x10	0.200	10.0
20x15	0.300	6.70
20x20	0.400	5.00
25x13	0.320	6.20
40x20	0.800	2.50
50x25	1.250	1.60

On average 1 x 250ml tin of **epidermix 326** per 3 tins/6 litres **flexothane G**.

PROTECTION ON COMPLETION

The finished sealant should be protected from traffic until the sealant has fully cured. Over painting of sealant is not recommended because of the inability of paint films to accept movement. However, if definitely required, trials should be carried out to determine compatibility.

MODEL SPECIFICATIONS

Two-component, gun grade, polyurethane sealant for construction and expansion joints. Not for potable water retaining structures. Primer: **epidermix 326** for porous surfaces and **epidermix 391** for non porous surfaces.

The sealant will be **flexothane G**, a two-component, gun grade, elastomeric joint sealant applied in accordance with the recommendations of **a.b.e.® Construction Chemicals**, including primers: **epidermix 326** for porous surfaces and **epidermix 391** for no porous surfaces. The sealant will have a movement tolerance of 25% of the neutral joint width.

PACKAGING

flexothane G is supplied in 2 litre kits.

HEALTH & SAFETY

Wet **flexothane G** is toxic. Always ventilate a working area very well during application and drying. Always wear gloves when working with the material and avoid excessive inhalation and skin contact. Clean hands well before smoking or eating. If material is splashed in the eye, wash well with copious quantities of clean water and seek medical attention.

HANDLING & STORAGE

flexothane G has a shelf life of 12 months when stored in the original packaging in a cool dry place. In more extreme conditions this period might be shortened.

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.



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