a.b.e.® Construction Chemicals

flexothane 1H

ELASTOMERIC JOINT SEALANT

DESCRIPTION

flexothane 1H is a an elastomeric, one-part, moisture cured, thixotropic polyurethane based adhesive and sealant.

USES

flexothane 1H has a high surface hardness, permanent elasticity and high tensile strength. **flexothane 1H** has excellent adhesion on all typical construction materials.

flexothane 1H is very suitable in wood and metal construction applications, especially where highly flexible bonding properties are required.

flexothane 1H is also suitable for sealing of active joints, bedding of panels, coping joints, window and door perimeter sealing, connection joints for typical applications in the building and prefabrication industry.

flexothane 1H is also suitable for sealing floor joints, roof-tile bonding, sealing and bonding of metal elements (ventilation ducts, gutters and spouts) etc.

ADVANTAGES

- Bonds and seals at the same time.
- Permanently flexible.
- Non-sag consistency - exceptional thixotropy.
- Adhesion to a wide range of substrates.
- Vibration and sound dampening properties.
- No change in volume – no shrinkage.
- High bond strength.
- Excellent tooling properties.
- Allows equalised stress transfer due to permanent elasticity.
- Excellent resistance to ageing and weathering.
- Easy to use one part.
- Sandable and over-paintable with many water/solvent based paints.

TYPICAL PHYSICAL PROPERTIES DURING APPLICATION	
Application by	Extrusion gun
Tack free time @ and 50% R.H.	55-65 minutes
Cure rate 23°C @ 50% R.H.	3 mm/24 hr
Application temperature	5°C to 35°C
Cure mechanism	Moisture cured
Chemical basis	Polyurethane
Specific weight	1.27 ± 0.02 gr/cc

TYPICAL PHYSICAL PROPERTIES OF CURED MATERIAL	
Service temperature	-40°C to +80°C with short periods at 120°C
Movement accommodation factor	Total movement must never exceed 12,5% of neutral width of joint
Elastic recover (DIN 52458)	85%
Elastic modulus @ 100% (DIN 52455)	0,8 ± 0.1 N/mm²
Tensile strength (DIN 53504)	± 1.9 ± 0.1 N/mm²
Elongation @ break (DIN 524504)	≥ 550
Shore A Hardness (DIN 53504)	40-45

PREPARATION OF JOINTS

Thorough preparation of joints is essential if a satisfactory seal is to be obtained. For concrete surfaces, stone or masonry, all traces of dust, laitance, mould oil, any previous sealant and all other foreign material must be removed by means of sandblasting or mechanical abrasion, followed by dust removal by means of blowing out with dry, oil free compressed air. For glass surfaces, ceramic or metal, all traces of oil, grease or protective coatings or film should be completely removed. The method of removal is governed by the nature of the contaminant. Generally the surfaces are cleaned with alcohol or **abe® thinners no. 3**. The cleaning material should be checked for compatibility with materials that it will come into contact with.

PRIMING OF JOINTS

flexothane 1H generally has good adhesion to most common building substrates even without the use of a primer. However, it is advisable to do a preliminary check. The use of primers ensures good bonding. Porous substrates, such as wood, concrete, and fibre cement, should be primed with **flexothane porous primer U-110**. Primer must be brushed well into the faces of the joints, to ensure complete coverage (thin layer). Drying time is 30 minutes minimum and 5 hours maximum. In the case of excessively porous surfaces, a second coat should be applied. 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 1H 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 1H** 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.®cord** is self-releasing material, but if **abe® dura.®cord**, soft-board or cork has been used as the joint filler and the sealant is going to applied without **abe® dura.®cord**, 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 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.

MIXING

No mixing required.

COVERAGE

THEORETICAL COVERAGE FOR ESTIMATING PURPOSES	
Cross section of joint (mm)	**Metres per 600ml sausage**
25 x 12	2,00
20 x 12	2,25
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 1H**. Allow 200 ml of **flexothane non-porous primer U-120** for approximately 24 cartridges of **flexothane 1H**.	
No allowance has been made for wastage	

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 to avoid entrapment of voids and to assist in wetting out the surfaces to which the sealant is applied. The surfaces of the joint should be smoothed with a clean knife or spatula. A mild solution of liquid soap and water can be sprayed onto the tooling spatula if required.

CLEANING

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.

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.

APPLICATION TEMPERATURE

5°C to 40°C.

MODEL SPECIFICATION

Single-pack, moisture-cured, medium modulus, moisture-curing polyurethane construction adhesive sealant.
Primer: U-110 for porous substrates such as concrete.
Primer: U-120 for non-porous substrates such as metal and certain plastics.

The sealant will be **flexothane 1H**, a one-component, moisture-cured, medium-modulus polyurethane sealant applied in accordance with the recommendations of **a.b.e.® Construction Chemicals**, including **primer U-110** or **primer U-120** where necessary.

Do **NOT** use in swimming pools.

PACKAGING

600 ml sausages packed 20 in a 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 1H** 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 1H** is inert and harmless.

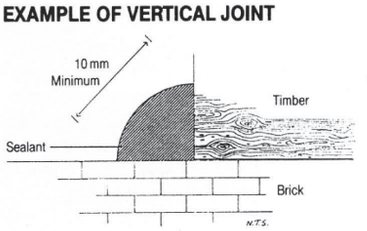
IMPORTANT NOTE

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.

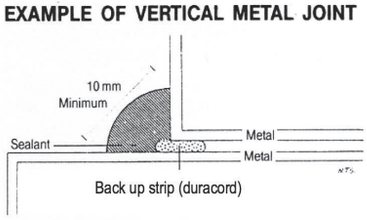
FURTHER INFORMATION

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.

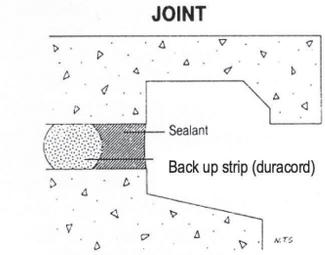
EXAMPLE OF VERTICAL JOINT



EXAMPLE OF VERTICAL METAL JOINT



PLAN VIEW OF VERTICAL EXPANSION JOINT



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