a.b.e.® Construction Chemicals

METHODOLOGY

Sealing of expansion and construction/contraction joints

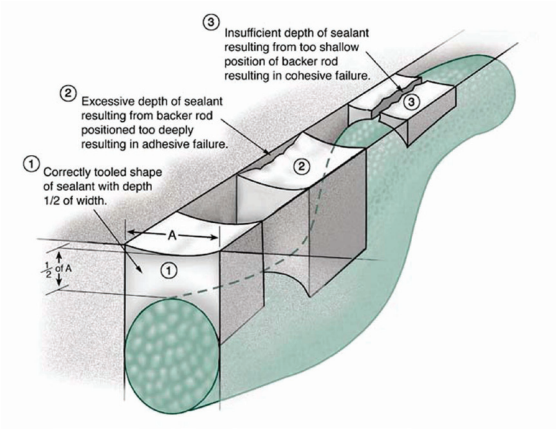
with polysulphide and polyurethane joint sealants

SURFACE PREPARATION: REFER TO PREPARATION OF SURFACES DATASHEET.

Cement-based substrates must be fully cured prior to coating application. All surfaces must be sand blasted or mechanically dry ground, to remove all surface laitance and other contaminants, followed by blowing out with clean, dry compressed air. All surfaces must be completely dry.

JOINT DESIGN

Joints shall be accurately formed and prepared to provide the correct slot sealing dimensions. Minimum width of any joint must be 6mm. The width of joint to be sealed should be four times that of calculated movement. For joints up to 12mm in width the sealant depth must equal the joint width; for joints 12mm to 24mm wide the depth must be 12mm and finally for joints greater than 24mm in width, the sealant depth must be half the width. The joint faces must be parallel. (Refer to individual product datasheets for joint design) In trafficked areas the sealing slots shall be so constructed that at no time during the design operating cycle of the joint will the sealant protrude above the surface of the joint. (This may mean recessing the level of the sealant 5mm to 8mm below the pavement surface dependent on the time of year and temperature prevailing at time of sealing).



NOTE: Joints expected to withstand hydrostatic or shear forces must have a width to depth ratio of 1:1.

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 tape should be applied after joint preparation but prior to priming or sealing. The tape to be removed from the joint edges once the tooling operations have been completed for the joint.

BONDING/PRIMING

Porous surfaces must be fully primed for brush application to concrete, stone, brickwork, timber and unglazed edges of ceramic tiles. Brush well into the faces of the joint, to ensure complete coverage. Avoid over priming resulting in excess primer in the base of the joint or application beyond faces. The primer film should be allowed to lose its solvent before sealant is applied. (Refer to primer data sheet). If, however, the primer is allowed to dry longer than 6 hours, the surface must be re-ground and re-primed. Non-porous surfaces must be primed with a one-pack material which is brushed onto the surface in the normal way. (Refer to individual product datasheets for primer requirements)

INSTALLATION OF BACKING MATERIAL

dura.®cord should be compressed into the joint to approximately 70% of its original size. Where hydrostatic pressures are present, compression should be to approximately 40% of its original size. For most effective results, **dura.®cord** must be inserted into the joint to a depth that will accommodate the depth of sealant specified. Bond breakers are not required as elastomeric sealants will not bond to **dura.®cord**.

MIXING

For two component sealants add the entire contents of the activator container to the base material container and mix thoroughly using a suitable paddle stirrer attached to a variable speed drilling machine (Refer to individual product datasheets for both mechanical and hand mixing requirements) until an even colour, free from streaks, is obtained. Periodically scrape the sides and base of the container with a spatula or small trowel to ensure complete blending of components.

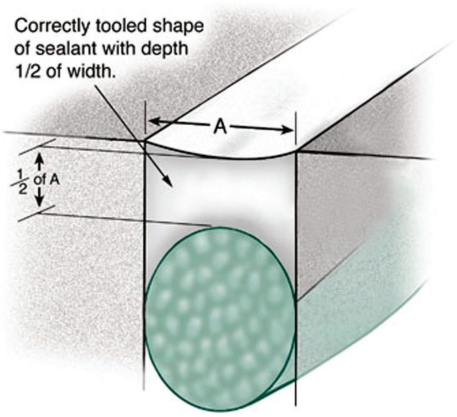
NOTE: If the material is not mixed thoroughly, its performances will be impaired.

TWO COMPONENT SEALANT INSTALLATION

Application to primed surfaces can be by hand or pressure-operated gun or by trowel or by pouring, according to the cross-section of the joint to be filled. For ease of application the use of a follower plate to extract the sealant from the tin is recommended. It is essential to ensure complete contact between the sealant and the joint surfaces. Tooling of sealant is necessary for complete air-free filling of voids and to assist the wetting out of the sealant to the joint faces. The surfaces of the joint should be smoothed with a clean putty knife or spatula. A minimum of lubricant such as diluted detergent solution applied to the tooling device may be used to assist the process. Any masking tape should be removed immediately after tooling.

SINGLE COMPONENT SEALANT INSTALLATION

Application to primed surfaces can be by hand or pressure-operated gun. It is essential to ensure complete contact between the sealant and the joint surfaces. Tooling of non-self-levelling sealants is necessary for complete air-free filling of voids and to assist the wetting out of the sealant to the joint faces. The surfaces of the joint should be smoothed with a clean putty knife or spatula. A minimum of lubricant such as diluted detergent solution applied to the tooling device may be used to assist the process. Any masking tape should be removed immediately after tooling.



POTABLE WATER RETAINING STRUCTURES

(Can also be used for expansion and contraction joints, where the structure is subject to a cyclic movement).

dura.®kol G HM with **epidermix 326** for porous substrates and **epidermix 39**1 for non-porous substrates.

- Requirements to install **dura.®kol G HM** joint sealant:
- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **epidermix 326/epidermix 391***
- **dura.®kol G HM**
- Follower plate*
- Long barrel gun*

EXPANSION AND CONTRACTION JOINTS (VERTICAL & HORIZONTAL)

dura.®kol G LM with **epidermix 326** for porous substrates and **epidermix 391** for non-porous substrates.

- Requirements to install **dura.®kol G LM** joint sealant:
- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **epidermix 326/epidermix 391***
- **dura.®kol G LM***
- Follower plate*
- Long barrel gun*

* Available from **a.b.e.® Construction Chemicals**

EXPANSION AND CONTRACTION JOINTS (HORIZONTAL)

dura.®kol P LM with **epidermix 326** for porous substrates and **epidermix 391** for non-porous substrates.

- Requirements to install **dura.®kol P LM** joint sealant:
- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial drill with slow speed setting
- Mixing paddle
- Masking tape
- **dura.®cord***
- **epidermix 326/epidermix 391***
- **dura.®kol P LM***
- Follower plate*
- Long barrel gun*

GENERAL JOINT SEALANTS

(Can be used in various applications including window and door perimeter joints, expansion and contraction joints)

flexothane 1, **flexothane 1H** and **flexothane 27**, with **flexothane** non porous primer U-120 and **flexothane** porous primer U-110.

- Requirements to install **flexothane 1**, **flexothane 1H** and **flexothane 27** joint sealants:
- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Masking tape
- **dura.®cord***
- **flexothane U110** & **U-120** primers*
- **flexothane 1**, **flexothane 1H** and **flexothane 27***
- Skeleton/Long barrel gun*

CHEMICALLY RESISTANT LOW MOVEMENT CONSTRUCTION JOINTS

flexothane CTW with **epidermix 116** primer where joints exceed 12mm wide.

- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **epidermix 116** (refer datasheet)*
- **flexothane CTW***
- Follower plate*
- Long barrel gun*

ABRASION RESISTANT LOW MOVEMENT JOINTS

flexothane EPU with **epidermix 326** primer on porous surfaces.

- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **epidermix 326***
- **flexothane EPU***
- Follower plate*
- Long barrel gun*

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SEWERAGE TREATMENT WORKS AND NON POTABLE WATER RETENTION STRUCTURES

(Can also be used for expansion and contraction joints, where the structure is subject to a cyclic movement).

flexothane G with **epidermix 326** primer for porous surfaces.

- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **epidermix 326***
- **flexothane G***
- Follower plate*
- Long barrel gun*

FUEL RESISTANT CONCRETE AND ASPHALT JOINT SEALANT

flexothane HS with **flexoprime A** for asphalt joints and **flexoprime C** for concrete joints.

- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **flexoprime A** & **flexoprime C***
- **flexothane HS***
- Follower plate*
- Long barrel gun*

EXPANSION AND CONTRACTION JOINTS (HORIZONTAL)

flexothane P with **epidermix 326** for porous substrates and **epidermix 391** for non-porous substrates.

- Requirements to install **flexothane P** joint sealant:
- Grinder (dependant on site requirements)
- Oil and moisture free compressed air
- Industrial variable speed drill
- Paddle stirrer
- Masking tape
- **dura.®cord***
- **epidermix 326/epidermix 391***
- **flexothane P***
- Follower plate*
- Long barrel gun*

* Available from **a.b.e.® Construction Chemicals**