



# a.b.e.<sup>®</sup> Construction Chemicals **dura.<sup>®</sup>kol G HM** Gun Grade High Modulus

## ELASTOMERIC POLYSULPHIDE JOINT SEALANT

### DESCRIPTION

**dura.<sup>®</sup>kol G HM** is a gun grade two-component manganese cured high modulus polysulphide sealant.

### USES

**dura.<sup>®</sup>kol G HM** is used for sealing expansion joints, stress relief joints and movement joints in building and other civil engineering structures. These include superstructures, reservoirs and potable water retaining structures, floors, basements and subways.

**NOTE:** For sewerage treatment and waste water structures use **flexothane G**.

### ADVANTAGES

- Suitable for use in potable water applications.
- Forms a tough, elastic, rubber-like seal.
- Accommodates continuous and pronounced cyclic movement in all planes.
- Excellent adhesion to most common construction materials.
- Specific primers ensure excellent adhesion to both porous and non-porous substrates.

### JOINT GEOMETRY

Minimum width of any joint is 6 mm. **dura.<sup>®</sup>kol G HM** may be applied in joints between 6 mm and 50 mm wide. The width of the joint should be four times that of the calculated joint movement. Joints that are expected to experience normal cyclic movements should be designed to an optimum width to depth ratio of 2:1, subject to the overriding recommended minimum sealant depths as follows:

- 6 mm for metals, glass and other non porous surfaces.
- 10 mm for all porous surfaces.
- 20 mm for trafficable joints and those subject to hydrostatic pressures.

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

The joint faces must be parallel.

### COVERAGE

Refer to the "**Estimated Coverage Table**" for both sealant and primer.

### SURFACE PREPARATION

Thorough preparation of joints is essential if a satisfactory seal is to be obtained. For concrete surfaces, 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 surfaces must be completely dry. Refer to "**Preparation Of Surfaces**" data sheet for further information.

#### TYPICAL PHYSICAL PROPERTIES OF WET MATERIAL

Mixing ratio	As supplied do not split kit
Density	1,74 g/cm <sup>3</sup>
Base Colour	Off White
Activator Colour	Black
Mixed Colour	Grey
Dilution	Do not dilute
Flash point	None

#### TYPICAL PHYSICAL PROPERTIES DURING APPLICATION

Application Method	Extrusion gun
Pot life	2hrs / 25°C
Slump resistance	No slump in joint of 38 mm x 19 mm
Tack free	72 hours @ 25°C
Full cure	7 days
Application temperature	5°C to 35°C
Fire resistance of wet film	Non-flammable

### TYPICAL PHYSICAL PROPERTIES OF CURED MATERIAL

Modulus@150% Extension	0.42N/mm <sup>2</sup>
Service temperature	-5°C to +80°C
M.A.F.	25% of joint width
Shore A hardness	20 - 25
Chemical resistance	Dilute acids and alkalis, fats and vegetable oils, petroleum fuels, oils, greases
Water resistance	Excellent
Atmospheric oxidation	Excellent

### PROTECTION OF ADJACENT SURFACES

Masking tape applied to areas adjacent to joints 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.

### BACKING MATERIAL

Suitable back-up material, **dura.®cord**, must be used to adjust sealant depth in the joint to comply with the joint geometry cited in the table. **dura.®cord** is a self-releasing material, but if soft-board or cork is used as the joint filler, a plastic strip bond-breaker must be placed on the filler surface before sealant is applied.

Where hydrostatic pressure is expected, joint former should be minimum of 100kg/m<sup>3</sup> density.

### BONDING/PRIMING

Porous surfaces, such as concrete, stone, brickwork, timber and unglazed edges of ceramic tiles must be fully primed with **epidermix 326**. Ensure primer is brushed well into the sides of the joint face, to ensure complete coverage. Avoid over-priming, this results in excessive primer in the base of the joint. The primer film should be allowed to lose its solvent (approximately 30 minutes drying) before sealant is applied.

**Primer open time is 4 hours.** 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 **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.

### MIXING

**dura.®kol G HM** 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 return to the container. Remove all the 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 r/min) fitted with a suitable paddle, 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. To obtain a complete mix will take approximately 5-10 minutes of mechanical mixing. If hand mixing is to be carried out, a minimum period of 15 minutes of vigorous mixing is required. Avoid air entrapment.

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

### 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 for complete air-free filling of voids and to assist in making required surface 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, which may be moistened with a little clean water or water containing a little liquid soap. **dura.®kol G HM** should not be used in direct contact with materials containing pitch or bitumen. Do not use in bridge joints.



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CHEMICAL SOLUTIONS FOR THE  
CONSTRUCTION MATERIALS INDUSTRY  
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### SEALANT COVERAGE FOR ESTIMATING PURPOSES

JOINT SIZE IN MM	LITRES PER L/M	L/M PER 2 LITRE PACK
6 X 6	0.020	55
6 X 10	0.030	33
10 X 10	0.100	20
15 X 10	0.150	13
20 X 10	0.200	10
20 X 15	0.300	6.6
20 X 20	0.400	5
40 X 20	0.800	2.5
50 X 25	1.250	1.6

No allowance has been made in the above estimates for wastage

#### PRIMER COVERAGE FOR ESTIMATING PURPOSES

± 250ml tin of <b>epidermix 326</b>	per 3 tins/6 litres of sealant
± 500ml tin of <b>epidermix 326</b>	per 6 tins/12 litres of sealant

No allowance has been made for primer wastage or the varying porosity of the concrete to which it is applied.

### CLEANING

All 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.

### 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.

### PACKAGING

**dura.®kol G HM** is supplied in 2 litre kits.

### 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.

### APPLICATION TEMPERATURE

Surface and ambient temperature must be at least + 5°C and rising ideally between 20°C and 30°C. Lower temperatures will extend the curing period.

### MODEL SPECIFICATION

**Two-component, gun grade, manganese cured, high modulus polysulphide sealant for use in water retaining structures.**

The sealant will be **dura.®kol G HM**, a two-component, high modulus polysulphide sealant applied in accordance with the recommendations of **a.b.e.® Construction Chemicals**, including the use of **epidermix 391** and **epidermix 326** primers where required.

### HEALTH & SAFETY

Uncured **dura.®kol G HM** is toxic. Always ventilate the working area well during application and drying. Avoid flames in the vicinity of uncured **dura.®kol G HM**. Always wear gloves when working with the material and avoid excessive inhalation and skin contact. If material is splashed in the eyes, wash with copious quantities of clean water and seek medical attention.

Cured **dura.®kol G HM** 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.



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