



ADHESIVE ENGINEERING

ADHESIVE ENGINEERING N.S.W. IS A DIVISION OF CARVERU PTY LIMITED A.C.N. 001 693 509
ABN 99 001 693 509

3/2 Leighton Place, Hornsby NSW 2077
TELEPHONE: 02 9477 7877
P.O. Box 1505 Hornsby Westfield 1635
Web: www.adhesiveengineering.com.au

(After hrs & voice mail 0411 51 05 03)
FACSIMILE: 02 9477 3315
Email: sales@adhesiveengineering.com.au

ARMA-FLEX "H"

APPLICATION GUIDE: 3 PART KITS



ARMA-FLEX is a high performance, fully trafficable waterproof resilient concrete repair kit with unique ability to fully accommodate day-cycle movements. However, it's excellent performance is dependent on correct repair specification including, surface preparation, correct mixing and application and a satisfactory cure time.

COLOUR: Light grey.

CONTENTS: 10 kg pack consists of 3 parts = volume 6.7lt
2.5kg pack consists of 3 parts = volume 1.7lt

Note: **ARMA-FLEX PRIMER** (500 gr liquid) pack is to be used.
Coverage 1/2 square metre per 500cc kit.

Basic Procedures:

- (1) Assemble tools, plant and **ARMA-FLEX H** kits
- (2) Excavate concrete as required.
- (3) Option: Grind all sharp corners.
- (4) Clean up, dust free and dry.
- (5) Option: Plug or seal large cracks.
- (6) In winter PRE-HEAT the part A (the largest pail)
- (7) PRE-MIX the A part contents
- (8) Mix the two part PRIMER
- (9) Apply the PRIMER to the prepared surfaces 1mm thick.
- (10) Add **ARMA-FLEX H** part "B" to the (warm) "A" part pail, then power stir thoroughly for 1 minute.
- (11) Add the 3rd part, the quartz filler, stir for 2 min.
- (12) With PRIMER fresh & wet, pour mixed **ARMA-FLEX H** into cavities to levels required, spread and level out.
Work time 20 min at 25 degrees C. Setting time 60 min at 25 degrees C.
- (13) Wash tools with T.C.S. (Tool Cleaning Solvent)
- (14) Cure generally overnight.
- (15) OPTIONAL: After 3 days cure Grind off any high spots of **ARMA-FLEX H**
- (16) Read and follow RECOMMENDED PROCEDURES to be used when handling EPOXY RESIN systems.. SHEET ATTACHED.

RECOMMENDED PROCEDURES ARE DETAILED ON THE FOLLOWING PAGES.

THIS METHOD IS FOR VEE'D CRACKS. Vee to be over 20mm WIDE.

1. TOOLS NEEDED:

To vee out cracks etc. Electric impact hammers offer a choice of suitable weights therefore have better control. We suggest chisel edge points as the cutting tool.

Broom, wire brush, vacuum cleaner, square mouth shovel, 100mm angle grinder and/or 180mm sander/polisher fitted with a "Z.E.C." flexible abrasive disc.

Heavy duty Power drill (700 watts & 350 r.p.m.) driving our steel stirrer model SS375.

Flat Stirrer model no FS25. Tool Cleaning Solvent (T.C.S.), 75mm paint scraper as a spreader, dust mask, goggles and hand soap.

(All underlined items are available from ADHESIVE ENGINEERING.

2. EXCAVATING:

Mark out area of work, excavate concrete to straight lines, break out with steep sides in cavity, remove rubble as you go.

REF TO ITEM 15 FOR GUIDE AS TO SIZE AND TYPE OF REPAIR

Optional: Saw cuts to cavity edges acceptable, depth is generally 10 to 15mm deep as a saw cut is to achieve a neat, straight line, no feathered edges.

Rough, sound chiselled surfaces are preferred, this gives maximum area to the bond line combined with max. strength.

3. GRINDING:

Grind all sharp corners, a radius of 5 to 10mm is suitable.
In heavy transport areas grind the radius at 15mm.

OPTION:

Grind a strip, 25mm wide, on top of the slab, each side of the Vee'd crack to remove the laitance and contamination, this allows the primer to improve the strength of the concrete at that point.

4. CLEANING:

All rubble to be removed as work progresses. Vacuum clean, rake out and wire brush when necessary, all dust must be removed from bonding surfaces.

High pressure water blasting of cavity is acceptable, 1000 psi is minimum. All wet dust must be removed and not allowed to dry (as it then will be difficult to remove when dried hard). Wet surfaces should be dried off at once.

Oil free air blasting is often used, subject to safe practices.

The objective is to present clean laitance free, newly broken concrete to the bond line.

5. OPTION: SEAL OR PLUG LARGER CRACKS:

SUSPENDED SLABS:

Seal from underneath with one of the following Epoxy type, past systems **ADHESIVE ENGINEERING'S ARMA-FLEX "V"** (Trowelling grade), **P13** or **P110**.

If access from underneath is restricted the crack may be sealed in the bottom of the Vee, keeping the above epoxy paste confined to the crack. These systems need only 1 hour setting time as the following **ARMA-FLEX PRIMER** and **"H"** systems are fully compatible. Do not use a caulking product to seal cracks there maybe chemical reaction with dissimilar products.

GROUND SLABS:

A simple method to fill a large crack is to pour dry sand into the void then brush away any dust from the sides of the vee.

Alternatively, use the above paste systems.

6. PRE HEATING:

In winter or when **ARMA-FLEX** is below 18 degrees C. it is recommended that pre-heating is considered for multi pack use.

Temperatures below 15 degrees C. pre-heating is necessary.

ARMA-FLEX when cold is thick and difficult to mix properly.

TO PRE-HEAT:

- (a) Stand in hot sun or
- (b) Store in warm room or
- (c) With lid tight, place bottom half of "A" pail in hot water to bring up to 25 to 30 degrees C. NO DIRECT FLAME.

7. PRE-MIX ARMA-FLEX "A" part.

One or two packs may be mixed by hand, using a flat stirrer, more than this requires power tools.

Power stirrer should be 700 watts, have a loaded speed 250 to 350 r.p.m. and have a chuck capacity of 10mm.

Use STIRRER Model No. ST 375 or similar.

Incorporate the sediment from the bottom of the pail by power mixing until a smooth consistency is achieved, this takes about 3 mins.

8. MIX PRIMER:

Remove the lids from both parts of the PRIMER (compound and curing agent).

Pour all of the curing agent into the larger compound tin.

Immediately mix the two together with a flat stirrer, Model No. ST 25.

This mixing takes about 1 min.

9. APPLY PRIMER:

Immediately PRIMER is mixed, apply it to the prepared surfaces with a suitable clean brush, even coating to be approximately 1mm thick.

10. MIX ARMA-FLEX 3 PART KIT.

Open the "warm" ARM-FLEX "A" pail, then add the cool "B" contents and mix thoroughly using the power stirrer for 1 min. Immediately add part 3, the quartz filler, allow 2 min. for this final power mixing.

Place immediately.

11. APPLY ARMA-FLEX "H".

The pail may be bent in, to form a pouring spout.

Pour the mixed ARMA-FLEX "H" slowly into the WET, PRIMED cavities. Allow to settle for a minute, spread out with the paint scraper.

If ARMA-FLEX is left proud a grinding process may be needed after curing.

Work time 20 minutes at 25 degrees C.

Setting time 60 minutes at 25 degrees C.

12. WASH TOOLS

Tools should be washed with A.E. Tool Cleaning Solvent (T.C.S.) using the Priming brush in a small steel can.

DO NOT WASH HANDS WITH T.C.S.

13. CURE.

Full cure time is 3 days at 25 degrees C.

14. FINISH GRIND.

If grinding is needed allow 12 hours after setting at 25 degrees C. 2 days at 15 degrees C. 3 days at 10 degrees C.

Grinding should be with an open grit, semi-flexible abrasive disc, to suit a 100mm angle grinder at 11,000 r.p.m. or 170mm sander polisher at 3,800 r.p.m.

A suitable abrasive disc is type 'Z.E.C. 16 grit sc.'

Use dust mask, goggles and leather gloves.

15. GENERAL GUIDE TO VEE'D SECTION.

Cracked pavement slabs.

No visible movements. Indoor situation. Light duty. Vee out 20mm wide & 15mm deep.

As above but heavy

Heavy duty. Vee out to 50mm wide & 35mm deep.

Cracked pavement slabs, small deflections

Vee out 55mm wide & 40mm deep.

NOTE: Rocking, moving slabs need to be grouted before the application of ARMAFLEX "H"

EXPANSION JOINT NOSINGS:

No visible movements; internal, under cover areas.

Open up joint to a Vee, totalling 50mm wide & 50mm deep

Both slabs may be joined together if conditions are suitable.

As above, but with small or large joint movements:

Method A: The slab must be separated with a heavy duty, waxed form-board.
(foam strips will float on ARMA-FLEX "H").

Method B: ARMA-FLEX "H" can be sawn (cure for 3 days before sawing)

**APPLICATION GUIDE FOR
ARMA-FLEX FAST SETTING.**

ARMA-FLEX "H" 2.5kg FAST SETTING KIT:

Prepare surfaces and follow all 13 steps as for the standard system, the exception is
WORK TIME, this is 7 min. at 25 degrees C. & 5 min at 30 degrees C.

In winter, when pre-heating is needed, DON'T overheat ARMA-FLEX "H". Use a
cheap thermometer for testing temperature before adding curing agent.

IF IN DOUBT PLEASE CONTACT OUR OFFICE OR YOU LOCAL AGENT.

NOTES.....
.....
.....
.....