



# a.b.e.<sup>®</sup> Construction Chemicals

## METHODOLOGY

### abe.<sup>®</sup>plate / abe.<sup>®</sup>cron

#### 1. THE SHAKE

The following products are factory-prepared, ready-to-apply shakes. Use the product as it comes from the bag.

- **abe.<sup>®</sup>plate** (pre-mixed)
- **abe.<sup>®</sup>cron** (pre-mixed)

Do not mix these products with cement, they are ready to use.

#### 2. PLACING CONCRETE

##### **Monolithic (Single Course) Method:**

Concrete of the required strength design with 75 mm slump, or less, and with not more than 3% entrained air should be carefully deposited between previously placed screed points with the least possible handling. A small spud vibrator ("Pencil type"), inserted vertically, is recommended to consolidate concrete at corners and sides of forms and bulkheads, particularly when keyed joints are involved.

NOTE: for heavy duty traffic areas, concrete designed for at least 30 MPa should be used.

NOTE: to minimise cracking, concrete should contain a water-reducing agent.

NOTE: at temperatures below 15°C

(1) provide a tight enclosure, heated concrete and heat, as required to maintain the temperature of concrete in place at 10°C, or above; make certain fumes from heaters are vented to the outside;

(2) do not add calcium chloride to concrete over which **abe.<sup>®</sup>plate** will be applied.

NOTE: at temperatures over 32°C, low humidity or placing concrete without protection from the wind or sun, adjust slump and mix design to cope with rapid evaporation, but maintain specified strength. Under these conditions it is preferable to delay the floor work until after the roof is erected.

NOTE: in areas bordering sea water, do not use salt water, or salt contaminated aggregate, in concrete over which **abe.<sup>®</sup>plate** will be applied.

#### 3. STRIKING OFF CONCRETE

Move concrete into place using square tipped shovels or other solid bladed tools. Do not use rakes.

Vibrators, when used, should be inserted vertically and should not be used to move concrete, but to consolidate it. The concrete should be struck off to level with a true, wooden, strike-off bar.

#### 4. LEVELLING CONCRETE

Immediately behind the strike-off operation, the concrete should be further levelled and consolidated with a wooden bull float or in limited access areas with a wooden darby. This operation must be completed before any free moisture (bleeding) rises to the surface.

#### 5. FIRST FLOATING

Concrete adjacent to forms, columns, pits, doorways and walls should be floated first because it stiffens faster than the concrete in the overall areas.

NOTE: in arid climates, areas exposed to sun, or 25 mm – 38 mm thick toppings exposed to temperatures over 12°C, omit balance of Operation No. 5 and start Operation No. 6. Float the overall areas as soon as the concrete will bear the weight of a finisher and a light trowelling machine (equipped with float blades) without digging in.

NOTE: if free bleed water remains on the surface at this time, it must be removed prior to floating. A rubber hose dragged slowly over the surface is the best method.

## 6. APPLYING THE FIRST SHAKE

The first shake should be applied to the floated concrete adjacent to walls, forms, columns and doorways as soon as possible, since these areas lose moisture very rapidly. Immediately behind the first floating of the overall areas, as it proceeds, apply two thirds of the total shake specified. Spread the shake evenly. Do not throw the shake.

NOTE: when **a.b.e.**'s coloured floor products are properly applied according to these directions, using reasonable care and skill, attractive, uniformly coloured floors will be obtained. **a.b.e.** cannot be responsible for diluted or mottled colour resulting from careless or improper application of the shake, finishing or curing or from failure to protect the finished floor from staining and damage by construction trades until turned over to owner.

## 7. FLOATING FIRST SHAKE

Float the shake on concrete adjacent to walls, forms and columns as soon as possible. Other finisher's using mechanical trowels with float blades should float shake on overall areas as soon as the shake has taken moisture, as indicated by a darkening of the surface, and as soon as the float blades do not dig into the surface. Float just enough to ensure moisture being brought completely through the shake from the base concrete. Time floating operations so it will not be necessary to sprinkle water on the surface.

## 8. APPLYING SECOND SHAKE

Immediately behind floating of first shake, apply final one-third of shake, as floating proceeds. Spread shake evenly.

## 9. FLOATING SECOND SHAKE

Using a mechanical trowelling machine equipped with float blades or disk float, float soon enough and long enough to bring moisture completely through the second shake.

NOTE: if a coarse non-slip finish is desired, omit Operations No. 10 to No. 14 inclusive and proceed with Operation No. 15, curing.

## 10. ADDITIONAL FLOATING

The surface may be further compacted by a third mechanical floating if time and setting characteristics of the concrete permit it to be floated.

NOTE: if a medium, non-slip finish is desired, omit Operations No. 11 to No. 14 inclusive and proceed with Operation No. 15, curing.

## 11. FIRST TROWELLING

When the surface has further stiffened and lost some of its sheen, it should be trowelled by hand or mechanical trowel, keeping the trowel blades relatively flat.

NOTE: if a fine, non-slip finish is desired omit Operations No. 12 to No. 14 inclusive and proceed with Operation No. 15, curing.

## 12. SECOND TROWELLING

When the surface has tightened up further, it should be trowelled again by hand or mechanical trowel.

The blades may be raised slightly in this operation.

For light coloured floors, such as Metallic White, a stainless steel trowel must be used for the second and subsequent trowellings.

## 13. THIRD TROWELLING

When little paste will cling to the trowel blades, a third trowelling may be given to the floor. All marks, pinholes, etc. should be removed in this hard trowelling operation.

## 14. BURNISH TROWELLING NATURAL COLOURED FLOORS

If desired, a hard, burnish trowelling may be given by hand when no paste clings to the trowel. This operation produces a shiny, smooth surface.

NOTE: do not burnish trowel **abe.cron** floors.



## 15. CURING

Just as soon as the finish will not be marred by the application, apply the curing compound manufactured by **a.b.e.**® for the type of surface and use involved. Do not cure with salt water.

Apply the proper curing compound in accordance with the directions on the container. For smooth trowelled surfaces coverage should not exceed the amounts shown below.

### **For natural coloured floors finished with:**

For natural coloured floors:

Cure with **dura.®cure SBC** curing compound at a rate not exceeding 9m<sup>2</sup> per litre.

For Light Reflective floors:

Cure with **dura.®cure SBC** coloured to match, at a rate not exceeding 9m<sup>2</sup> per litre.

### **Application Rates**

Natural coloured **abe.®plate**: at 5, 7 or 9 kg per m<sup>2</sup>.

Coloured **abe.®plate**: at 7 or 9 kg per m<sup>2</sup>.

**abe.®cron**: at 3, 4, 5 or 7 kg per m<sup>2</sup>.

### **Special Non-Slip Finishes**

Coarse non-slip finish – After Operation No. 9 omit Operation No. 10 to No. 14 inclusive and proceed to Operation No. 15, curing.

Medium non-slip finish – After Operation No. 10, omit Operations No. 11 to No. 14 inclusive and proceed to Operation No. 15, curing.

Fine non-slip finish – After Operation No. 11, omit Operations No. 12 to No. 14 inclusive and proceed to Operation No. 15, curing.

## IMPORTANT NOTE

This datasheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** endeavours 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 datasheets 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.

## ARMoured JOINTS

If iron armoured joints are specified, joints should be done first.

- **abe.®plate** or **abe.®cron** armoured joints are installed by mixing **abe.®plate** or **abe.®cron** and only enough water to produce a mortar of plastic consistency.
- After the concrete slab has been screeded, leveled, and all bleed water removed, the concrete at the joints to be armoured should be cut down and removed to a depth of 10 to 12 mm at the joint line, tapering back to the surface level 100 mm away.
- This area should be floated open with wood hand floats, working up sufficient paste at the surface to assure an integral bond of the mortar to the fresh slab.
- **abe.®plate** or **abe.®cron** in a placeable mortar consistency is then installed.



- Once placed, level off the **abe.®plate** or **abe.®cron** mortar with a wood hand float making sure the heel of the float is resting on the bulkhead. The toe of the float should not dig into the surface, thus maintaining a level surface. Floating should be parallel to the form at all times to prevent contamination of the iron armoured joint with the concrete paste.
- When armouring control joints, it is imperative that the placement of the koroplate mortar be on the centre line with the designed joint location. Once the exact location of the centre line has been determined it may be visually marked with a string or chalk line.
- Bridge the slab approximately 150 mm to the side using a 50 x 200 mm plank.
- Working from the bridged platform, cut down and remove the concrete 10 to 12 mm at the centre line and taper back to the surface level 100 mm away on each side. The next step is to float open the area; maintaining a level surface; do not pack the mortar in or push the mortar down. Then, as before, level off with wood hand floats.
- The next step is the installation of the **abe.®plate** or **abe.®cron** dry shake over the entire area, as per datasheet, keeping an eye on the edges as they generally set up first.

#### abe.®cron - abe.®plate DRY SHAKE-METHOD

