



Method Statement

Ref. #: DCP00/05-0004-A-2022



Tibmix

(Pre-blended metallic dry shake floor topping)



Table of Content

SECTION A: GENERAL COMMENTS	3
General Notes	3
High Temperature Working	3
Low Temperature Working	3
Tools and Equipment	4
SECTION B: APPLICATION	5
Substrate Preparation	5
Application	5
Curing	7
Cleaning	7
Remarks	7
SECTION C: CAUTIONS	8
Health & Safety	8
SECTION D: APPROVAL AND VARIATIONS	8



Section A : General Comments

General Notes:

The information below is a detailed overview for the application of **Tibmix** flooring system and should be read in conjunction with the relevant technical data sheet prior to application. All DCP Products should be applied by experienced specialist contractors.

All the points below assume correct preparation of the relevant surface.

High Temperature Working:

Application temperature ranges from 5 to 35°C. However, it is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:

- i. Unmixed materials and equipment should be stored in a cool shaded area and away from direct sunlight.
- ii. Avoid application during peak temperature of the day.
- iii. Plan for enough materials, tools and labor to ensure continuous applicator process.

Low Temperature Working:

It is suggested that, for temperatures below 10°C, the following guidelines are adopted as good working practice:

- i. Unmixed materials should be stored at room temperature.
- ii. Cold temperatures will affect the properties of the material.
- iii. Do not apply under rain or snow, and avoid dew points conditions during application.
- iv. Avoid applying the product if the temperature is around 5°C and falling.

Tools and Equipment:

It is suggested that the following list of equipment are adopted as a minimum requirement

Personal protection

- : Protective overalls
- : Goggles or a face mask
- : Good quality gloves
- : Safety shoes
- : Safety helmet



Equipment

- : Straight edge trowel (Fig.1)
- : Mechanical spreader [if required] (Fig.2)
- : Highway straight edge (Fig.3)
- : Bull float (Fig.4)
- : Wooden bull float (Fig.5)
- : Power trowel / Helicopter (Fig.6)



Fig.1: Straight edge trowel



Fig.2: Mechanical spreader



Fig.3: Highway straight edge



Fig.4: Bull float



Fig.5: Wooden bull float



Fig.6: Power trowel/Helicopter

Section B : Application

1.0 Substrate Preparation

1.1 Concrete Mix

- 1.1.1 It is recommended that the base concrete have a minimum compressive strength of 25 MPa with a cement content no less than 300 kg/m³ and should be placed in accordance with good concrete practice.
- 1.1.2 The water/cement ratio should be kept to the minimum needed to produce fully compacted concrete without excess surface water.
- 1.1.3 Concrete slump should be kept between 75 mm and 120 mm for optimum results.
- 1.1.4 Concrete mixes with 7.5 to 12 cm slumps will normally give the best results. However, a concrete slump shouldn't be greater than 12.5 cm.

Notes:

- *Mixes with > 3% air content can affect the performance of **Tibmix**, and induce stickiness in the finishing process, which leads to stretching.*
- *Concrete mixes containing calcium chloride or admixtures with > 0.05% chloride ions should not be treated with metallic dry shakes.*
- *Retarders are not recommended when the color is a concern.*
- *Concrete mixes containing Micro silica over 10% (of cement weight) cause great difficulties in finishing.*

1.2 Concrete Substrate

- 1.2.1 The concrete substrate must be fully compacted and smoothed using a wooden bull float or a highway straight edge.
- 1.2.2 Work the surface to allow water to bleed to the top of the slab.
- 1.2.3 The use of a vibratory or laser screed will substantially improve the striking off and consolidation of fresh concrete in preparation for the dry shake installation.
- 1.2.4 Bleed water present at the surface should be allowed to evaporate or to be brushed away, before the application of **Tibmix**.



2.0 Application

- 2.1 The right time to spread the **Tibmix** on the concrete surface is when light foot traffic leaves an imprint of about 3 - 6 mm.
- 2.2 Broadcast the **Tibmix** evenly over the surface of the base concrete after bleed water has dissipated, and after the concrete appears to have lost its surface sheen.
- 2.3 Wait until the concrete sets up sufficiently to support the weight of a power trowel/Helicopter.
- 2.4 Application in two stages is recommended.

2.5 First stage

2.5.1 After ensuring the removal or evaporation of surface bleed water, broadcast two thirds of the recommended coverage rate evenly over the surface;

- (2/3 of 4 - 5 kg per m²) for Medium duty floors,
- or
- (2/3 of 6 - 7 kg per m²) for Heavy duty floors.

2.5.2 Immediately after this stage **Tibmix** should be troweled in either by hand or using a power float (pan fitted to blades) float.

2.5.3 The first troweling passes should be across the placement strip in the short direction to ensure that irregularities can be easily identified and corrected in subsequent operations.

2.5.4 Re-straighten the surface after application of **Tibmix** to remove irregularities.



2.6 Second stage:

2.6.1 Apply the remaining third of the coverage rate amount and repeat troweling.

2.6.2 It is recommended to apply the remaining amount of **Tibmix** on the second stage at right angles to the first application.

2.6.3 Trowel **Tibmix** in using the power float.

2.6.4 Care should be taken as the early setting may occur around the slab edges, and should be checked regularly to properly time the floating operation.

2.6.5 Re-straighten the surface after application using highway straightedge.

2.6.6 Continue finishing with multiple trowels using power-trowel to produce a leveled, smooth, dense, wear-resistant surface.

2.7 When the surface has sufficiently stiffened (usually about two hours from the first troweling), a second troweling should be carried out to close any pores and remove surface irregularities.

2.8 Further treatment may be necessary to remove disc marks and to achieve the final finish required.

2.9 For large floor constructions **Tibmix** can be spread and troweled satisfactorily in one stage by mechanical means.

2.10 Where mechanical spreader is to be used:

- Calibrate the machine to drop the required amount by weight of **Tibmix**.

The slab edges should be broadcast evenly by hand during initial floating operations.





Notes:

- *Broadcasting **Tibmix** before the bleed water has evaporated will cause the color to dull, darken, or gray.*
- *Floating and finishing of the edges around the slab must be done first, as they will start to dry out first.*
- *Finishing around the slab perimeter is usually done by hand, yet power floats can be used.*
- *Avoid finishing and closing up the freshly applied concrete surface too quickly, as this can result in trapped bleed water and subsequent delamination.*

3.0 Curing

- 3.1 After final troweling is complete, suitable curing compound should be applied by spray taking care to avoid any puddling.
- 3.2 Appropriate measures must be taken to prevent the surface from drying out too rapidly. Proper curing should be maintained and the surface is not to be marred by the curing method.
- 3.3 The use of polythene sheeting is not recommended as this can cause the blooming of the surface, particularly with coloured **Tibmix**.

4.0 Cleaning

- 4.1 All tools should be cleaned immediately after finishing using clean water.

5.0 Remarks

- 5.1 Check the substrate in advance. Ensure that the substrate is in good condition and clean.
- 5.2 Failure to use a concrete mix intended specifically for use with dry shake hardeners can lead to issues such as finishing difficulties, delamination, and blistering of the dry-shake hardener.
- 5.3 Curing shouldn't be done using polythene sheeting curing paper, or wet burlap as this will cause uneven color, staining, or efflorescence.
- 5.4 Avoid application in case of wind and direct sunlight as it will affect the drying, setting, and application timing of **Tibmix**.
- 5.5 No standing or bleed water should exist exactly before applying **Tibmix** into the surface, failure to do so will produce much heavier and denser metallic aggregates sinking into the fresh concrete.
- 5.6 Broadcasting high amounts of **Tibmix** in one pass can cause delamination or blistering in the finish, ensure to check the calibration of the mechanical spreader periodically during **Tibmix** application.
- 5.7 Combination blade power trowels are not recommended.
- 5.8 Control joints are recommended to be soft cut early after final finishing and the curing compound application.
- 5.9 **Tibmix** should not be applied onto frozen substrates or if the ambient temperature is around 5°C and falling.



Section C : Cautions

Health and safety

Tibmix should not come in contact with skin and eyes. However, any accidental splashes to the eyes must be rinsed with clean water and seek medical advice.

Fire:

Tibmix is nonflammable.

For further information on refer to the Material Safety Data Sheet.

Section D : Approval and Variations

This method statement is offered by DCP as a 'standard proposal' for the application of **Tibmix**. It remains the responsibility of the Engineer to determine the correct method for any given application. Where alternative methods are to be used, these must be submitted to DCP for approval, in writing, prior to commencement of any work. DCP will not accept responsibility or liability for variations to the above method statement under any other condition.