

TECHNICAL BULLETIN No. 35

DESCRIPTION

This Technical Bulletin provides information on the correct method of application of the recommended adhesives to be used with FloorworX products.

1. FLOORWORX NO. 62 ACRYLIC ADHESIVE

FloorworX No. 62 is a water-based acrylic dispersion adhesive specially developed to meet the flooring contractor's needs for a high performance multi-purpose flooring adhesive. It is available in 1 litre, 2.5 litre, 5 litre, and 25 litre containers and will give coverage of between 5,5m² and 6,5m² per litre, depending on the sub-floor porosity. The adhesive has a long open time, dependant on the ambient temperature.

1.1. PREPARATION

1.1.1. Ensure that the sub-floor is firm, clean, smooth, free of oil and grease and compliant to a Grade 1 floor finish as set out in SANS 10070 Code of Practice: The installation of resilient thermoplastic and similar flexible floor covering materials in terms of levelness. **(See FloorworX Technical Bulletin No. 32: Sub-Floor Surface Preparation).**

1.1.2. Ensure that the sub-floor is dry by testing with a suitably approved Concrete Moisture Meter. (*Tramex CME 4, Caisson VI-D4 Pinless Concrete Moisture Meter, GE Protometer Mini or a Hygrometer*). **(See FloorworX Technical Bulletin No. 30: Moisture in Sub-Floors & Damp-Proof Membranes).**

1.1.3. The sub-floor should be swept or, preferably, vacuumed, to remove all dust and dirt.

1.1.4. Under no circumstances apply the adhesive to a dusty sub-floor unless it has been primed with a suitable primer.

1.1.5. Ensure that the job has been correctly planned and set out prior to any adhesive application.

1.2. APPLICATION

1.2.1. Stir the adhesive thoroughly before spreading.

1.2.2. Evenly spread the adhesive using a TKB - A2 trowel.

1.2.3. Allow sufficient time for the volatiles in the adhesive to flash-off.

1.2.4. When the adhesive feels tacky but not wet, the flooring can be laid. Ensure that the flooring is laid into the adhesive before it dries.

1.2.5. Bed the flooring into the adhesive using a 68kg three-sectional metal flooring roller in both directions before the adhesive has hardened.

1.3. PRECAUTIONS

1.3.1. Do not use FloorworX No. 62 when the temperature is below 6°C.

1.3.2. Stir the adhesive well before use.

1.3.3. Do not use FloorworX No. 62 on woodblock flooring.

1.3.4. Do not spread large areas of adhesive.

1.3.5. Do not lay into the adhesive too early or too late.

1.3.6. Adhesives should be stored indoors on a wooden pallet at a temperature of not less than 6° to prevent freezing.

1.3.7. Do not use solvent-based cleaners to remove adhesive from the flooring surface. Such adhesive should be removed immediately using a clean, damp rag, warm water and a detergent.

1.4. POTENTIAL PROBLEMS

When the correct procedures are not followed a variety of problems will arise:

1.4.1. If the flooring has been laid into the adhesive too early, the volatiles which have not flashed off will be trapped. This will prevent the adhesive from curing and will result in a poor bond. The problem will manifest itself in the peaking or lifting of the flooring.

- 14.2. If the flooring has been laid into the adhesive too late, there will be little or no bond which will result in the flooring lifting. Trowel notch marks will show through the flooring once it has been trafficked.
- 14.3. If the flooring has been laid onto a damp sub-floor, the moisture in the sub-floor will cause the adhesive to re-emulsify and soften, resulting in the flooring peaking or lifting.
- 14.4. If the trowel notching is too small, insufficient adhesive will be applied to the sub-floor resulting in a poor bond.
- 14.5. If the trowel notching is too large, an excessive amount of adhesive will be applied to the sub-floor resulting in adhesive weeping through the joints. Allow 24 hours or longer before welding sheet flooring material.

2. FLOORWORX NO. 71 CONTACT ADHESIVE

FloorworX No. 71 is a trowel, brush or roller grade contact adhesive. It is available in 1 litre, 5 litre and 25 litre containers and will give coverage of approximately 3,5m² per litre (single surface application), depending on the sub-floor or wall surface porosity. Caution must be exercised when using FloorworX No. 71 as the solvents contained in the adhesive are flammable and hazardous.

2.1. PREPARATION (FLOORING)

- 2.1.1. Ensure that the sub-floor is firm, clean, smooth, free of dust, wax, oil and grease and compliant to a Grade 1 floor finish as set out in SANS 10070 in terms of levelness.

(See FloorworX Technical Bulletin No. 32: Sub-Floor Surface Preparation).

- 2.1.2. Ensure that the sub-floor is dry by testing with a suitably approved Concrete Moisture Meter. (*Tramex CME 4, Caisson VI-D4 Pinless Concrete Moisture Meter, GE Protometer Mini or a Hygrometer*).
(See FloorworX Technical Bulletin No. 30: Moisture in Sub-Floors and Damp-Proof Membranes).

- 2.1.3. The sub-floor should be swept or preferably, vacuumed, to remove all dust and dirt.
- 2.1.4. Do not apply FloorworX No. 71 onto an open, porous sub-floor unless it has been primed with a suitable primer. Ensure that the work area has adequate ventilation and the relevant safety signs are displayed.
- 2.1.5. Provide a fire extinguisher.
- 2.1.6. Ensure that the job has been correctly planned and set out prior to any adhesive application.

2.2. PREPARATION (WALLCLADDING)

- 2.2.1. Ensure that the wall surface is even, dry and free from dust, oil, grease, wax or any other contaminant which could prevent adhesion.
- 2.2.2. On smooth surface such as two coat plastered walls, rub the wall surface down with fine sandpaper then apply one coat of FloorworX No. 33 Bonding Liquid. Alternatively prime with a suitable paint primer.
- 2.2.3. On a dusty surface, apply a priming coat of FloorworX No. 33 Bonding Liquid. Alternatively prime with a suitable paint primer.
- 2.2.4. Do not attempt to adhere wall cladding to enamel or oil paints.
- 2.2.5. Ensure that the work area has adequate ventilation and the relevant safety signs are displayed.
- 2.2.6. Provide a fire extinguisher.
- 2.2.7. Ensure that the job has been correctly planned and set out prior to adhesive application,

2.3. APPLICATION (FLOORING & ACCESSORIES)

- 2.3.1. Stir the adhesive thoroughly before use.
- 2.3.2. Apply FloorworX No. 71 using a smooth trowel, brush or paint (mohair) roller to both the sub-floor and the reverse side of the material.

2.3.3. Allow the adhesive on both surfaces to dry thoroughly.

2.3.4. Lay the flooring onto the sub-floor, working from one side to avoid the formation of air pockets.

2.3.5. Ensure that the flooring is correctly aligned when it is laid, due to the fact that once adhered, the adhesive bond is strong and subsequent realignment will damage either the sub-floor or flooring material.

2.3.6. Bed the flooring into the adhesive using a 68kg three-sectional articulated metal flooring roller.

2.4. APPLICATION (WALLCLADDING)

2.4.1. Stir the adhesive thoroughly before use.

2.4.2. Apply FloorworX No. 71 using a smooth trowel, or paint (mohair) roller; thinly spread the adhesive onto both the wall and the reverse side of the wall cladding.

2.4.3. Allow the adhesive on both surfaces to dry thoroughly.

2.4.4. Apply wall cladding to the wall, working from one side to avoid the formation of air pockets.

2.4.5. Ensure that the wall cladding is correctly aligned, due to the fact that once adhered, the adhesive bond is comparatively strong and subsequent realignment will damage either the wall surface or wall cladding.

2.4.6. Once all the wall cladding has been hung, rub down or roll with a hand roller in order to bed the cladding into the adhesive.

2.5. PRECAUTIONS (FLOORING & WALL CLADDING)

2.5.1. Do not add solvent to the adhesive.

2.5.2. Exercise extreme caution when handling the adhesive as the solvents used are flammable and toxic.

2.5.3. Do not smoke.

2.5.4. Keep the adhesive drums away from naked flames.

2.5.5. Avoid eye and skin contact with adhesive.

2.6. POTENTIAL PROBLEMS

When the correct procedures are not followed a variety of problems will arise:

2.6.1. If wall cladding is fixed before the solvents in the adhesive have evaporated, the entrapped solvent will result in the formation of bubbles.

2.6.2. If the sub-floor or wall surface is dusty, the dust will contaminate the adhesive, preventing the formation of a good bond.

2.6.3. If wall cladding is fixed to unsound surfaces, it will eventually peel away.

2.6.4. Misaligned flooring or wall cladding is difficult to rectify.

3. FLOORWORX NO. 55 TWO-PART POLYURETHANE ADHESIVE

FloorworX No. 55 is a two-part polyurethane adhesive used for laying Nora synthetic rubber floor tiles and other specialised applications. The adhesive system consists of a large container of base and a small container of activator which are mixed together before spreading on the sub-floor. FloorworX No. 55 adhesive is available in 6kg pack which will give coverage of approximately 2m² per kg depending on the sub-floor porosity.

For further information regarding the use of two-part adhesive systems refer to FloorworX Technical Bulletin No. 36: Two Part Adhesive Systems.

3.1. PREPARATION

3.1.1. Ensure that the sub-floor is firm, clean, smooth, free of dust, wax, oil and grease and compliant to a Grade 1 floor finish as set out in SANS in terms of levelness.

(See FloorworX Technical Bulletin No. 32: Sub-Floor Surface Preparation).

3.1.2. Ensure that the sub-floor is dry by testing either with a suitably approved Concrete Moisture Meter. (*Tramex CME 4, Caisson VI-D4 Pinless Concrete Moisture*

Meter, GE Protometer Mini or a Hygrometer).

(See FloorworX Technical Bulletin No. 30: Moisture in Sub-Floors & Damp-Proof Membranes).

- 3.1.3. The sub-floor should be swept or preferably, vacuumed, to remove all dust and dirt.
- 3.1.4. Ensure that the sub-floor has been properly prepared with a reputable cementitious smoothing or self-levelling compounds.
- 3.1.5. It is highly recommended that the sub-floor should be primed with a suitable primer prior to the application of FloorworX No. 55 adhesive.
- 3.1.6. Ensure that the job has been correctly planned and set out prior to any adhesive application.

3.2. APPLICATION OF FLOORWORX NO. 55 ADHESIVE

- 3.2.1. The two components of FloorworX No. 55 comprise a 5kg container of base and a 1kg of activator.
- 3.2.2. Briefly stir the base. Empty the small container of activator into the large container of base, ensuring that all the activator is added to the base.
- 3.2.3. Thoroughly mix the activator and the base, preferably using a stirrer attached to a low-speed drill. Mixing by hand takes at least 10 minutes.
- 3.2.4. When stirring, pay special attention ensuring that the adhesive on the sides and bottom of the container is thoroughly mixed.
- 3.2.5. Once mixed, the adhesive should be spread immediately. If left in the container, it will harden rapidly due to the heat generated by the curing reaction.
- 3.2.6. Spread the adhesive using a TKB - A2 trowel.
- 3.2.7. Spread the adhesive evenly ensuring that no bare spots, pools or overlapping adhesive ridges are left.
- 3.2.8. Once the adhesive has been spread, the tiles should

be laid into it immediately. FloorworX No. 55 does not contain any water or solvents, so there is no flash off time.

- 3.2.9. In hot environments, ensure that the laying of the tiles keeps up with the spreading of the adhesive to prevent the adhesive hardening before the tiles are laid.
- 3.2.10. During the laying process, embed the flooring into the adhesive using an articulated 68 kg three sectional metal floor roller.

3.3. PRECAUTIONS

- 3.3.1. Ensure that the two components of FloorworX No. 55 have been thoroughly mixed together.
- 3.3.2. Ensure that the tiles are flat when laid since tile corners which have been turned up will not settle into the adhesive later. Corners which stand proud must be weighted down for 3 hours in order to allow the adhesive to cure.
- 3.3.3. Before it has hardened, any excess adhesive on the sub-floor should be removed using a hand scraper.
- 3.3.4. Do not allow any heavy traffic onto the floor for 48 hours after installation in order to allow sufficient time for the adhesive to cure.
- 3.3.5. Avoid eye and skin contact with the adhesive by wearing eye and hand protection.

3.4. POTENTIAL PROBLEMS

When the correct procedures are not followed a variety of problems will arise:

- 3.4.1. If the tiles are laid into the adhesive too late then no bond will occur.
- 3.4.2. If the trowel notches are too small, insufficient adhesive will be spread causing little or no bond and resulting in the tiles lifting.
- 3.4.3. If the trowel notches are too large, an excess of

adhesive will be spread, causing the tiles to slide and misalign.

4. FLOORWORX NO. 27 ELECTRICALLY CONDUCTIVE ACRYLIC ADHESIVE

FloorworX No. 27 is a water-based acrylic conductive adhesive suitable for use with FloorworX Static Dissipative and FloorworX Electro-statically Conductive flooring. It is available in 5 litre containers and will give coverage of 3.0m² - 4.0m² per litre depending on the porosity of the sub-floor.

4.1. PREPARATION

4.1.1. Ensure that the sub-floor is firm, clean, smooth, free of dust, oil wax and grease and compliant to a Grade 1 floor finish as set out in SANS 10070 in terms of levelness.

(See FloorworX Technical Bulletin No. 32: Sub-Floor Surface Preparation).

4.1.2. Ensure that the sub-floor is dry by testing either with a suitably approved Concrete Moisture Meter. (*Tramex CME 4, Caisson VI-D4 Pinless Concrete Moisture Meter, GE Protometer Mini or a Hygrometer*).

(See FloorworX Technical Bulletin No. 30: Moisture in Sub-Floors & Damp-Proof Membranes).

4.1.3. The sub-floor should be swept or preferably vacuumed to remove all dust and dirt.

4.1.4. It is highly recommended that the sub-floor should be primed with a suitable primer prior to the application of FloorworX No 27 adhesive.

4.1.5. Ensure that the job has been correctly planned and set out prior to any adhesive application.

4.2. APPLICATION

4.2.1. Stir the adhesive thoroughly before use.

4.2.2. Evenly spread the adhesive using a TKB - A2 trowel.

4.2.3. Allow sufficient time for the volatiles in the adhesive to flash off.

4.2.4. Lay the FloorworX Static Dissipative and FloorworX Electro-statically Conductive flooring into the adhesive once it has changed from a wet to a tacky stage.

4.2.5. Allow at least 24 hours before welding.

4.3. PRECAUTIONS

4.3.1. Do not spread too large an area of adhesive since it will harden and dry before the flooring is laid.

4.3.2. Do not use FloorworX No. 27 if the temperature of the sub-floor is below 6°C.

4.3.3. Ensure that excess adhesive on the tile surface is immediately wiped off with a clean, damp rag and not allowed to harden.

4.4. POTENTIAL PROBLEMS

When the correct procedures are not followed a variety of problems will arise:

4.4.1. If the tiles are laid into the adhesive too late then no bond will occur and the tiles will not adhere to the sub-floor.

4.4.2. If the tiles are laid into the adhesive too early, volatiles which have not flashed off will be trapped. This will prevent the adhesive from curing and will result in a poor bond. Should this happen the tiles will peak or lift.

4.4.3. If the trowel notches are too small, insufficient adhesive will be applied to the sub-floor resulting in a poor bond.

4.4.4. If the trowel notches are too large, an excessive amount of adhesive will be applied to the sub-floor, resulting in adhesive weeping between tiles.

 For more information please contact the **FloorworX TECHNICAL DEPARTMENT** by sending your query to technical@floorworx.co.za

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