



# 12 HOUR TILE ADHESIVE

## DATA SHEETS

1. TECHNICAL DATA SHEET
2. MATERIAL SAFETY DATA SHEET

## 1. TECHNICAL DATA SHEET

### PURPOSE

EcoTile 12 Hour Tile Adhesive is a multi-purpose, standard setting, grey, cement-based adhesive, suited for use in interior and exterior conditions, walls and floors, thin and medium bed applications. This adhesive has been specifically formulated to be used for the fixing of porcelain, ceramic, stone, brick and clay tiles to cement, render, screeds, concrete, and primed fibre cement surfaces.

### USES

- Overlaying of ceramic and porcelain tiles and stone material.
- Easy levelling and localised smoothing with rapid curing prior to fixing ceramic and porcelain tiles.
- Ideal for residential or commercial conditions.
- Interior and exterior applications.

### CHARACTERISTICS / ADVANTAGES

- Easy to apply.
- High strength.
- Suitable for ceramic, porcelain, and natural stone tile installations.
- Standard setting – trafficable after 12 hours.
- High tensile and shear strength.



**12 HOUR TILE ADHESIVE:**  
INTERIOR/EXTERIOR  
HIGH STRENGTH  
WALL & FLOOR

## **SURFACE PREPARATION**

New surfaces are required to cure for the following minimum periods to mitigate the adverse effect of differential shrinkage and movement in the substrate, which could compromise the integrity of the installation.

- New concrete floors require 6 weeks curing time before direct bedding.
- New concrete floors require 4 weeks curing time before screeding and the screeds another 4 weeks before tiling can commence. Screeds prepared with a screeding compound can be tiled over approximately 48 hours after laying the screed.
- New brick walls require 6 weeks curing time before direct bedding.
- New brick walls require 4 weeks curing time before plastering.

Existing surfaces must be solid, firm, and free of dust, mould, oil, grease, sealers, wax polish and organic growth. All damaged, defective, deteriorated, or hollow sounding areas within the screed or render must be removed down to a solid, clean substrate and made good before tiling. Unsuitable, loose, and brittle surfaces can be identified by using a hammer to sound out weak, hollow and unsound material. Organic growth must be removed, and the spores killed with an effective fungicide such as a household bleaching solution.

- Painted and Gypsum-plastered surfaces need to be chipped to remove 80% of the paint or Gypsum.
- Enamel painted and bitumen surfaces must be stripped of all coating by scraping and then chipping to expose 80% of the substrate. Do not use a solvent or heat to remove bitumen from the substrate.
- Existing tiled surfaces must be in good conditions and well bonded to the substrate if they are to be tiled over. Cracked, loose or hollow sounding tiles are to be removed prior to tiling.
- Smooth, off-form/shutter or power-floated cement surfaces and existing tile panels must be acid washed to remove laitance and rinsed well with cold, clean water. Once the surface preparation has been completed, this area must be primed with a keying slurry prepared by mixing a keying compound with a keying additive. Two parts of keying compound are to be mixed with one part of keying additive and applied with a builder block brush to a minimum thickness of  $\pm 2$  mm.

## **MIXING**

- Add 20 kg of Ecotile 12 Hour Tile Adhesive to 5 litres of cold clean water.
- Mix to a creamy, smooth paste. Mechanical mixing will result in a lump free, easier to use mix.
- Allow the mix to activate for 5 minutes then remix the product before use.
- Stir occasionally whilst in use; do not add more water to the mix.
- For all external, wet, or high traffic areas, or in special conditions where significant thermal stresses or temperature changes are expected, and where additional flexibility is required (i.e., for installations on suspended slabs), replace all the water in the mix with a bonding additive.
- For optimal results, use a full bag of adhesive per mix. Do not mix more adhesive than can be used in 2 hours.

## **APPLICATION**

- The backs of all tiles must be clean and free from all traces of dust and contaminants which could impair adhesion.
- Apply adhesive to the surface using a notched floor or wall trowel.
- Ensure to spread enough adhesive for a minimum bed thickness of 3 mm for wall tiling and 6 mm for floor tiling.
- Large format, heavily lugged, grooved, or dovetailed tiles must be back buttered to fill any voids with adhesive before placing into the wet adhesive bed. This will ensure a solid bed of adhesive behind each tile.
- Do not spread more adhesive than can be tiled in 10 to 15 min, depending on atmospheric conditions.
- This will normally not be more than 1m<sup>2</sup>. This is to ensure that the adhesive does not dry or skin before tiles are applied.
- Press tiles firmly into the wet adhesive with a twisting action.

- Use a rubber mallet to bed large or heavy tiles.
- Occasionally lift a tile to check that full contact is being made between the tile and the adhesive bed.
- Remove excess adhesive from joints and tiled surface before drying has occurred.
- Minimum grouting joints for walls is 2 mm and for floors 3 mm or as recommended by the tile manufacturer.
- Do not butt joint tiles.

## TECHNICAL DATA

|                                |                                          |
|--------------------------------|------------------------------------------|
| <b>Initial setting Time:</b>   | ± 6-8 hours 25°C and 50% humidity.       |
| <b>Final Setting Time:</b>     | ± 12 hours 25°C and 50% humidity.        |
| <b>Open Time:</b>              | ± 45 minutes 25°C and 50% humidity.      |
| <b>Pot Life:</b>               | ± 4 hours 25°C and 50% humidity.         |
| <b>Temperature Resistance:</b> | Up to 90°C.                              |
| <b>Mix Ratio:</b>              | 20kg/5 L of water or a bonding additive. |
| <b>VOC Content:</b>            | < 20 g/litre of product.                 |
| <b>Application Thickness:</b>  | 3 – 20 mm.                               |
| <b>Consumption:</b>            | 4 – 10 kg/m <sup>2</sup> .               |

## WARNING

Do not ingest. Keep away from children and pets. Do not empty into drains.

## PRECAUTIONS

Wear rubber gloves. In the event of contamination, rinse thoroughly with cold water. Seek medical assistance if irritation or discomfort persists.

## STORAGE

Store in dry conditions.

## GUARANTEE

EcoTile products are manufactured and tested in accordance with the highest standards and are guaranteed to be fit for purpose and free from defects. This guarantee is subject to the performance of EcoTile products when used strictly in accordance with the methods specifications for the particular project and where professional and competent workmanship is followed.

**EcoTile 12 Hour Tile Adhesive is manufactured by EcoTile, a division of EcoCem.**

**Address: 275 Cowen Ntuli Street, Eastdene, Middelburg, 1050**

**Email: [info@ecocem.co.za](mailto:info@ecocem.co.za)**

## 2. MATERIAL SAFETY DATA SHEET

### 2.1 Identification of the substance/mixture and of the company/undertaking

#### 2.1.1 Product Identifier

Trade Name: EcoTile 12 Hour Tile Adhesive

#### 2.1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use: Industrial/Commercial/Residential

#### 2.1.3 Details of the supplier of the safety data sheet

Company name of supplier: ECOCEM (Pty) Ltd  
Street: 275 Cowen Ntuli Street  
State/postal code/city: Middelburg, 1050  
Telephone: +27 71 360 9802  
Information about the Safety Data Sheet: +27 11 360 9802  
Email: info@ecocem.co.za

### 2.2 Hazards Identification

#### 2.2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Results of in vitro tests have shown that cement based mixtures with more than 1% of cement cause serious skin irritation and serious eye damage, therefore the classification of these mixtures regarding H315 and H318 is not based on the calculation of the ingredients or the pH in this case.



corrosion

Eye Dam. 1 H318 Causes serious eye damage.



Skin Irrit. 2 H315 Causes skin irritation.

Skin sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

#### 2.2.2 Label elements

Labelling (SANS 10234)

Hazard pictograms:



Signal word: Danger

Hazard determining: Cement Portland, grey

Components of labelling: Calcium dirmormate

Hazard statements:

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H335 May cause respiratory irritation.

Precautionary statements:

**P101** If medical advice is needed, have product container or label at hand.

**P102** Keep out of reach of children.

**P103** Read label before use.

**P280** Wear protective gloves/protective clothing/eye protection/face protection.

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**P310** Immediately call a POISON CENTER/doctor.

**P362** Take off contaminated clothing.

**P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

## 2.2.3 Other Hazards

### Results of PBT and vPvB assessment

**PBT:** Does not contain PBT substances.

**vPvB:** Does not contain vPvB substances.

## 2.3 Composition/information on ingredients

### 2.3.1 Mixtures

#### Hazardous components

| Chemical Name   | CAS-No.<br>EC-No.<br>Registration Number | Classification<br>(SANS 10234)                                                  | Concentration<br>(% w/w) |
|-----------------|------------------------------------------|---------------------------------------------------------------------------------|--------------------------|
| Cement Portland | Not Assigned                             | H318: Eye Dam. 1<br>H315: Skin Irrit. 2<br>H317: Skin Sens. 1<br>H335: STOT SE3 | 25 – 50 %                |

For explanation of abbreviations see section 2.16.

## 2.4: First aid measures

### 2.4.1 Description of first aid measures

General advice:

- Move out of dangerous area.
- Consult a physician.
- Show this safety data sheet to the doctor in attendance.

In inhaled:

- Move to fresh air.

|                          |                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| In case of skin contact: | Consult a physician after significant exposure.                                                                          |
|                          | Take off contaminated clothing and shoes immediately.                                                                    |
|                          | Wash off with soap and plenty of water.                                                                                  |
| In case of eye contact:  | Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. |
|                          | Small amounts splashed into eyes can cause irreversible tissue damage and blindness.                                     |
|                          | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.                        |
|                          | Continue rinsing eyes during transport to hospital.                                                                      |
|                          | Remove contact lenses.                                                                                                   |
| If swallowed:            | Keep eye wide open while rinsing.                                                                                        |
|                          | Do not induce vomiting without medical advice.                                                                           |
|                          | Rinse mouth with water.                                                                                                  |
|                          | Do not give milk or alcoholic beverages.                                                                                 |
|                          | Never give anything by mouth to an unconscious person.                                                                   |

#### 2.4.2 Most important symptoms and effects, both acute and delayed

|           |                                                                              |
|-----------|------------------------------------------------------------------------------|
| Symptoms: | Cough                                                                        |
|           | Respiratory disorder                                                         |
| Risks:    | Dermatitis                                                                   |
|           | See Section 11 for more detailed information on health effects and symptoms. |
|           | Health injuries may be delayed.                                              |
|           | Corrosive effects.                                                           |
|           | Irritant effects.                                                            |
|           | Causes serious eye damage.                                                   |
|           | May cause respiratory irritation.                                            |
|           | Causes severe burns.                                                         |

#### 2.4.3 Indication of any immediate medical attention and special treatment needed

|            |                       |
|------------|-----------------------|
| Treatment: | Treat symptomatically |
|------------|-----------------------|

## 2.5 Firefighting measures

### 2.5.1 Extinguishing media

|                               |                                 |
|-------------------------------|---------------------------------|
| Suitable extinguishing media: | The product is not combustible. |
|-------------------------------|---------------------------------|

### 2.5.2 Special hazards arising from the substance or mixture

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Hazardous combustion products: | No further relevant information available. |
|--------------------------------|--------------------------------------------|

### 2.5.3 Advice for firefighters

|                                                |                               |
|------------------------------------------------|-------------------------------|
| Special protective equipment for firefighters: | No special measures required. |
|------------------------------------------------|-------------------------------|

## 2.6 Accidental release measures

### 2.6.1 Personal precautions, protective equipment, and emergency procedures

Avoid formation of dust.

Ensure adequate ventilation.

### 2.6.2 Environmental precautions

Environmental precautions : No special measures required.

### 2.6.3 Methods and material for containment and cleaning up

Use neutralising agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

### 2.6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 2.7 Handling and storage

### 2.7.1. Precautions for safe handling

Thorough dedusting.

Keep receptacles tightly sealed.

Provide suction extractors if dust is formed.

**Information about fire - and explosion protection: No special measures required.**

### 2.7.2. Conditions for safe storage, including any incompatibilities

**Requirements to be met by storerooms and receptacles:**

Store only in unopened original receptacles.

**Information about storage in one common storage facility:**

Store away from foodstuffs.

**Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Protect from humidity and water.

### 2.7.3. Specific end use(s)

No further relevant information available.

## 2.8 Exposure controls/personal protection

### 2.8.1. Control parameters

#### Occupational Exposure Limits

| Components      | CAS-No.    | Value type<br>(Form of exposure) | Control<br>parameters | Basis |
|-----------------|------------|----------------------------------|-----------------------|-------|
| Cement portland | 65997-15-1 | TWA OEL-CL (Respirable dust)     | 10*5** mg/m3          | OEL   |

**Additional Occupational Exposure Limit Values for possible hazards during processing:**

total inhalable dust: 10 mg/m<sup>3</sup>

alveolar dust (< 5 µm): 4 mg/m<sup>3</sup>

Quartz alveolar dust (< 5 µm) : 0,15 mg/m<sup>3</sup>

**Additional information:**

The applicable TRGS

**2.8.2.Exposure controls****Personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages, and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Use a moisturizing skin cream after processing the product.

**Respiratory protection:** Short term filter device.

**Protection of hands:** Protective gloves.

**Material of gloves:** Nitrile impregnated cotton gloves.

**Eye protection:** Tightly sealed goggles

**Body protection:** Protective work clothing.

**2.9 Physical and chemical properties****2.9.1.Information on basic physical and chemical properties**

|                             |                                                |
|-----------------------------|------------------------------------------------|
| Appearance                  | : Powder                                       |
| Colour                      | : Grey                                         |
| Odour                       | : Uncharacteristic                             |
| Odour Threshold             | : Not determined                               |
| pH-value                    | : Alkaline                                     |
| Melting point/Melting range | : Undetermined                                 |
| Boiling point/Boiling range | : Not applicable                               |
| Flash point                 | : Not applicable                               |
| Flammability                | : Product is not flammable                     |
| Ignition temperature        | : Not determined                               |
| Decomposition temperature   | : Not determined                               |
| Self-igniting               | : Product is not self-igniting                 |
| Danger of explosion         | : Product does not present an explosion hazard |
| Vapour pressure             | : Not applicable                               |
| Explosive properties        | : No data available                            |
| Oxidizing properties        | : No data available                            |
| Density                     | : No data available                            |

|                                            |                                      |
|--------------------------------------------|--------------------------------------|
| Water solubility                           | : Hardens when in contact with water |
| Partition coefficient: n-octanol/<br>Water | : No data available                  |
| Viscosity, dynamic                         | : No data available                  |
| Viscosity, kinematic                       | : Not applicable                     |
| Relative vapour density                    | : No data available                  |
| Evaporation rate                           | : No data available                  |
| Organic solvents                           | : 0.0%                               |
| Solids content                             | : 100.0%                             |

### 2.9.2. Other information

No data available

## 2.10 Stability and reactivity

### 2.10.1 Reactivity

No further relevant information available.

### 2.10.2 Chemical Stability

Stable at recommended storage conditions.

Thermal decomposition / Conditions to be avoided: No decomposition if used according to specifications.

### 2.10.3 Possibility of hazardous reactions

Reacts with acids.

Reacts with light alloys in the presence of moisture to form hydrogen.

### 2.10.4 Conditions to avoid

No further relevant information available.

### 2.10.5 Incompatible materials

No further relevant information available.

### 2.10.6 Hazardous decomposition products

No dangerous decomposition products known.

## 2.11 Toxicological information

### 2.11.1 Information on toxicological effects

#### Acute toxicity

Not classified based on available information.

#### Skin corrosion/irritation

Causes Skin irritation.

#### Serious eye damage/eye irritation

Causes serious eye damage.

#### Respiratory or skin sensitisation

May cause an allergic skin reaction.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause respiratory irritation.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

## 2.12 Ecological information

### 2.12.1 Toxicity

No data available.

### 2.12.2 Persistence and degradability

No data available.

### 2.12.3 Bio accumulative potential

No data available.

### 2.12.4 Mobility in soil

No data available.

**Ecotoxicological effects:****Remark:**

The product contains substances which causes severe clouding in water.

The product contains substances which cause a local pH to change and thus have a detrimental effect on fish and bacteria.

**Additional ecological information:****General notes:**

Do not allow product to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralised.

### 2.12.5 Results of PBT and vPvB assessment

**PBT** : Does not contain PBT substances.

**vPvB** : Does not contain vPvB substances.

### 2.12.6 Other adverse effects

No further relevant information available.

## 2.13 Disposal considerations

### 2.13.1 Waste treatment methods

Product hardens after adding water after 5 to 6 hours and can then be disposed of as building rubbish.

Possible waste code 17 09 04. European waste catalogue.

Possible waste code. The concrete waste code depends on the source of the waste.

**Uncleaned packaging:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleaning agent:** Thoroughly shake out sacks.

## 2.14 Transport information

### 2.14.1 UN Number

ADR, ADN, IMDG, IATA Void

### 2.14.2 UN proper shipping name

ADR, ADN, IMDG, IATA Void

### 2.14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA Void

### 2.14.4 Packing group

ADR, ADN, IMDG, IATA Void

### 2.14.5 Environmental hazards

Not regulated as a dangerous good.

### 2.14.6 Special precautions for user

No data available.

### 2.14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

**Transport/Additional information:** Not dangerous according to the above specifications.

**UN "Model Regulation":** Void

## 2.15 Regulatory information

### 2.15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

### 2.15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

## 2.16: Other information

### Full text of H-Statements

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.

H318 : Causes serious eye damage.

H335 : May cause respiratory irritation.

H373 : May cause damage to organs through prolonged or repeated exposure.

**Full text of other abbreviations**

|             |                                                                                                                                                                                                                                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye Dam.    | : Serious eye damage                                                                                                                                                                                                                     |
| Skin Irrit. | : Skin irritation                                                                                                                                                                                                                        |
| Skin Sens.  | : Skin sensitisation                                                                                                                                                                                                                     |
| STOT RE     | : Specific target organ toxicity - repeated exposure                                                                                                                                                                                     |
| STOT SE     | : Specific target organ toxicity - single exposure                                                                                                                                                                                       |
| ADR         | : European Agreement concerning the International Carriage of Dangerous Goods by Road                                                                                                                                                    |
| CAS         | : Chemical Abstracts Service                                                                                                                                                                                                             |
| DNEL        | : Derived no-effect level                                                                                                                                                                                                                |
| EC50        | : Half maximal effective concentration                                                                                                                                                                                                   |
| GHS         | : Half maximal effective concentration                                                                                                                                                                                                   |
| IATA        | : International Air Transport Association                                                                                                                                                                                                |
| IMDG        | : International Maritime Code for Dangerous Goods                                                                                                                                                                                        |
| LD50        | : Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)                                                                                                 |
| LC50        | : Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)                                                                                                   |
| MARPOL      | : International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978                                                                                                                          |
| OEL         | : Occupational Exposure Limit                                                                                                                                                                                                            |
| PBT         | : Persistent, bioaccumulative and toxic                                                                                                                                                                                                  |
| PNEC        | : Predicted no effect concentration                                                                                                                                                                                                      |
| REACH       | : Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Reg-istration, Evaluation, Authorisation and Restriction of Chemi-cals (REACH), establishing a European Chemicals Agency |
| SVHC        | : Substances of Very High Concern                                                                                                                                                                                                        |
| vPvB        | : Very persistent and very bioaccumulative                                                                                                                                                                                               |

**Relevant phrases**

|      |                                        |
|------|----------------------------------------|
| H315 | : Causes skin irritation.              |
| H317 | : May cause an allergic skin reaction. |
| H318 | : Causes serious eye damage.           |
| H335 | : May cause respiratory irritation.    |

The information contained in this Material Safety Data Sheet corresponds to our level of knowledge at the time of publication. All warranties are excluded. Our most current General Sales Conditions shall apply. Please consult the product data sheet prior to any use and processing.