SAFETY DATA SHEET

# BuMaECO

Cement-based powder tile adhesive

| | |
|---|---|
| Product code | 1.TA.ECO |
| Version | 2026.10 |
| Date of issue | 01/10/2026 |
| Revision date | Supersedes version 2026.07 |

Prepared in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and the Vietnam Law on Chemicals No. 69/2025/QH15. This sheet contains the 16 mandatory sections in order.

## 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE SUPPLIER

### 1.1 Product identifier

| | |
|---|---|
| Trade name | BuMaECO |
| Product code | 1.TA.ECO |
| Product type | Cement-based powder tile adhesive |
| Product classification | Class C1T (mixed with water) / C2TES1 (mixed with CeRaLASTIC admixture) — per TCVN 7899-1:2008 and EN 12004-1:2017; meets ANSI A118.4 |
| Packaging | 25kg/bag |

### 1.2 Relevant identified uses and uses advised against

**Identified use**: adhesive for ceramic tiles, porcelain tiles and natural stone, interior and exterior, on floors/walls levelled with cement-based mortar.

**Uses advised against**: any application outside the manufacturer's technical instructions (see Section 7 and the product Technical Data Sheet).

### 1.3 Details of the supplier / manufacturer

**BUMATECH CO., LTD**

HEAD OFFICE
154/1/5 Cong Lo, Tan Son Ward, Ho Chi Minh City

OFFICE
91 Hoang Bat Dat, Tan Son Ward, Ho Chi Minh City

PLANT
820 Ap Chanh, Duc Lap Commune, Tay Ninh Province

TECHNICAL
0979 793 804

SALES
0914 765 778

EMAIL
bumagreen@bumatech.com.vn

WEBSITE
www.bumatech.vn

### 1.4 Emergency telephone number

**Medical emergency — 24/7**: **115** (national emergency number). Take this Safety Data Sheet or the product label with you to the medical facility.

**BUMATECH Technical Department**: 0979 793 804 (office hours) — advice on the product and on response measures.

## 2 HAZARD(S) IDENTIFICATION

### 2.1 Classification of the substance or mixture (GHS)

| HAZARD CLASS AND CATEGORY | CATEGORY | H CODE |
|---|---|---|
| Skin irritation (Skin Irrit.) | Category 2 | H315 |
| Serious eye damage (Eye Dam.) | Category 1 | H318 |
| Skin sensitisation (Skin Sens.) | Category 1B | H317 |
| Specific target organ toxicity – single exposure (STOT SE) | Category 3 | H335 |

### 2.2 GHS label elements



GHS05
Corrosion



GHS07
Exclamation mark

SIGNAL WORD
**DANGER**

#### Hazard statements

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

#### Precautionary statements

| | |
|---|---|
| P102 | Keep out of reach of children. |
| P261 | Avoid breathing dust. |
| P264 | Wash hands thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/clothing and eye/face protection. |
| P302+P352 | IF ON SKIN: Wash with plenty of water. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| 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 or doctor. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Dispose of contents/container in accordance with applicable regulations. |

### 2.3 Other hazards

- Prolonged exposure and/or intensive inhalation of respirable free crystalline silica (average diameter < 10 micron per ACGIH) can cause pulmonary fibrosis, commonly referred to as silicosis.
- The product contains cement. Contact between cement and body fluids (e.g. sweat and eye fluids) produces a strong alkaline reaction that may cause irritation or burns.
- The product does not meet the criteria for PBT (persistent, bioaccumulative, toxic) or vPvB.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

Mixture — cement-based dry mortar. Hazardous components within the meaning of GHS and the related classification:

| COMPONENT NAME | CAS / EC NO. | CONCENTRATION | CLASSIFICATION (GHS) |
|---|---|---|---|
| Portland cement (Cr(VI) < 2ppm) | CAS: 65997-15-1<br>EC: 266-043-4 | ~30 - 40% | Skin Irrit. 2 (H315); Skin Sens. 1B (H317); Eye Dam. 1 (H318); STOT SE 3 (H335) |
| Crystalline silica (quartz) — in graded sand | CAS: 14808-60-7<br>EC: 238-878-4 | < 60% | Carc. 1A / STOT RE 1 (H372) classification applies to the respirable fraction only (see note) |

The remainder consists of graded quartz sand, cellulose ether additives, redispersible polymer powder and functional additives — not classified as hazardous at the concentrations present.

> **Note on crystalline silica:** the carcinogenicity (IARC Group 1) and STOT RE classifications relate only to the respirable fraction of crystalline silica. As supplied, the silica is present as non-respirable graded aggregate; therefore the product is **NOT** classified as a carcinogen. Dust generated during dry mixing, cutting or grinding of tiles may contain respirable crystalline silica — hence the dust controls in Sections 2, 8 and 11.

## 4 FIRST-AID MEASURES

### 4.1 Description of necessary first-aid measures

**Skin contact**: Immediately remove contaminated clothing. Wash skin at once with soap and plenty of water. If irritation or a rash persists, get medical advice/attention.

**Eye contact**: Immediately rinse the eye under gently running clean water with the eyelids open for 10 - 15 minutes. Do not rub. Remove contact lenses if present and easy to do. Consult a doctor or ophthalmologist immediately.

**Ingestion**: Do not induce vomiting. Rinse mouth with water. Get medical advice immediately, showing the SDS and product label.

**Inhalation**: Move the person to fresh air, keep warm and at rest. If breathing difficulty persists, get medical advice.

### 4.2 Most important symptoms/effects, acute and delayed

Eye irritation, eye damage, skin irritation, erythema, respiratory irritation.

### 4.3 Indication of immediate medical attention and special treatment

In case of accident or if feeling unwell, seek medical advice immediately (show the directions for use or the SDS if possible). Treat symptomatically.

## 5 FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable media**: the product is non-combustible; use media appropriate to the surrounding fire (water, powder, $CO_2$, foam).

**Unsuitable media**: none in particular.

### 5.2 Special hazards arising from the chemical

The product is non-combustible and non-explosive. The product itself does not produce hazardous combustion products.

### 5.3 Special protective actions for fire-fighters

Use suitable breathing apparatus where a surrounding fire generates smoke. Collect contaminated fire-extinguishing water separately; do not discharge into drains.

## 6 ACCIDENTAL RELEASE MEASURES

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

Wear personal protective equipment (Section 8). Avoid dust dispersal and inhalation. Avoid skin and eye contact. Move unprotected persons to safety.

### 6.2 Environmental precautions

Do not allow the product to enter soil, surface water or drains. Contact with water produces an alkaline environment.

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

Collect mechanically using low-dust methods (avoid dry sweeping; prefer HEPA-filtered vacuuming or light dampening). Place in sealed containers for disposal. Hydrated (set) material is handled as inert construction waste.

## 7 HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid creating and inhaling dust. Avoid skin and eye contact. Work in a well-ventilated area; avoid confined spaces or areas with children or pets. Do not eat or drink while working. Wash hands after handling. See Section 8 for protective equipment.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool, well-ventilated place on pallets, protected from moisture. Tightly close bags after opening to prevent moisture uptake. Keep away from food, drink and animal feed.

**Shelf life:** 12 months in unopened bags (per the Technical Data Sheet).

**Incompatible materials:** none in particular; avoid strong acids and strong oxidisers.

### 7.3 Specific end use(s)

Tile adhesive (see Section 1 and the product Technical Data Sheet).

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters — occupational exposure limits (Vietnam)

Per QCVN 02:2019/BYT (National Technical Regulation on Dust — Permissible Exposure Limit Values of Dust at the Workplace):

| AGENT | BASIS | LIMIT VALUE (TWA) |
|---|---|---|
| Free crystalline silica (respirable / total dust) | QCVN 02:2019/BYT — silica-containing dust | Free silica in total dust ≤ 0.3mg/m³; the respirable fraction is subject to a stricter limit per Table 2 of the regulation |
| Cement dust | QCVN 02:2019/BYT — silica-free dust (Table 3) | Apply the silica-free dust limit values from Table 3 of the regulation |

**International reference (ACGIH TLV-TWA):** Portland cement 1mg/m³ (respirable); respirable crystalline silica (quartz) 0.025mg/m³.

Workplaces where employees are exposed to dust must carry out periodic workplace air monitoring at least once a year, per QCVN 02:2019/BYT and the Law on Occupational Safety and Health.

### 8.2 Individual protection measures (PPE)

**Eye protection**: Close-fitting safety goggles per EN 166 (when mixing the product or cutting tiles). Do not use contact lenses.

**Hand protection**: Suitable waterproof gloves per EN ISO 374 — e.g. nitrile (NBR) ≥ 0.35mm thick, or neoprene / PVC / butyl rubber. Do not use non-waterproof gloves.

**Respiratory protection**: A P2 dust mask per EN 149 when dry-mixing, cutting tiles, or where exposure limits are exceeded.

**Skin / body protection**: Full-cover protective clothing and boots.

**Engineering controls**: Ensure adequate ventilation; use local dust extraction when cutting or grinding tiles.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical state | Solid |
| Form | Powder |
| Colour | Grey / White |
| Odour | Cement-like |
| Odour threshold | No data available |
| pH (10% water dispersion) | ≈ 12.5 — strongly alkaline |
| Melting/freezing point | Not applicable |
| Initial boiling point/range | Not applicable |
| Flash point | Not applicable |
| Evaporation rate | Not applicable |
| Flammability (solid/gas) | Non-combustible |
| Flammability/explosive limits | Not applicable |
| Vapour pressure / density | Not applicable |
| Bulk density | ≈ 1.3g/cm³ |
| Solubility in water | Partly soluble (reacts and sets with water) |
| Partition coefficient n-octanol/water | Not applicable |
| Auto-ignition temperature | Not applicable |
| Viscosity | Not applicable |
| Volatile organic compound (VOC) content | 0g/l (per Technical Data Sheet, USEPA Method 24) |

## 10 STABILITY AND REACTIVITY

| | |
|---|---|
| 10.1 Reactivity | Stable under normal conditions. |
| 10.2 Chemical stability | Stable when stored dry. Moisture uptake or water contact causes irreversible hydration (setting). |
| 10.3 Possibility of hazardous reactions | None. When mixed with water, a mildly exothermic alkaline reaction occurs. |
| 10.4 Conditions to avoid | Moisture (degrades the unused product). |
| 10.5 Incompatible materials | Strong acids, strong oxidisers; aluminium and amphoteric metals (a moist alkaline environment may release hydrogen gas). |
| 10.6 Hazardous decomposition products | None. |

## 11 TOXICOLOGICAL INFORMATION

Contains cement. Cement gives a strong alkaline reaction with water and body fluids (e.g. sweat and eye fluids); contact with skin and eyes should therefore be carefully avoided.

| ROUTE OF EFFECT | CLASSIFICATION RESULT |
|---|---|
| a) Acute toxicity | Not classified (criteria not met). |
| b) Skin corrosion/irritation | Classified: Skin irritation, Category 2 (H315). |
| c) Serious eye damage/irritation | Classified: Serious eye damage, Category 1 (H318). |
| d) Respiratory/skin sensitisation | Classified: Skin sensitisation, Category 1B (H317). Cr(VI) in cement may cause allergic contact dermatitis (reduced to < 2ppm). |
| e) Germ cell mutagenicity | Not classified. |
| f) Carcinogenicity | The product (as supplied) is not classified. Note: prolonged inhalation of respirable crystalline silica is a risk factor for lung cancer and silicosis (IARC Group 1). |
| g) Reproductive toxicity | Not classified. |
| h) STOT — single exposure | May cause respiratory irritation (H335). |
| i) STOT — repeated exposure | Prolonged exposure to respirable silica dust carries a risk of silicosis. |
| j) Aspiration hazard | Not classified. |

## 12 ECOLOGICAL INFORMATION

| | |
|---|---|
| Toxicity | Not classified for environmental hazards. However, the product and wash water have a high (alkaline) pH that may harm aquatic life if discharged in quantity. |
| Persistence and degradability | Not applicable (inorganic material). |
| Bioaccumulative potential | None. |
| Mobility in soil | Set material is inert and of low mobility. |
| Other adverse effects | Avoid releasing the product into water bodies and drains. |

## 13 DISPOSAL CONSIDERATIONS

- Minimise waste generation. Allow surplus product to hydrate (set), then handle it as inert construction waste.
- Do not pour surplus material or wash water into drains (it may cause blockage).
- Dispose of in accordance with local and national regulations (the Law on Environmental Protection and applicable waste-management regulations).
- Empty packaging: clean or dispose of per regulations; do not reuse for other purposes.

## 14 TRANSPORT INFORMATION

Not classified as dangerous goods under transport regulations (ADR/RID for road and rail, IMDG for sea, IATA for air) or under domestic dangerous-goods transport regulations (Decree 161/2024/NĐ-CP).

| | |
|---|---|
| UN number | Not applicable |
| UN proper shipping name | Not applicable |
| Transport hazard class(es) | Not applicable |
| Packing group | Not applicable |
| Marine pollutant | None |

## 15 REGULATORY INFORMATION

### Vietnam

- Law on Chemicals No. 69/2025/QH15 (effective from 01/01/2026).
- Decree 24/2026/NĐ-CP, Decree 25/2026/NĐ-CP and Decree 26/2026/NĐ-CP.
- Circular 01/2026/TT-BCT and Circular 02/2026/TT-BCT of the Ministry of Industry and Trade.
- QCVN 02:2019/BYT — permissible dust exposure limits at the workplace.
- Law on Occupational Safety and Health; applicable goods-labelling regulations.
- Classification and labelling per the Globally Harmonized System (GHS).

### International

- United Nations GHS (current edition — 11th Revised Edition, 2025).
- Reference product standards: EN 12004-1:2017 and TCVN 7899-1:2008 (tile adhesives).

**Chemical safety assessment:** not required for this mixture.

## 16 OTHER INFORMATION

### Full text of the hazard (H) statements appearing in this SDS

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

### Explanation of hazard classifications

| GHS SECTION | CLASSIFICATION CODE | MEANING |
|---|---|---|
| 3.2 / 2 | Skin Irrit. 2 | Skin irritation, Category 2 |
| 3.3 / 1 | Eye Dam. 1 | Serious eye damage, Category 1 |
| 3.4.2 / 1B | Skin Sens. 1B | Skin sensitisation, Category 1B |
| 3.8 / 3 | STOT SE 3 | Specific target organ toxicity – single exposure, Category 3 |

## Legend to abbreviations

| | |
|---|---|
| CAS | Chemical Abstracts Service |
| EC | European Community EINECS / ELINCS inventory |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| OEL / TWA / STEL | Occupational exposure limit / time-weighted average / short-term |
| STOT SE / RE | Specific target organ toxicity – single / repeated exposure |
| PBT / vPvB | Persistent, bioaccumulative, toxic / very persistent, very bioaccumulative |
| PPE | Personal protective equipment |
| ADR / RID / IMDG / IATA | Dangerous-goods transport regulations: road / rail / sea / air |
| IARC | International Agency for Research on Cancer |
| VOC | Volatile organic compound |

**Main data sources:** BuMaECO Technical Data Sheet (version 2026.10); reference SDS for an equivalent cement-based tile adhesive; United Nations GHS.

**Disclaimer:** The information herein is based on our state of knowledge at the date stated and refers solely to the product indicated; it constitutes no guarantee of any particular property. It is the user's responsibility to ensure that this information is appropriate and complete for the specific intended use. This SDS cancels and replaces any preceding release.

END OF SAFETY DATA SHEET · 16 OF 16 SECTIONS