SAFETY DATA SHEET

K11F

Aggregate-filled acrylic polymer waterproofing admixture liquid — to be mixed with cement on site

Product code	3.WP.K11F
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	K11F
Product code	3.WP.K11F
Product type	Aggregate-filled acrylic polymer waterproofing admixture liquid — to be mixed with cement on site
Packaging	04kg/pail and 18kg/pail

1.2 Relevant identified uses and uses advised against

Identified use: Polymer waterproofing admixture, mixed with cement on site to form a flexible cement-polymer membrane, for waterproofing external walls, basement walls, walls in wet areas (bathrooms, kitchens, sanitary rooms), potable water tanks, swimming pools, water features, planters, concrete roof slabs, balconies, gutters and precast wall panels.

SCOPE OF APPLICATION: This sheet applies only to K11F as supplied. The CEMENT used for mixing is supplied by the applicator and is NOT covered by this sheet — Portland cement is a chemical classified as hazardous (skin irritation, serious eye damage, respiratory irritation); the Safety Data Sheet of the cement used must be consulted. Uses advised against: any use outside the manufacturer's 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)

The product is NOT classified as a hazardous mixture under the GHS classification criteria — it does not meet the thresholds for physical, health or environmental hazards. The product is a water-based acrylic polymer dispersion, non-combustible, with a low volatile organic compound (VOC) content. Basis of classification: (a) The CMIT/MIT preservative (CAS 55965-84-9) is controlled below 0.0015% — the specific concentration limit (SCL) for classification as Skin Sensitisation Category 1A, and also below the 0.0025% threshold for classification as an aquatic environmental hazard, Category 3 (multiplying factor M = 100). (b) The silica aggregate in the product is wet and dispersed in the liquid phase and generates no respirable dust — the toxicity classification for inhaled crystalline silica dust therefore does not apply to the product as supplied. All remaining components are present at non-classifiable concentrations. See Sections 3, 11 and 12.

2.2 GHS label elements

LABEL ELEMENTS

NOT REQUIRED

No hazard pictogram, signal word, hazard statement (H) or precautionary statement (P) is required under GHS.

Safe-use recommendations — not required on the label

- Keep out of reach of children; keep away from food and drink.
- Avoid direct and prolonged skin contact; wash hands thoroughly after handling.
- Gloves, safety goggles and a fine-dust mask are MANDATORY when charging and mixing cement — the mixed product is alkaline.
- Do not pour surplus product or tool-wash water into drains or water bodies (see Sections 6 and 13).

Other mandatory label content

Additional warning: "Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction."

2.3 Other hazards

- The product contains isothiazolinone preservatives (CMIT/MIT) at trace level. These are very potent skin sensitisers: individuals already sensitised may develop allergic contact dermatitis even below the classification threshold. Avoid direct skin contact with the product.
- Hazards of the product once mixed with cement: the cement supplied by the applicator is a chemical classified as hazardous — it causes skin irritation, serious eye damage and respiratory irritation. Mixed K11F is alkaline; prolonged contact with sweat or body fluids can cause irritation, dryness or mild skin burns. Cement dust or splashes of the wet mix in the eyes can cause redness, stinging and corneal injury. The Safety Data Sheet of the cement used must be consulted.
- Dust from dry working: the product contains a silica aggregate. As supplied in liquid form the aggregate is wet and generates no dust. However, grinding, cutting, sanding or demolishing the CURED film can generate dust containing respirable crystalline silica — the agent that causes silicosis, placed by IARC in Group 1 for occupational exposure. When dry-working, local dust extraction or surface dampening and an FFP3 dust mask are mandatory.
- The product is highly adhesive. Clean tools and spray equipment while the product is still wet; once cured it can only be removed mechanically.
- Spilled product, or product that dries to a film, can make the work surface slippery.
- Water-based and non-combustible. Freezing breaks the dispersion and irreversibly spoils the product.
- PBT / vPvB assessment: the product contains no PBT or vPvB substance at ≥ 0.1%. It contains no substance of very high concern (SVHC) at ≥ 0.1%.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Mixture — water-based acrylic polymer dispersion with fine silica aggregate and functional additives. The product contains no organic solvents. Hazardous components within the meaning of GHS:

COMPONENT NAME	CAS / EC NO.	CONCENTRATION	CLASSIFICATION (GHS)
Polymer dispersion	Trade secret	Trade secret	Not classified
Silica sand / quartz flour (aggregate)	CAS: 14808-60-7	< 50%	Not classified in the form present in the product — see the note below the table
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) — preservative (CMIT/MIT)	CAS: 55965-84-9 EC Index: 613-167-00-5	< 0.0015%	Acute Tox. 2, H330; Acute Tox. 2, H310; Acute Tox. 3, H301; Skin Corr. 1C, H314; Eye Dam. 1, H318; Skin Sens. 1A, H317; Aquatic Acute 1, H400 (M = 100); Aquatic Chronic 1, H410 (M = 100)

NOTE ON THE SILICA AGGREGATE: crystalline silica (quartz) AS RESPIRABLE DUST is self-classified by many suppliers as specific target organ toxicity after repeated exposure — H372 or H373 (lungs) — and is placed by IARC in Group 1 for occupational exposure. In this product the aggregate is wet and dispersed in the liquid phase, so NO respirable dust is generated; that classification therefore does not apply to the product as supplied. The dust hazard arises only when the cured film is ground, cut, sanded or demolished — see Sections 2.3, 8 and 11.

4 FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

Skin contact: Immediately remove contaminated clothing and footwear. Wash skin with soap and plenty of water. If irritation, a rash or itching appears and persists, get medical advice/attention and take the SDS with you. Wash clothing before reuse.

Eye contact: Remove contact lenses if worn and easy to do. Rinse the eye under gently running clean water with the eyelids open for 10 - 15 minutes. Do not rub. If irritation persists, consult a doctor or ophthalmologist.

Ingestion: Rinse mouth with water. Do not induce vomiting. Do not give milk or alcoholic drinks. Never give anything by mouth to an unconscious person. If symptoms persist, get medical advice and take the SDS with you.

Inhalation: Move the person to fresh air, keep warm and at rest. If unconscious, place in the recovery position and get medical help. If symptoms persist, call a doctor. Never leave the person unattended.

4.2 Most important symptoms/effects, acute and delayed

No serious immediate symptoms have been reported for K11F as supplied. Prolonged skin contact may cause dryness or slight irritation. Individuals already sensitised to isothiazolinones may develop allergic contact dermatitis, typically appearing 12 - 48 hours later. For the product once mixed with cement: skin irritation, dryness, mild burns and corneal injury — see the Safety Data Sheet of the cement used.

4.3 Indication of immediate medical attention and special treatment

Treat symptomatically. No specific antidote is known. Where allergic contact dermatitis is suspected, stop exposure and refer the person to a dermatologist; mention possible isothiazolinone sensitisation so that patch testing can be considered. The additional toxicological information in Section 11 must be observed.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

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

Unsuitable media: none in particular.

5.2 Special hazards arising from the chemical

The water-based product itself is non-combustible. Combustion of the dried polymer film may generate carbon monoxide (CO), CO_2 and unburned hydrocarbons (smoke). No hazardous explosive combustion products have been reported.

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus (SCBA) when fighting a fire in a confined space or a smoky fire. Follow standard procedures for chemical fires. Collect contaminated fire-extinguishing water separately; do not allow it to enter drains or water bodies.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment when cleaning up (see Section 8). Take care: surfaces wetted with the product are very slippery — warn of the slip hazard. Avoid prolonged skin contact and eye contact. Ensure the area is ventilated.

6.2 Environmental precautions

Do not discharge the product into drains, surface water or soil — the cured polymer can block pipework, and the preservative in the product is very toxic to aquatic life in its pure form. Contain the spill. If the product contaminates a river, lake or watercourse, notify the competent authority immediately.

6.3 Methods and material for containment and cleaning up

Small quantity: absorb with inert absorbent material (cloths, cotton waste, sand, sawdust) and collect into sealed, correctly labelled containers for disposal. Large quantities: collect mechanically and pump into suitable containers. WIPE CLEAN WHILE THE PRODUCT IS STILL WET — once dry, the polymer film adheres very strongly and can only be removed mechanically. Wash the area with water; retain all contaminated wash water for treatment per Section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Invert the pail, tap it lightly, open the lid and stir the liquid thoroughly before mixing. Add the cement slowly in the ratio 1kg of product : 0.5kg of cement and mix with a slow-speed mixer until the mix is homogeneous and low in entrained air. Use only cement with a 28-day compressive strength ≥ 40MPa. Gloves, safety goggles and a fine-dust mask are MANDATORY when charging and mixing the cement — cement causes skin irritation and serious eye damage (see Section 8 and the Safety Data Sheet of the cement used). Minimise inhalation of cement dust. Use the mix within 1 hour at 35°C; this time is shorter at higher temperatures. Apply by brush, roller or spray at up to approximately 1kg/m² per coat; build up in several thin coats to limit cracking and blistering. Do not eat, drink or smoke while working; wash hands thoroughly after handling. Close the container immediately after use. Apply in a well-ventilated area with air movement; avoid confined spaces and areas with children or pets.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, shaded place with the container tightly closed and correctly labelled; keep away from direct sunlight and heat. PROTECT FROM FREEZING / FROST — freezing breaks the dispersion and irreversibly spoils the product. Aggregate may settle during prolonged storage; stir thoroughly before use. Keep out of reach of children and away from food and drink.

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

Incompatible materials in storage: strong acids; concentrated electrolytes and polyvalent metal salts (coagulate the dispersion); freezing temperatures. Cement is to be added to the product only at the time of application and in the correct ratio — do not store the mixed product.

7.3 Specific end use(s)

Polymer waterproofing admixture for site mixing with cement, for interior and exterior floors and walls (see Section 1 and the product Technical Data Sheet).

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters — occupational exposure limits (Vietnam)

As supplied K11F is a liquid in which the silica aggregate is wet, so no respirable dust is generated; no occupational exposure limit (OEL) applies to the product in this form. Apply general occupational hygiene principles per QCVN 02:2019/BYT and the Law on Occupational Safety and Health. NOTE: when charging and mixing cement, and when grinding / cutting / sanding the cured film, cement dust and respirable crystalline silica dust must be controlled to the limits in QCVN 02:2019/BYT.

8.2 Individual protection measures (PPE)

K11F as supplied requires no special protective equipment on its own. However, mixing the cement and applying the product always give rise to the hazards of cement, so full protective equipment must be worn throughout. Provide an eyewash point and clean water near the work area.

Eye protection: Safety goggles per EN 166. Mandatory when charging and mixing cement, when brushing / rolling / spraying, and when cutting or grinding surfaces.

Hand protection: Chemical-resistant gloves per EN ISO 374 — nitrile rubber (NBR) 0.1 - 0.4mm thick, breakthrough time ≥ 480 minutes. Mandatory when mixing the cement and throughout application because the mix is alkaline. Gloves are also the primary measure against skin sensitisation to isothiazolinones.

Skin / body protection: Protective coveralls with long sleeves and long trousers; rubber boots when applying large quantities or when standing in areas of wet mortar.

Respiratory protection: Normally not required for K11F in liquid form. When charging and mixing cement or spray-applying: an FFP2 fine-dust mask per EN 149. When grinding, cutting or sanding the cured film: an FFP3 mask per EN 149, combined with local dust extraction or surface dampening.

Engineering controls: Ensure adequate general ventilation; provide local dust extraction where cement is charged and mixed and when dry-working the cured layer. Provide an eyewash point and clean water near the work area.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Colour	Opaque white with ivory-white aggregate
Odour	Slight, ester-like
Odour threshold	No data available
pH	≈ 7 - 9 at 25°C
Melting/freezing point	≈ 0°C (water-based — protect from freezing)
Boiling point	≈ 100°C (water-based)
Flash point	Not applicable (water-based, non-combustible)
Flammability	Non-combustible
Vapour pressure	As for water (≈ 2.3kPa at 20°C)
Density	≈ 1.7 - 1.8g/cm³ at 25°C
Solubility in water	Dispersible in water before curing; the silica aggregate is insoluble
VOC content	0g/l (declared per USEPA Method 24)

10 STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions. Does not decompose when stored and used as directed.
10.2 Chemical stability	Stable when stored correctly (cool and dry, protected from freezing). Freezing breaks the dispersion and irreversibly degrades the product.
10.3 Possibility of hazardous reactions	No hazardous reactions occur. Stable under the recommended storage conditions.
10.4 Conditions to avoid	Freezing / frost; elevated temperatures; prolonged direct sunlight.
10.5 Incompatible materials	Strong acids; concentrated electrolytes and polyvalent metal salts — coagulate the dispersion.
10.6 Hazardous decomposition products	Under normal storage and use conditions: no hazardous decomposition products are known. On combustion: carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

11 TOXICOLOGICAL INFORMATION

ROUTE OF EFFECT	CLASSIFICATION RESULT
a) Acute toxicity	Not classified. No component is present at a concentration reaching the classification threshold.
b) Skin corrosion/irritation	Not classified. Prolonged or repeated contact may cause dryness or slight irritation.
c) Serious eye damage/irritation	Not classified. May cause temporary stinging, redness and discomfort if splashed into the eyes.
d) Respiratory/skin sensitisation	Not classified. The product contains CMIT/MIT preservative below 0.0015% — the specific concentration limit for classification as Skin Sensitisation Category 1A. Note: individuals already sensitised to isothiazolinones may still show an allergic reaction below this threshold.
e) Germ cell mutagenicity	Not classified.
f) Carcinogenicity	Not classified for the product as supplied. Crystalline silica AS RESPIRABLE DUST is placed by IARC in Group 1 for occupational exposure; in this product the aggregate is wet and generates no dust — see item i) and Section 2.3.
g) Reproductive toxicity	Not classified.
h) STOT — single exposure	Not classified. No test data are available for the product as a whole.
i) STOT — repeated exposure	Not classified for the product as supplied. The crystalline silica aggregate AS RESPIRABLE DUST is self-classified by many suppliers as H372 / H373 (lungs). In this product the aggregate is wet and dispersed in the liquid phase and generates no respirable dust. The hazard arises only when the cured film is ground, cut or sanded — see Sections 2.3 and 8.
j) Aspiration hazard	Not classified.

12 ECOLOGICAL INFORMATION

Toxicity	The product is NOT classified as hazardous to the aquatic environment. The determining component is the CMIT/MIT preservative, with a multiplying factor M = 100; at a content below 0.0015% the summation value falls below the Category 3 classification threshold (which corresponds to a content of 0.0025%). The product must nevertheless be kept out of water bodies.
Persistence and degradability	CMIT/MIT: not readily biodegradable (OECD 301). Acrylic polymer: persistent, not biodegradable; dries to an inert film. Silica aggregate: an inert inorganic material, not biodegradable and not toxic to aquatic life.
Bioaccumulative potential	Not bioaccumulative (OECD 305 for CMIT/MIT). The acrylic polymer is of high molecular weight — bioaccumulation is not expected.
Mobility in soil	No data available. The dried product forms an inert film of low mobility.
Other adverse effects	PBT and vPvB assessment: the product contains no PBT or vPvB substance at 0.1% or above. Do not allow the product to enter surface water, drainage systems, sewers or soil. Special note for water tanks and swimming pools: put into service only after the waterproofing layer has cured and been kept for the full curing time given in the Technical Data Sheet; discard the first fill of water and observe the product's current potable-water contact certification.

13 DISPOSAL CONSIDERATIONS

- Minimise waste generation. Allow surplus product to dry / cure completely, then dispose of it as solid construction waste, or hand it to an authorised contractor for treatment at a licensed facility.
- Do not pour surplus product or tool-wash water into drains, water bodies or soil — the cured polymer blocks pipework. Collect separately for disposal.
- Dispose of in accordance with local and national regulations (the Law on Environmental Protection and applicable waste-management regulations).
- Empty packaging: drain completely (drip-free) and clean; it may then be sent to a suitably equipped facility for recycling or disposal. 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.
- Decree 161/2024/NĐ-CP — transport of dangerous goods.
- 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).
- Reference product standards: per the Technical Data Sheet.

Chemical safety assessment: not mandatory for this mixture.

16 OTHER INFORMATION

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

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H372	Causes damage to organs (lungs) through prolonged or repeated exposure by inhalation.
H373	May cause damage to organs (lungs) through prolonged or repeated exposure by inhalation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

All the H statements above are the classifications of the components in their PURE form (CMIT/MIT) or AS RESPIRABLE DUST (crystalline silica), as stated in Section 3. In the form and at the concentrations present in the product none of them applies to the product — K11F is not classified and carries no hazard statement (see Sections 2.1 and 2.2).

Legend to abbreviations

CAS	Chemical Abstracts Service
EC / EINECS	European Community EINECS / ELINCS inventory
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
OEL / TWA	Occupational exposure limit / time-weighted average / short-term
PBT / vPvB	Persistent, bioaccumulative, toxic / very persistent, very bioaccumulative
PPE	Personal protective equipment
LC50 / EC50 / ErC50	Concentration lethal to, or affecting, 50% of the test organisms
NOEC	No observed effect concentration
M factor	Multiplying factor used in the summation method when classifying aquatic environmental hazards
SCL	Specific concentration limit — a substance-specific threshold used instead of the generic threshold when classifying a mixture
CMIT/MIT	Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) — preservative
OECD	Organisation for Economic Co-operation and Development — test guidelines
VOC	Volatile organic compound
SVHC	Substance of very high concern

Main data sources: K11F Technical Data Sheet (version 2026.10); 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