HUMIC ACID SALTS

Potassium Humate Flake

Product code SH-KH-04F · Prepared in the format of Annex II to Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2020/878

01 IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier	Potassium Humate Flake Product code: SH-KH-04F Substance: Humic acids, potassium salts CAS No.: 68514-28-3 EC No.: 271-030-1
1.2 Relevant identified uses of the substance and uses advised against	
Identified uses	Fertilizer ingredient and soil conditioner for agricultural and horticultural use.
Uses advised against	Not supplied for human consumption, pharmaceutical use or as an animal feed material.
REACH registration number	No REACH registration number has been provided in this supply chain, and no applicable exemption or Only Representative coverage has been demonstrated. The EU importer must confirm and fulfil any applicable registration obligation before import. This SDS is not evidence of registration or exemption.
1.3 Details of the supplier of the safety data sheet	SAINT HUMIC ACID CO., LIMITED Flat/Rm 1002, 10/F, Easey Commercial Building, 253-261 Hennessy Road, Wan Chai, Hong Kong Telephone: +86 133 9088 3227 E-mail (person responsible for the SDS): info@humicacid.org Website: www.humicacid.org
1.4 Emergency telephone number	+86 133 9088 3227 Available on working days, 09:00–18:00 Beijing time (UTC+8); English / Chinese. National poison centre numbers are not provided; in an emergency also contact the poison centre of the country of use.

02 HAZARDS IDENTIFICATION

2.1 Classification of the substance (Regulation (EC) No 1272/2008)	vPvM (very persistent and very mobile), EUH451. Basis: self-classification submitted jointly by REACH registrants to the ECHA C&L Inventory for Humic acids, potassium salts (EC 271-030-1), record accessed 2026-10-27. It has not been confirmed that this product has the same substance identity as the notified substance; see the limitations in Section 16.
2.2 Label elements	Signal word: Danger Hazard statement: EUH451 Can cause very long-lasting and diffuse contamination of water resources. Pictogram: none (no pictogram is assigned to this hazard class). Precautionary statements: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P273 Avoid release to the environment. P391 Collect spillage. P501 Dispose of contents/container in accordance with local/regional/national regulations.
2.3 Other hazards	Meets the vPvM criteria according to the classification in 2.1 (see Sections 12.2, 12.4, 12.7). PBT/vPvB: not assessed (data lacking). Endocrine disrupting properties: not assessed; screening against EU lists not yet carried out.

03 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance	Humic acids, potassium salts CAS No.: 68514-28-3 EC No.: 271-030-1
Typical content (see TDS)	Humic acid (dry basis): ≥ 60.0%; Potassium as K_2O (dry basis): 10.0 – 12.0%
Substance identity	Single substance of unknown or variable composition (UVCB), not a mixture (manufacturer information, 2026-10-27). Raw material: weathered coal and lignite; neutralised with potassium alkali only; no additives. Whether the product falls within the substance identity of the REACH registrations for EC 271-030-1 has not been verified.
Other constituents	Remainder: moisture and mineral matter (ash). Specification values may overlap (e.g. potassium is expressed as K2O). Typical values: Technical Data Sheet SH-TDS-KH-04F-EN-v1.1.
Impurities	Heavy metals, manufacturer in-house certificates of analysis (not third-party reports): heavy metals (as Pb) ≤ 10 mg/kg, complied; arsenic (as As2O3) ≤ 2 mg/kg, not detected. Sources: Super Potassium Humate Powder, batch 20250118KHA-1 (2025-01-18); Sulfonated Potassium Humate, batch 20220622KFA-1 (2022-06-22). Cadmium, mercury, chromium: no data available.

04 FIRST AID MEASURES

4.1 Description of first aid measures	Eyes: rinse with plenty of water for several minutes; remove contact lenses if easy to do. Skin: wash with soap and water. Inhalation: move to fresh air. Ingestion: rinse mouth with water. Seek medical advice if symptoms persist.
4.2 Most important symptoms and effects, both acute and delayed	Dust may cause mechanical irritation of eyes and respiratory tract.
4.3 Indication of any immediate medical attention and special treatment needed	Treat symptomatically.

05 FIREFIGHTING MEASURES

5.1 Extinguishing media	Suitable: water spray, foam, dry chemical powder or carbon dioxide, as appropriate for the surrounding fire. Unsuitable: none known.
5.2 Special hazards arising from the substance	Combustion may produce carbon monoxide and carbon dioxide and potassium oxides. As an organic solid, fine dust may be combustible; dust explosion characteristics: No data available (data lacking).
5.3 Advice for firefighters	Wear self-contained breathing apparatus and protective clothing.

06 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel	Avoid generating dust and contact with eyes. Wear protective equipment as in Section 8.
6.1.2 For emergency responders	Wear protective equipment as in Section 8, including respiratory protection where dust is generated.
6.2 Environmental precautions	Prevent the product, including small spillages and wash water, from entering drains, surface water and groundwater. Normal agricultural application in accordance with label directions is not a release under this section.
6.3 Methods and material for containment and cleaning up	Collect spillage. Avoid dry sweeping that raises dust; use gentle shovelling or an industrial vacuum suitable for combustible dust. Place in a closed, labelled container for reuse or disposal (Section 13).
6.4 Reference to other sections	See Sections 8 and 13.

07 HANDLING AND STORAGE

7.1 Precautions for safe handling	Avoid dust formation and contact with eyes. Use local exhaust ventilation where dust is generated. Observe good industrial hygiene.
7.2 Conditions for safe storage	Store in a cool, dry, well-ventilated place in the original closed packaging; protect from moisture. Keep away from strong oxidising agents. Keep away from acids (product quality: humic acid precipitates).
7.3 Specific end uses	See Section 1.2.

08 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters	No substance-specific EU occupational exposure limit. Applicable national limits (e.g. for inhalable and respirable dust) and monitoring procedures to be listed for each destination country; not yet compiled. DNEL/PNEC: No data available (data lacking).
8.2 Exposure controls	Engineering: local exhaust ventilation where dust is generated. Eyes: safety glasses with side shields; goggles where dust is generated. Hands: protective gloves for dry solids tested to EN ISO 374 (e.g. nitrile); wear gloves for prolonged or repeated contact. Material thickness and breakthrough time to be confirmed with the glove supplier. Respiratory: particulate filter mask (e.g. FFP2/P2) where dust is generated. Thermal hazards: not applicable. Environment: avoid release to drains and surface water.

09 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Physical state	Solid (black flake)
Colour	Black
Odour	No data available
Melting point / freezing point	No data available
Boiling point	Not applicable (solid)
Flammability	No data available
Lower and upper explosion limit	No data available
Flash point	Not applicable (solid)
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	9.0 – 10.0 (1:100 aqueous solution; Chinese standard method GB/T 33804-2025 (fertiliser-grade potassium humate))
Kinematic viscosity	Not applicable (solid)
Solubility	Water-soluble fraction, dry basis, TDS specification: 100% (complete dissolution under the test conditions). This is the proportion of product dissolving under the test method, not a solubility in g/L. Test method: Chinese standard GB/T 33804-2025 (fertiliser-grade potassium humate).
Partition coefficient n-octanol/water	No data available
Vapour pressure	No data available
Density and/or relative density	No data available
Relative vapour density	Not applicable (solid)
Particle characteristics	Flake size: 2 – 4 mm (particle size distribution: no data available)
9.2 Other information	
9.2.1 Information with regard to physical hazard classes	Dust explosion characteristics (Kst, MIE): No data available (data lacking).
9.2.2 Other safety characteristics	No data available (data lacking)

10 STABILITY AND REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	Dust formation and accumulation; heat and sources of ignition. Moisture (product quality only).
10.5 Incompatible materials	Strong oxidising agents.
10.6 Hazardous decomposition products	On combustion: carbon monoxide and carbon dioxide and potassium oxides.

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
Acute toxicity	No data available (data lacking); classification criteria cannot be assessed.
Skin corrosion / irritation	No data available (data lacking); classification criteria cannot be assessed.
Serious eye damage / irritation	No data available (data lacking); classification criteria cannot be assessed.
Respiratory or skin sensitisation	No data available (data lacking); classification criteria cannot be assessed.
Germ cell mutagenicity	No data available (data lacking); classification criteria cannot be assessed.
Carcinogenicity	No data available (data lacking); classification criteria cannot be assessed.
Reproductive toxicity	No data available (data lacking); classification criteria cannot be assessed.
STOT – single exposure	No data available (data lacking); classification criteria cannot be assessed.
STOT – repeated exposure	No data available (data lacking); classification criteria cannot be assessed.
Aspiration hazard	No data available (data lacking); classification criteria cannot be assessed.
Routes of exposure and effects	Likely routes of exposure: inhalation of dust, skin and eye contact. Immediate effects: see Section 4.2. Delayed and chronic effects: No data available (data lacking).
11.2 Information on other hazards	
11.2.1 Endocrine disrupting properties	Not identified as having endocrine disrupting properties: no endocrine disruptor assessment or listing for EC 271-030-1 in ECHA CHEM (checked 2026-10-27). No test data.
11.2.2 Other information	None.

12 ECOLOGICAL INFORMATION

12.1 Toxicity	No data available (data lacking)
12.2 Persistence and degradability	Classified as very persistent (vP) as part of the vPvM classification in Section 2.1; supporting study data are not held by the supplier.
12.3 Bioaccumulative potential	No data available (data lacking)
12.4 Mobility in soil	Classified as very mobile (vM) as part of the vPvM classification in Section 2.1; supporting study data are not held by the supplier.
12.5 Results of PBT and vPvB assessment	PBT / vPvB: not assessed (data lacking). Note: vPvM is a separate hazard class and is not a PBT or vPvB conclusion.
12.6 Endocrine disrupting properties	Not identified as having endocrine disrupting properties: no endocrine disruptor assessment or listing for EC 271-030-1 in ECHA CHEM (checked 2026-10-27). No test data.
12.7 Other adverse effects	vPvM: can cause very long-lasting and diffuse contamination of water resources (EUH451). Prevent release to drains, surface water and groundwater.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Dispose of product, collected spillage and contaminated packaging in accordance with local, regional and national regulations, e.g. via a licensed waste contractor. Do not discharge to drains or watercourses. Emptied packaging should be completely emptied before recycling or disposal.

14 TRANSPORT INFORMATION

Transport (ADR/RID, IMDG, IATA)	Not classified as dangerous goods for transport, on the basis of available information (no transport tests carried out; no indication of flammable-solid, self-heating, corrosive or environmental transport hazards). vPvM (EUH451) does not in itself lead to transport classification.
14.1 UN number or ID number	Not applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Environmentally hazardous (ADR/RID): no, on available information (aquatic toxicity data lacking). Marine pollutant (IMDG): no, on available information.
14.6 Special precautions for user	Keep dry; keep packaging intact; avoid dust formation during handling.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable: supplied packaged (bags and flexible intermediate bulk containers), not carried in bulk.

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the substance	REACH registration: see Section 1 (REACH registration number). ECHA CHEM lists no regulatory obligations for EC 271-030-1 (checked 2026-10-27): not on the Candidate List of SVHC, not in Annex XIV (authorisation), no substance-specific entry in Annex XVII (restrictions), no harmonised classification. Heavy-metal data: see Section 3. Customers are worldwide with no fixed destination; destination-country requirements have not been compiled and must be checked by the user. Placing on the market as or in a fertilising product must be checked separately under Regulation (EU) 2019/1009 or the national fertiliser rules, as applicable.
15.2 Chemical safety assessment	Not carried out by the supplier.

16 OTHER INFORMATION

Revision	Version 1.1, 2026-10-31. Supersedes SH-SDS-KH-04F-EN-v1.0 (2026-10-27). Change: reference updated to Technical Data Sheet SH-TDS-KH-04F-EN-v1.1 (water solubility stated as 100%); hazard information unchanged. Version 1.0 superseded the SAINT 2026-08 MSDS for this grade; its main changes were: new format to Annex II as amended by (EU) 2020/878; Section 2 reviewed against the ECHA C&L Inventory; REACH registration statement corrected; Sections 9, 12, 14 and 15 revised.
Sources	Technical Data Sheet SH-TDS-KH-04F-EN-v1.1; manufacturer's published product information and safety data sheets (2011 and later editions); ECHA C&L Inventory, Source: European Chemicals Agency, https://chem.echa.europa.eu (record exports kept on file).
Classification procedure	Section 2: adopted from published self-classifications in the ECHA C&L Inventory; substance identity not confirmed (see Limitations). Precautionary statements selected from the set listed for vPvM (P201, P202, P273, P391, P501).
Full text of H/EUH statements	EUH451 Can cause very long-lasting and diffuse contamination of water resources.
Training advice	Handle according to good industrial hygiene and safety practice; users should be trained in the content of this SDS.
Abbreviations	CAS: Chemical Abstracts Service; EC: European Community number; PBT: persistent, bioaccumulative, toxic; vPvB: very persistent, very bioaccumulative; vPvM: very persistent, very mobile; UVCB: substance of unknown or variable composition; DNEL: derived no-effect level; PNEC: predicted no-effect concentration; STOT: specific target organ toxicity.
Status and scope	Issued on the basis of available information. Not for supply to the European Union; an EU version will be issued when the missing information below is available.
Limitations	1. Section 2 is based on published self-classifications (ECHA C&L Inventory); it has not been confirmed that this product has the same substance identity. 2. No REACH registration number is available in this supply chain; registration obligations must be confirmed before any import into the EU. 3. No transport tests have been carried out; Section 14 is a conclusion based on available information. 4. The emergency telephone is staffed during working hours only (Section 1.4). 5. Toxicological and ecological data on the product are not available (Sections 11 and 12). 6. Heavy-metal data, where given, are the manufacturer's own results for lead and arsenic only (Section 3).

The information in this Safety Data Sheet is based on the present state of knowledge and is intended to describe the product for safety purposes. It does not constitute a guarantee of specific properties.