



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.04.2023

Version number 1.1 (replaces version 1.0)

Revision: 02.04.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier:

Trade name: Ecoforte**UFI:** KC00-T005-700P-AG3M

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product category: PC35 Washing and cleaning products (including solvent based products)**Application of the substance / the mixture:** Professional use only

1.3 Details of the supplier of the safety data sheet:

Manufacturer / Importer / Supplier:

Houweling Horticulture B.V.

Hoefweg 156

2665 LD Bleiswijk

The Netherlands

Tel: +31 88 1210 590

www.houweling.com

horticulture@houweling.nl

Further information obtainable from: Product safety department.

1.4 Emergency telephone number:

+31 88 1210 590 or +31 6 5240 3813

NL- National Vergiftigingen Informatie Centrum (NVIC). Tel nr.: +31 30 274 8888 (Only available to a treating physician in case of accidental poisoning. Only for professional rescuers)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

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

GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

2.2 Label elements:

Labelling according to Regulation (EC) No 1272/2008: The product is classified and labelled according to the CLP regulation.**Hazard pictograms:** GHS05**Signal word:** Danger

Hazard-determining components of labelling:

ammonium bifluoride

Hydrochloric acid

Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P260 Do not breathe dusts or mists.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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.

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

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P406 Store in a corrosion resistant container / container with a resistant inner liner.

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

2.3 Other hazards:

Results of PBT and vPvB assessment:**PBT:** Not applicable.

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vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description:

Mixture of substances specified below, possibly with non-hazardous additions or with components whose concentration is lower than the classification values..

Components:

CAS: 7647-01-0 EINECS: 231-595-7 Reg.nr.: 01-2119484862-27	Hydrochloric acid Met. Corr. 1, H290; Skin Corr. 1B, H314; STOT SE 3, H335 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 % STOT SE 3; H335: C ≥ 10 % Met. Corr. 1; H290: C ≥ 1 %	2.5-10%
CAS: 1341-49-7 EINECS: 215-676-4 Index number: 009-009-00-4 Reg.nr.: 01-2119489180-38	ammonium bifluoride Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Corr. 1B, H314 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 1 % Skin Irrit. 2; H315: 0.1 % ≤ C < 1 % Eye Irrit. 2; H319: 0.1 % ≤ C < 1 %	2.5-10%

Additional information: For the wording of the listed hazard phrases See section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:

General information:

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Persons, providing assistance, should avoid exposure and danger for themselves or others.

After inhalation:

Remove the victim to fresh air and keep him/her at rest in a position that facilitates breathing.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Remove and wash contaminated clothing before re-use.

Rinse with plenty of water and wash with soap.

If skin irritation continues, consult a doctor.

After eye contact:

Seek medical treatment immediately.

If possible, remove contact lenses.

Rinse opened eye for several minutes (at least 15 minutes) under running water. If symptoms persist, consult a doctor.

After ingestion:

Do not induce vomiting; call for medical help immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing agents:

All extinguishing media are possible.

Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture: No further relevant information available.

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5.3 Advice for firefighters:

Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Keep unprotected persons away.
Avoid breathing vapor and contact with eyes, skin and clothing.
Ensure adequate ventilation

6.2 Environmental precautions:

Remainder dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Use according to good industrial hygiene and safety procedures.
Avoid inhalation of vapors and contact with eyes, skin and clothing.
Ensure good ventilation/exhaustion at the workplace.
In the immediate vicinity of any potential exposure source, eye wash stations and emergency showers should be available.

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

7.2 Conditions for safe storage, including any incompatibilities:

Storage must comply with the local regulations.

Storage:

Requirements to be met by storerooms and tanks:

Keep only in the original container tightly closed.
All hazardous products must be placed above a sump pallet.
No special requirements.

Information about storage in one common storage facility: Do not store together with alkalis (caustic solutions).

Further information about storage conditions: Keep container tightly sealed.

7.3 Specific end use(s):

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

Ingredients with limit values that require monitoring at the workplace:

7647-01-0 Hydrochloric acid

IOELV	Short-term value: 15 mg/m ³ , 10 ppm
	Long-term value: 8 mg/m ³ , 5 ppm

DNELs

7647-01-0 Hydrochloric acid

Inhalative	Acute - local effects	15 mg/m ³ (Worker)
	Long-term - local effects	8 mg/m ³ (Worker)

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PNECs**7647-01-0 Hydrochloric acid**

Fresh water	0.036 mg/l
Marine water	0.036 mg/l
Intermittent releases	0.045 mg/l
Soil	0.036 mg/kg
Sewage treatment	0.036 mg/l

Additional information: The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see section 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

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.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Hand protection

Protective gloves

Use protective gloves to EN ISO 374-1

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Gloves made of Nitrile rubber, NBR

Thickness: 18 mil / 0.46 mm

Penetration time of glove material:

Permeation: Breakthrough time > 240 min

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection

Tightly sealed goggles

Use safety glasses that meets the requirements of EN 166; latest versions.

Environmental exposure controls Do not allow to enter in surface water or soil.**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties:****General Information:**

Colour:	Green
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.

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Lower and upper explosion limit**Lower:** Not determined.**Upper:** Not determined.**Flash point:** Not applicable.**Decomposition temperature:** Not determined.**pH at 20 °C** 1**Viscosity:****Kinematic viscosity** Not determined.**Kinematic viscosity****Dynamic:** Not determined.**Solubility****Water:** Fully miscible.**Refraction Index:****Partition coefficient n-octanol/water (log value)** Not determined.**Vapour pressure:** Not determined.**Vapour pressure:****Density and/or relative density****Density at 20 °C:** 1.04 g/cm³**Relative density:** Not determined.**Vapour density:** Not determined.**9.2 Other information:****Appearance:****Form:** Liquid.**Important information on protection of health and environment, and on safety.****Ignition temperature:** Product is not self-igniting.**Explosive properties:** Product does not present an explosion hazard.**Solvent content:****VOC (EU, 1999/13/EC)** -**Congealing Point****Evaporation rate:** Not determined.**Information with regard to physical hazard classes****Explosives** Void**Flammable gases** Void**Aerosols** Void**Oxidising gases** Void**Gases under pressure** Void**Flammable liquids** Void**Flammable solids** Void**Self-reactive substances and mixtures** Void**Pyrophoric liquids** Void**Pyrophoric solids** Void**Self-heating substances and mixtures** Void**Substances and mixtures, which emit flammable gases in contact with water** Void**Oxidising liquids** Void**Oxidising solids** Void**Organic peroxides** Void**Corrosive to metals**

May be corrosive to metals.

Desensitised explosives Void**SECTION 10: Stability and reactivity****10.1 Reactivity:** Reacts violently with bases.**10.2 Chemical stability:****Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

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10.3 Possibility of hazardous reactions: Corrosive action on metals.**10.4 Conditions to avoid:** No further relevant information available.**10.5 Incompatible materials:**

Metals

Alkali

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute toxicity:** Based on available data, the classification criteria are not met.**LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Oral	LD50	2,653 mg/kg (Rat)
Dermal	LD10	6,122 mg/kg (Mouse)

7647-01-0 Hydrochloric acid

Inhalative	LD50 /1h	8.3 mg/l (Rat)
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1341-49-7 ammonium bifluoride

Oral	LD50	130 mg/kg (Rat)
Dermal	LD10	300 mg/kg (Mouse)

Skin corrosion/irritation:

Causes severe skin burns and eye damage.

Serious eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitization: Based on available data, the classification criteria are not met.**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.**Carcinogenicity:** Based on available data, the classification criteria are not met.**Reprotoxicity:** Based on available data, the classification criteria are not met.**STOT-single exposure:** Based on available data, the classification criteria are not met.**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.**Additional toxicological information:****OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

11.2 Information on other hazards**Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity:**Aquatic toxicity:****7647-01-0 Hydrochloric acid**

LC50/96h	20.5 mg/l /pH 3.25-3. (Lepomis macrochirus)
EC50/48h	0.45 mg/l /pH4.9 (Daphnia Magna)
EC50/72h	0.73 mg/l /pH 4.7 (Algae)

12.2 Persistence and degradability: No further relevant information available.**12.3 Bioaccumulative potential:** No further relevant information available.**12.4 Mobility in soil:** No further relevant information available.**12.5 Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.

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12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects:

Additional ecological information:

General notes:

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contaminated packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN number or ID number

DOT, ADR/RID/ADN, IMDG, IATA UN3264

14.2 UN proper shipping name:

ADR/RID/ADN: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (AMMONIUM HYDROGENDIFLUORIDE, HYDROCHLORIC ACID)

IMDG, IATA CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (AMMONIUM HYDROGENDIFLUORIDE, HYDROCHLORIC ACID)

14.3 Transport hazard class(es):

DOT



Class 8 Corrosive substances.

Label 8

ADR/RID/ADN:



Class: 8 (C1) Corrosive substances.

Label: 8

IMDG, IATA



Class: 8 Corrosive substances.

Label: 8

14.4 Packing group:

DOT, ADR/RID/ADN, IMDG, IATA II

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user: Warning: Corrosive substances.

Hazard identification number (Kemler code): 80

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EMS Number: F-A,S-B
Segregation groups (SGG1) Acids
Stowage Category B
Stowage Code SW2 Clear of living quarters.
Segregation Code SG36 Stow "separated from" SGG18-alkalis.
 SG49 Stow "separated from" SGG6-cyanides

14.7 Maritime transport in bulk according to IMO instruments Not applicable.

Transport/Additional information:

ADR/RID/ADN:

Limited quantities (LQ): 1L
Excepted quantities (EQ): Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

Transport category:

Tunnel restriction code:

2
E

IMDG:

Limited quantities (LQ): 1L
Excepted quantities (EQ): Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":

UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(AMMONIUM HYDROGENDIFLUORIDE, HYDROCHLORIC ACID), 8, II

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Sara

Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value)

1341-49-7 ammonium bifluoride

A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

Directive 2012/18/EU:

Named dangerous substances - ANNEX I: None of the ingredients are listed.

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REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3, 65**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

REGULATION (EU) 2019/1148**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

7647-01-0 | Hydrochloric acid

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Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

7647-01-0 | Hydrochloric acid

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National regulations:**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Relevant phrases:

H290 May be corrosive to metals.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Department issuing SDS: Environment protection department.**Contact:** Ronald de Vreede**Date of previous version:** 02.04.2023**Version number of previous version:** 1.0**Abbreviations and acronyms:**

ADN: Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (Division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

EC50: Effective Concentration, 50 percent

IOELVS: Indicative Occupational Exposure Limit Values

mPa.s: milliPascal per second

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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References:

This information is based on the current available data (suppliers of raw materials, chemistry maps, Annex VI)

See also the internet site: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Based on regulations - 1907/2006/EC, 272/2008/EC and directive 2012/18/EU

Disclaimer:

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