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

1.1 Product Identifier

Trade name: **Topcleaner**

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: Professional use only

1.3 Details of the supplier of the safety data sheet

Manufacturer / Importer / Supplier:
Houweling Horticulture bv
Klappolder 104
2665 LP Bleiswijk
Nederland
tel +31 88 1210 400
horticulture@houweling.nl
houweling.com

Further information obtainable from: Product safety department

1.4 Emergency telephone number

During office hours: +31 88 1210 400

SECTION 2* Hazards identification

2.1 Classification of the substance or mixture

Description: Mixture

Classification according to Regulation (EC) No 1272/2008

Skin Corr. 1B	H314	Causes severe skin burns and eye damage
Eye Dam. 1	H318	Causes serious eye damage
Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.

2.2 Label elements

The product is classified and labelled according to the CLP Regulation.

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms: GHS05, GHS07

Signal word: Danger

Hazard-determining components of labelling

Ammonium bifluoride

Hazard statements

H302+H312	Harmful if swallowed or in contact with skin.
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.
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.
P405	Store locked up.

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

2.3 Other hazards

There is no additional information available.

Results of PBT and vPvB assessment

PBT: There is no additional information available.
vPvB: There is no additional information available.

SECTION 3 Composition/information on ingredients

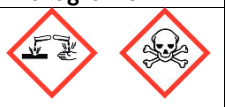
3.1 Chemical characterisation: Substances

Not applicable.

3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below, possibly with non-hazardous additions.

Dangerous components

Component	Identification	Classification	Conc.%	Pictograms
Ammonium bifluoride	CAS: 1341-49-7 EINECS: 215-676-4 Index: 009-009-00-4 Reg.: 01-2119489180-38	Acute Tox. 3, H301 Acute Tox. 3, H311 Skin Corr. 1B, H314	10 - 25%	

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 into fresh air, and keep 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 (>15) under running water. Then 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

There is no additional information available.

4.3 Indication of any immediate medical attention and special treatment needed

There is no additional 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

Hazards from the substance or mixture
There is no additional information available.

Hazardous combustion products
There is no additional information available.

5.3 Advice for firefighters

Special precautions
There is no additional information available.

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/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
For information on safe handling: see SECTION 7.
For information on personal protection equipment: see SECTION 8.
For disposal information: see SECTION 13.

SECTION 7* Handling and storage

7.1 Precautions for safe handling
Handle in accordance with 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.

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)
There is no additional information available.

SECTION 8* Exposure controls/personal protection

Additional information about design of technical facilities
No further data; see SECTION 7.

8.1 Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information
The lists valid during the making were used as basis.

8.2 Exposure controls

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.

Protection of hands

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: Breakthough 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 protection/Face protection

Tightly sealed goggles

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

Limitation and supervision of exposure into the environment
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

Appearance

Form:	Liquid.
Colour:	Blue.
Odour:	Weak, characteristic.

Odour threshold:	Not determined.

Other physical and chemical parameters

pH-value at 20 °C:	3.5
Change in condition	
• Melting point/freezing point:	Not determined.
• Initial boiling point and boiling range:	100 °C
Flash point:	Not determined.
Flammability (solid, gas):	Not determined.
Ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not self-igniting.
Explosive properties:	Product does not present an explosion hazard.
Explosion limits	
• Lower explosion limit (LEL):	Not determined.
• Upper explosion limit (UEL):	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density at 20 °C:	1.075 g/cm³
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in/miscibility with water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity	
• Dynamic:	1 mPas
• Kinematic:	Not determined.
Solvent content VOC (EU 1999/13/EC):	Not determined.

9.2 Other information
There is no additional information available.

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.

10.3 Possibility of hazardous reactions
Corrosive action on metals.

10.4 Conditions to avoid
There is no additional information available.

10.5 Incompatible materials
Metals.
Strong bases.

10.6 Hazardous decomposition products
There are no dangerous decomposition products known.

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Fatal if swallowed or in contact with skin.

LD/LC50 values relevant for classification

ATE (Acute Toxicity Estimates)		
Oral	LD50	867 mg/kg (rat)
Dermal	LD10	2,000 mg/kg (mouse)

1341-49-7 Ammonium bifluoride		
Oral	LD50	130 mg/kg (rat)
Dermal	LD10	300 mg/kg (mouse)

Primary irritant effect

- **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.

CMR effects (carcinogenic, mutagenic and reprotoxic)

- **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.
- **Specific target organ toxicity from single exposure**
  Based on available data, the classification criteria are not met.
- **Specific target organ toxicity from repeated exposure**
  Based on available data, the classification criteria are not met.

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

SECTION 12 Ecological information

12.1 Toxicity

Aquatic toxicity
There is no additional information available.

12.2 Persistence and degradability
There is no additional information available.

12.3 Bioaccumulative potential
There is no additional information available.

12.4 Mobility in soil
There is no additional information available.

Additional ecological information
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

12.5 Results of PBT and vPvB assessment
There is no additional information available.

12.6 Other adverse effects
There is no additional information available.

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Product

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.

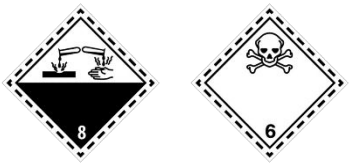
SECTION 14 Transport information

14.1	**UN-number:**	UN2817
14.2	**UN proper shipping name:**	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
14.3	**Transport hazard class(es):**	
	Class:	8 Corrosive substances
14.4	**Packing group:**	II
14.5	**Environmental hazards:**	None.
14.6	**Special precautions for user:**	Warning: Corrosive substances
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Not applicable.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN-number:	UN2817
Proper shipping name:	2817 AMMONIUM HYDROGENDIFLUORIDE SOLUTION
Particulars in the transport document:	UN 2817 AMMONIUM HYDROGENDIFLUORIDE SOLUTION, 8 (6.1), II
Class:	8 Corrosive substances
Classification code:	CT1
Packing group:	II
Danger label(s):	8 + 6.1



Excepted quantities (EQ):	E2
Limited quantities (LQ):	1L
Transport category (TC):	2
Tunnel restriction code (TRC):	E
Hazard Identification No:	86

International Maritime Dangerous Goods Code (IMDG)

UN-number:	UN2817
Proper shipping name:	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
Particulars in the transport document:	UN 2817 AMMONIUM HYDROGENDIFLUORIDE SOLUTION, 8 (6.1), II
Class:	8 Corrosive substances
Marine pollutant:	No
Packing group:	II
Danger label(s):	8 + 6.1

Excepted quantities (EQ):	E2
Limited quantities (LQ):	1L
EmS:	F-A,S-B
Stowage category:	B
Stowage code:	SW2 Clear of living quarters.
Segregation group:	Acids, ammonium compounds

International Civil Aviation Organization (ICAO-IATA/DGR)

UN-number:	UN2817
Proper shipping name:	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
Particulars in the transport document:	UN 2817 AMMONIUM HYDROGENDIFLUORIDE SOLUTION, 8 (6.1), II
Class:	8 Corrosive substances
Packing group:	II
Danger label(s):	8 + 6.1

SECTION 15 Regulatory information

15.1 Safety, health and environmental Regulations/legislation specific for the substance or mixture

International Regulations

Directive 2012/18/EU

- **Named dangerous substances - ANNEX I**
  None of the ingredients are listed.
- **Regulation (EC) No 1907/2006 - ANNEX XVII**
  Conditions of restriction: 3, 65

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

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.

Department issuing SDS
Environment protection department

Abbreviations and acronyms

Acute Tox. 4	Acute toxicity, Hazard Category 4
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 européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (division of the American Chemical Society)
DNEL	Derived No-Effect Level (REACH)
EC50	Effective Concentration, 50 percent
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam. 1	Serious eye damage/eye irritation, Hazard Category 1
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
IMDG	International Maritime Code for Dangerous Goods
IOELVs	Indicative Occupational Exposure Limit Values
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration (REACH)
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
Skin Corr. 1B	Skin corrosion/irritation, Hazard Category 1B
STEL	Short Term Exposure Limit
VOC	Volatile Organic Compounds (USA, EU)
vPvB	very Persistent and very Bioaccumulative
WEL	Workplace Exposure Limits

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.

Date of composition
13/09/2015

Version date
30/06/2020

Indication of changes
Revisions were made in sections marked with *.

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