

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

1.1. Product identifier

Product form : Mixture
Product name : Universal-Flux powder

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Stripper

1.3. Details of the supplier of the safety data sheet

Certilas Nederland BV B.V.
Gloxinialaan 2
NL 6851 TG Huissen
Nederland
info@certilas.com, <https://certilas.com/>

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Netherlands	Nationaal Vergiftigingen Informatie Centrum (NVIC)	Huispostnummer Q03.2.315 Postbus 85500 3508 GA Utrecht	+31 88 755 80 00	Only for the purpose of informing medical personnel in cases of acute intoxications (24 hours a day, 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 1, Sub-Category 1A H314
Serious eye damage/eye irritation, Category 1 H318
Reproductive toxicity, Category 1B H360FD
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05



GHS07



GHS08

Signal word (CLP) :

Danger

Contains :

boric acid; potassium bifluoride; potassium hydrogen difluoride; potassium hydroxide; caustic potash

Hazard statements (CLP) :

H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H360FD - May damage fertility. May damage the unborn child.

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Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P280 - Wear eye protection, protective gloves, protective clothing. P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER, a doctor. P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER, a doctor. P308+P313 - IF exposed or concerned: Get medical advice/attention. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Extra phrases	: Restricted to professional users.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	boric acid (10043-35-3)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
boric acid substance listed on REACH Candidate List	CAS-No.: 10043-35-3 EC-No.: 233-139-2 EC Index-No.: 005-007-00-2 REACH-no: 01-2119486683-25	50 – < 75	Repr. 1B, H360FD
potassium bifluoride; potassium hydrogen difluoride substance with national workplace exposure limit(s) (NL)	CAS-No.: 7789-29-9 EC-No.: 232-156-2 EC Index-No.: 009-008-00-9 REACH-no: 01-2119960644-32	25 – < 50	Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight) Skin Corr. 1B, H314
potassium hydroxide; caustic potash	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8 REACH-no: 01-2119487136-33	10 – < 25	Acute Tox. 4 (Oral), H302 (ATE=388 mg/kg bodyweight) Skin Corr. 1A, H314

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Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dipotassium tetraborate	CAS-No.: 1332-77-0 EC-No.: 215-575-5	1 – < 10	Repr. 2, H361d

Specific concentration limits:

Name	Product identifier	Specific concentration limits (Conc. (% w/w))
potassium bifluoride; potassium hydrogen difluoride	CAS-No.: 7789-29-9 EC-No.: 232-156-2 EC Index-No.: 009-008-00-9 REACH-no: 01-2119960644-32	(0,1 ≤ C < 1) Eye Irrit. 2; H319 (0,1 ≤ C < 1) Skin Irrit. 2; H315 (1 ≤ C < 100) Skin Corr. 1B; H314
potassium hydroxide; caustic potash	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8 REACH-no: 01-2119487136-33	(0,5 ≤ C < 2) Skin Irrit. 2; H315 (0,5 ≤ C < 2) Eye Irrit. 2; H319 (2 ≤ C < 5) Skin Corr. 1B; H314 (5 ≤ C ≤ 100) Skin Corr. 1A; H314
Dipotassium tetraborate	CAS-No.: 1332-77-0 EC-No.: 215-575-5	(6,8 ≤ C ≤ 100) Repr. 2; H361d

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If medical advice is needed, have product container or label at hand. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Immediately call a POISON CENTER/doctor.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.
Chronic symptoms	: May damage fertility or the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Presents no particular fire or explosion hazard.
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Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust, fume.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust, fume.
Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store locked up.
Incompatible products : Water, humidity. Acids. Oxidizing agent. Strong bases.
Heat and ignition sources : Keep away from heat and direct sunlight.
Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

potassium bifluoride; potassium hydrogen difluoride (7789-29-9)	
Netherlands - Occupational Exposure Limits	
Local name	Kaliumwaterstofdifluoride
Grenswaarde TGG 15MIN (mg/m ³)	2 mg/m ³ (GSW Public Limit Values (2022))

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Safety glasses. Gloves. Protective clothing.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses. DIN EN 166

Skin protection

Skin and body protection:

Wear suitable protective clothing. ISO 13688

Hand protection:

Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF ISO 374-1 or equivalent)

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥0,11		EN ISO 21420

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. EN 143

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: characteristic.
Odour	: odourless.

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Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: In water, material is partially soluble.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1742,2 kg/m ³ (20 °C)
Relative density	: 1,742 (20 °C)
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

Other safety characteristics

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Water, humidity. Acids. Oxidizing agent. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

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LD50 oral	304,55 mg/kg (calculated value)

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Universal-Flux powder	
LD50 dermal	> 2000 mg/kg (calculated value)
LC50 Inhalation - Rat	> 5 mg/l/4h (calculated value)
boric acid (10043-35-3)	
LD50 oral rat	4080 mg/kg
LD50 dermal	> 2000 mg/kg
potassium bifluoride; potassium hydrogen difluoride (7789-29-9)	
LD50 oral	100 mg/kg
LD50 dermal	> 2000 mg/kg
potassium hydroxide; caustic potash (1310-58-3)	
LD50 oral rat	388 mg/kg
LD50 dermal rat	> 2000 mg/kg
Dipotassium tetraborate (1332-77-0)	
LD50 oral	> 2000 mg/kg
LD50 dermal	> 2000 mg/kg
Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: May damage fertility. May damage the unborn child.
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

boric acid (10043-35-3)	
LC50 - Fish [1]	477 mg/l Oncorhynchus mykiss (Rainbow trout)
NOEC chronic fish	11,2 mg/l Pimephales promelas
NOEC chronic crustacea	25,9 mg/l Hyalella azteca
potassium hydroxide; caustic potash (1310-58-3)	
LC50 - Fish [1]	80 mg/l Gambusia affinis (48h)

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12.2. Persistence and degradability

Universal-Flux powder

Persistence and degradability	Biodegradability in water: no data available.
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boric acid (10043-35-3)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
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potassium bifluoride; potassium hydrogen difluoride (7789-29-9)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
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potassium hydroxide; caustic potash (1310-58-3)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
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Dipotassium tetraborate (1332-77-0)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)
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Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information	: Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
European List of Waste (LoW, EC 2000/532)	: 16 03 03* - inorganic wastes containing dangerous substances
HP Code	: HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP8 - "Corrosive:" waste which on application can cause skin corrosion.





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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 1759	UN 1759	UN 1759	UN 1759
14.2. UN proper shipping name			
CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)	CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)	Corrosive solid, n.o.s. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)	CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)
Transport document description			
UN 1759 CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I, (E)	UN 1759 CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I	UN 1759 Corrosive solid, n.o.s. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I	UN 1759 CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
I	I	I	I
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-A EmS-No. (Spillage): S-B	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C10
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P002, IBC07
Mixed packing provisions (ADR)	: MP18
Portable tank and bulk container instructions (ADR)	: T6
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: S10AN, L10BH
Vehicle for tank carriage	: AT
Transport category (ADR)	: 1
Special provisions for carriage - Packages (ADR)	: V10
Special provisions for carriage - Operation (ADR)	: S20
Hazard identification number (Kemler No.)	: 88

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Orange plates

:



Tunnel restriction code (ADR)

:

E

Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC07
IBC special provisions (IMDG)	: B1
Tank instructions (IMDG)	: T6
Tank special provisions (IMDG)	: TP33
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 858
PCA max net quantity (IATA)	: 1kg
CAO packing instructions (IATA)	: 862
CAO max net quantity (IATA)	: 25kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Rail transport

Classification code (RID)	: C10
Special provisions (RID)	: 274
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P002, IBC07
Mixed packing provisions (RID)	: MP18
Portable tank and bulk container instructions (RID)	: T6
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: S10AN, L10BH
Special provisions for RID tanks (RID)	: TU38, TE22
Transport category (RID)	: 1
Special provisions for carriage – Packages (RID)	: W10
Hazard identification number (RID)	: 88

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
30.	boric acid	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: Boric acid (EC 233-139-2, CAS 10043-35-3)

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items: Potassium bifluoride (7789-29-9).

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Netherlands

ABM category : Z(2) - biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/reprotoxicity/bioacumulative potential or toxicity)

SZW-lijst van kankerverwekkende stoffen : potassium bifluoride; potassium hydrogen difluoride is listed

SZW-lijst van mutagene stoffen : potassium bifluoride; potassium hydrogen difluoride is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : boric acid is listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : boric acid is listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
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Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Data sources : ECHA (European Chemicals Agency). Supplier's safety documents.

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Other information

: **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. REACH Disclaimer:

This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 4 (Oral)	H302	On basis of test data
Skin Corr. 1A	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Repr. 1B	H360FD	Calculation method

This Safety Data Sheet is compiled by: ChemPros B.V. | +31(0)858881927 | info@chemprosbv.nl

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

1.1. Product identifier

Product form : Mixture
Product name : Universal-Flux paste

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Stripper

1.3. Details of the supplier of the safety data sheet

Certilas Nederland BV B.V.
Gloxinialaan 2
NL 6851 TG Huissen
Nederland
info@certilas.com, <https://certilas.com/>

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Netherlands	Nationaal Vergiftigingen Informatie Centrum (NVIC)	Huispostnummer Q03.2.315 Postbus 85500 3508 GA Utrecht	+31 88 755 80 00	Only for the purpose of informing medical personnel in cases of acute intoxications (24 hours a day, 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 1, Sub-Category 1A H314
Serious eye damage/eye irritation, Category 1 H318
Reproductive toxicity, Category 1B H360FD
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Contains :

Hazard statements (CLP) :

: Danger
: boric acid; potassium bifluoride; potassium hydrogen difluoride; potassium hydroxide; caustic potash
: H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H360FD - May damage fertility. May damage the unborn child.

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Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P280 - Wear eye protection, protective gloves, protective clothing. P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER, a doctor. P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER, a doctor. P308+P313 - IF exposed or concerned: Get medical advice/attention. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Extra phrases	: Restricted to professional users.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	boric acid (10043-35-3)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
boric acid substance listed on REACH Candidate List	CAS-No.: 10043-35-3 EC-No.: 233-139-2 EC Index-No.: 005-007-00-2 REACH-no: 01-2119486683-25	25 – < 50	Repr. 1B, H360FD
potassium bifluoride; potassium hydrogen difluoride substance with national workplace exposure limit(s) (NL)	CAS-No.: 7789-29-9 EC-No.: 232-156-2 EC Index-No.: 009-008-00-9 REACH-no: 01-2119960644-32	25 – < 50	Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight) Skin Corr. 1B, H314
potassium hydroxide; caustic potash	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8 REACH-no: 01-2119487136-33	1 – < 10	Acute Tox. 4 (Oral), H302 (ATE=388 mg/kg bodyweight) Skin Corr. 1A, H314

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Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dipotassium tetraborate	CAS-No.: 1332-77-0 EC-No.: 215-575-5	1 – < 10	Repr. 2, H361d

Specific concentration limits:

Name	Product identifier	Specific concentration limits (Conc. (% w/w))
potassium bifluoride; potassium hydrogen difluoride	CAS-No.: 7789-29-9 EC-No.: 232-156-2 EC Index-No.: 009-008-00-9 REACH-no: 01-2119960644-32	(0,1 ≤ C < 1) Eye Irrit. 2; H319 (0,1 ≤ C < 1) Skin Irrit. 2; H315 (1 ≤ C < 100) Skin Corr. 1B; H314
potassium hydroxide; caustic potash	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8 REACH-no: 01-2119487136-33	(0,5 ≤ C < 2) Skin Irrit. 2; H315 (0,5 ≤ C < 2) Eye Irrit. 2; H319 (2 ≤ C < 5) Skin Corr. 1B; H314 (5 ≤ C ≤ 100) Skin Corr. 1A; H314
Dipotassium tetraborate	CAS-No.: 1332-77-0 EC-No.: 215-575-5	(6,8 ≤ C ≤ 100) Repr. 2; H361d

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If medical advice is needed, have product container or label at hand. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Immediately call a POISON CENTER/doctor.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.
Chronic symptoms	: May damage fertility or the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Presents no particular fire or explosion hazard.
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Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust, fume.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust, fume.
Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store locked up.
Incompatible products : Water, humidity. Acids. Oxidizing agent. Strong bases.
Heat and ignition sources : Keep away from heat and direct sunlight.
Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

potassium bifluoride; potassium hydrogen difluoride (7789-29-9)	
Netherlands - Occupational Exposure Limits	
Local name	Kaliumwaterstofdifluoride
Grenswaarde TGG 15MIN (mg/m ³)	2 mg/m ³ (GSW Public Limit Values (2022))

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Safety glasses. Gloves. Protective clothing.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses. DIN EN 166

Skin protection

Skin and body protection:

Wear suitable protective clothing. ISO 13688

Hand protection:

Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF ISO 374-1 or equivalent)

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥0,11		EN ISO 21420

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. EN 143

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: characteristic.
Odour	: odourless.

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Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: In water, material is partially soluble.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1548,2 kg/m ³ (20 °C)
Relative density	: 1,548 (20 °C)
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

Other safety characteristics

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Water, humidity. Acids. Oxidizing agent. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

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LD50 oral	341,33 mg/kg (calculated value)

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LD50 dermal	> 2000 mg/kg (calculated value)
LC50 Inhalation - Rat	> 5 mg/l/4h (calculated value)
boric acid (10043-35-3)	
LD50 oral rat	4080 mg/kg
LD50 dermal	> 2000 mg/kg
potassium bifluoride; potassium hydrogen difluoride (7789-29-9)	
LD50 oral	100 mg/kg
LD50 dermal	> 2000 mg/kg
potassium hydroxide; caustic potash (1310-58-3)	
LD50 oral rat	388 mg/kg
LD50 dermal rat	> 2000 mg/kg
Dipotassium tetraborate (1332-77-0)	
LD50 oral	> 2000 mg/kg
LD50 dermal	> 2000 mg/kg
Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: May damage fertility. May damage the unborn child.
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

boric acid (10043-35-3)	
LC50 - Fish [1]	477 mg/l Oncorhynchus mykiss (Rainbow trout)
NOEC chronic fish	11,2 mg/l Pimephales promelas
NOEC chronic crustacea	25,9 mg/l Hyalella azteca
potassium hydroxide; caustic potash (1310-58-3)	
LC50 - Fish [1]	80 mg/l Gambusia affinis (48h)

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12.2. Persistence and degradability

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Persistence and degradability	Biodegradability in water: no data available.
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boric acid (10043-35-3)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
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potassium bifluoride; potassium hydrogen difluoride (7789-29-9)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
-------------------------------	--

potassium hydroxide; caustic potash (1310-58-3)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
-------------------------------	--

Dipotassium tetraborate (1332-77-0)

Persistence and degradability	Biodegradation: The methods for determining biodegradability are not applicable to inorganic substances.
-------------------------------	--

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)
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Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	boric acid (10043-35-3)
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information	: Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
European List of Waste (LoW, EC 2000/532)	: 16 03 03* - inorganic wastes containing dangerous substances
HP Code	: HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP8 - "Corrosive:" waste which on application can cause skin corrosion.





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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 1759	UN 1759	UN 1759	UN 1759
14.2. UN proper shipping name			
CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)	CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)	Corrosive solid, n.o.s. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)	CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride)
Transport document description			
UN 1759 CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I, (E)	UN 1759 CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I	UN 1759 Corrosive solid, n.o.s. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I	UN 1759 CORROSIVE SOLID, N.O.S. (CONTAINS : potassium hydroxide; caustic potash ; potassium bifluoride; potassium hydrogen difluoride), 8, I
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
I	I	I	I
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-A EmS-No. (Spillage): S-B	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C10
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P002, IBC07
Mixed packing provisions (ADR)	: MP18
Portable tank and bulk container instructions (ADR)	: T6
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: S10AN, L10BH
Vehicle for tank carriage	: AT
Transport category (ADR)	: 1
Special provisions for carriage - Packages (ADR)	: V10
Special provisions for carriage - Operation (ADR)	: S20
Hazard identification number (Kemler No.)	: 88

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Orange plates

:



Tunnel restriction code (ADR)

:

E

Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC07
IBC special provisions (IMDG)	: B1
Tank instructions (IMDG)	: T6
Tank special provisions (IMDG)	: TP33
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 858
PCA max net quantity (IATA)	: 1kg
CAO packing instructions (IATA)	: 862
CAO max net quantity (IATA)	: 25kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Rail transport

Classification code (RID)	: C10
Special provisions (RID)	: 274
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P002, IBC07
Mixed packing provisions (RID)	: MP18
Portable tank and bulk container instructions (RID)	: T6
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: S10AN, L10BH
Special provisions for RID tanks (RID)	: TU38, TE22
Transport category (RID)	: 1
Special provisions for carriage – Packages (RID)	: W10
Hazard identification number (RID)	: 88

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
30.	boric acid	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: Boric acid (EC 233-139-2, CAS 10043-35-3)

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items: Potassium bifluoride (7789-29-9).

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Netherlands

ABM category : Z(2) - biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/reprotoxicity/bioacumulative potential or toxicity)

SZW-lijst van kankerverwekkende stoffen : potassium bifluoride; potassium hydrogen difluoride is listed

SZW-lijst van mutagene stoffen : potassium bifluoride; potassium hydrogen difluoride is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : boric acid is listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : boric acid is listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
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Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Data sources : ECHA (European Chemicals Agency). Supplier's safety documents.

Universal-Flux paste

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Other information

: **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. REACH Disclaimer:
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Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 4 (Oral)	H302	On basis of test data
Skin Corr. 1A	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Repr. 1B	H360FD	Calculation method

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