Gladiator

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 4/9/2024 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : Gladiator
UFI : 2KQ0-P0X7-600G-N88Y
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Plant nutrient

Title	Life cycle stage	Use descriptors
Gladiator	Professional	PC12

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Abundigro
288 Mundt Street
Waltloo, Pretoria
South Africa
hello@abundigro.com, www.abundigro.com

Headquarters
Abundigro
Korte Lijnbaanssteeg 1-4141
1012 SL Amsterdam
The Netherlands
T +31 64 466 5601
luke@abundigro.com, www.abundigro.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Corrosive to metals, Category 1	H290
Skin corrosion/irritation, Category 1	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

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS05 GHS08

Signal word (CLP) : Danger

Contains : hydrogen chloride; Tetrahydroxysilane; boric acid

Hazard statements (CLP) : H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H360FD - May damage fertility. May damage the unborn child.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
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 or 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 or doctor.
P405 - Store locked up.
P501 - Dispose of contents/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 ≥ 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	calcium chloride (10035-04-8), boric acid (10043-35-3)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	calcium chloride (10035-04-8), 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

3.1. Substances

Not applicable

3.2. Mixtures

Product name	Product identifier	% w/w (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
calcium chloride	CAS-No.: 10035-04-8 EC-No.: 233-140-8 EC Index-No.: 017-013-00-2 REACH-no: 01-2119494219-28	20 – 30	Eye Irrit. 2, H319
hydrogen chloride substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit (Note U)(Note 5)	CAS-No.: 7647-01-0 EC-No.: 231-595-7 EC Index-No.: 017-002-00-2 REACH-no: 01-2119484862-27	5 – 10	Press. Gas Acute Tox. 3 (Inhalation), H331 Skin Corr. 1A, H314
Tetrahydroxysilane	CAS-No.: 10193-36-9 EC-No.: 233-477-0 REACH-no: 01-2120871273-54	1 – 5	Skin Corr. 1, H314 Eye Dam. 1, H318
boric acid substance listed as REACH Candidate	CAS-No.: 10043-35-3 EC-No.: 233-139-2 EC Index-No.: 005-007-00-2 REACH-no: 01-2119486683-25	1 – 5	Repr. 1B, H360FD

Note 5: The concentration limits for gaseous mixtures are expressed as volume per volume percentage.

Note U: When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:. Press. Gas (Comp.), Press. Gas (Liq.), Press. Gas (Ref. Liq.), Press. Gas (Diss.). Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

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 : Move victim out of danger zone. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If unconscious, place in the recovery position and seek medical advice. In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after skin contact : Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Do not remove clothing if it sticks to the skin. Immediately call a POISON CENTER/doctor.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 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. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects : Suspected of damaging fertility or the unborn child.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : May cause serious damage to eyes.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Extinguishing materials should be selected according to the surrounding area.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Fire could produce a combination of irritating, corrosive and toxic gases.

5.3. Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear personal protective equipment. Keep public away from danger area.

6.1.1. For non-emergency personnel

Protective equipment : Use protective clothing. Wear protective gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

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

Methods for cleaning up : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Keep container tightly closed. Handle and open container with care.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container tightly closed. Protect from heat and direct sunlight.

7.3. Specific end use(s)

No additional data.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

hydrogen chloride (7647-01-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Hydrogen chloride
IOEL TWA	8 mg/m³
	5 ppm
IOEL STEL	15 mg/m³
	10 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	Hydrogen chloride
WEL TWA (OEL TWA)	2 mg/m³ (aerosol mist and gas)
	1 ppm (aerosol mist and gas)
WEL STEL (OEL STEL)	8 mg/m³ (aerosol mist and gas)
	5 ppm (aerosol mist and gas)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

calcium chloride (10035-04-8)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	10 mg/m³
Long-term - local effects, inhalation	5 mg/m³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	5 mg/m³
Long-term - local effects, inhalation	2.5 mg/m³

hydrogen chloride (7647-01-0)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	15 mg/m³
Long-term - local effects, inhalation	8 mg/m³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	15 mg/m³
Long-term - local effects, inhalation	8 mg/m³

Tetrahydroxysilane (10193-36-9)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	11.2 mg/m³
Long-term - systemic effects, dermal	3.18 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	11.2 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, oral	1.14 mg/kg bodyweight/day
Long-term - systemic effects,oral	1.14 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.97 mg/m³
Long-term - systemic effects, dermal	1.14 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.146 mg/l
PNEC aqua (marine water)	0.146 mg/l
PNEC aqua (intermittent, freshwater)	1.46 mg/l
PNEC aqua (intermittent, marine water)	1.46 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.6784807 mg/kg dwt
PNEC sediment (marine water)	0.6784807 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l

boric acid (10043-35-3)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	392 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	8.3 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, oral	0.98 mg/kg bodyweight/day
Long-term - systemic effects,oral	0.98 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	4.15 mg/m³
Long-term - systemic effects, dermal	196 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	2.9 mg/l
PNEC aqua (marine water)	2.9 mg/l
PNEC aqua (intermittent, freshwater)	13.7 mg/l
PNEC (Soil)	
PNEC soil	5.7 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. Gloves. Safety glasses. Protective clothing.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Wear safety glasses with side shields (EN 166)

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing. EN 13034

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): e.g. nitrile rubber (>=0.4 mm), chloroprene rubber (>=0.5 mm), butyl rubber (>=0.7 mm) and others. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer

8.2.2.3. Respiratory protection

Respiratory protection:
Not required for normal conditions of use. In case of inadequate ventilation wear respiratory protection. Wear respiratory protection when in the presence of vapour, dust, and aerosols. Recommended: Filter B (grey). DIN EN 136 / DIN EN 140 / DIN EN 143 / DIN EN 149

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Odour	:	Odourless.
Odour threshold	:	Not available
Melting point	:	Not determined
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Explosive properties	:	Product is not explosive.
Oxidising properties	:	Not oxidizing.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available

Flash point	:	Not available
Auto-ignition temperature	:	Not determined
Decomposition temperature	:	Not determined
pH	:	0.6 @ 20 °C
Viscosity, kinematic	:	Not determined
Viscosity, dynamic	:	Not determined
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	Not determined
Vapour pressure	:	Not determined
Vapour pressure at 50°C	:	Not available
Density	:	Not determined
Relative density	:	1.2 @ 20 °C
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable at ambient temperature and under normal conditions of use.

10.2. Chemical stability

Stable in use and storage conditions as recommended in item 7.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Strong acid. Strong alkalis. Strong oxidizers. Strong reducing agents.

10.6. Hazardous decomposition products

At high temperature may liberate dangerous gases.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

calcium chloride (10035-04-8)	
LD50 oral rat	2301 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Anhydrous form, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Other, 24 h, Rabbit, Male / female, Experimental value, Anhydrous form, Dermal, 2 week(s))

calcium chloride (10035-04-8)	
ATE oral	2301 mg/kg bodyweight

hydrogen chloride (7647-01-0)	
LD50 oral rat	238 – 277 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 5010 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat	1.68 mg/l (Exposure time: 1 h Source: JAPAN_GHS)
ATE gases	700 ppmv/4h
ATE vapours	3 mg/l/4h
ATE dust/mist	0.5 mg/l/4h

boric acid (10043-35-3)	
LD50 oral rat	> 2600 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 2.12 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: other:

Skin corrosion/irritation : Causes severe skin burns.
pH: 0.6 @ 20 °C

calcium chloride (10035-04-8)	
pH	4.5 – 4.8 (5 %, 20 °C)

hydrogen chloride (7647-01-0)	
pH	1.1 (conc: 0.1 N (solution)

Serious eye damage/irritation : Causes serious eye damage.
pH: 0.6 @ 20 °C

calcium chloride (10035-04-8)	
pH	4.5 – 4.8 (5 %, 20 °C)

hydrogen chloride (7647-01-0)	
pH	1.1 (conc: 0.1 N (solution)

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

hydrogen chloride (7647-01-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : May damage fertility. May damage the unborn child.

Tetrahydroxysilane (10193-36-9)	
NOAEL (animal/male, F0/P)	> 9.76 mg/kg bodyweight Animal: , Animal sex: male

STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Tetrahydroxysilane (10193-36-9)	
NOAEL (subchronic, oral, animal/male, 90 days)	> 227 mg/kg bodyweight Animal: , Animal sex: male
NOAEL (subchronic, oral, animal/female, 90 days)	> 237 mg/kg bodyweight Animal: , Animal sex: female

Aspiration hazard : Not classified

Gladiator	
Viscosity, kinematic	Not determined

calcium chloride (10035-04-8)	
Viscosity, kinematic	Not applicable (solid)

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

Hazardous to the aquatic environment, long–term (chronic) : Not classified

calcium chloride (10035-04-8)	
LC50 - Fish [1]	4630 mg/l (EPA 600/4-90/027, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Anhydrous form)
EC50 - Crustacea [1]	2.4 – 2.77 g/l
EC50 72h - Algae [1]	2.9 – 4 g/l
ErC50 algae	> 4000 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Experimental value, Anhydrous form)

Tetrahydroxysilane (10193-36-9)	
LC50 - Fish [1]	2320 mg/l Test organisms (species):
LC50 - Fish [2]	2320 mg/l Test organisms (species): Gambusia affinis
EC50 72h - Algae [1]	207 mg/l Test organisms (species): Scenedesmus sp.

boric acid (10043-35-3)	
LC50 - Fish [1]	79.7 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	74 mg/l Test organisms (species): Limanda limanda
EC50 - Crustacea [1]	91 – 165 mg/l
EC50 72h - Algae [1]	66 mg/l Test organisms (species): Phaeodactylum tricornutum
EC50 72h - Algae [2]	54 mg/l Test organisms (species): Phaeodactylum tricornutum
NOEC chronic fish	6.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

12.2. Persistence and degradability

Gladiator	
Persistence and degradability	Rapidly degradable

calcium chloride (10035-04-8)	
Persistence and degradability	Biodegradability: not applicable.

hydrogen chloride (7647-01-0)	
Persistence and degradability	Rapidly degradable

Tetrahydroxysilane (10193-36-9)	
Persistence and degradability	Rapidly degradable

boric acid (10043-35-3)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Gladiator	
Partition coefficient n-octanol/water (Log Pow)	Not determined

calcium chloride (10035-04-8)	
Bioaccumulative potential	Not bioaccumulative.

Tetrahydroxysilane (10193-36-9)	
Partition coefficient n-octanol/water (Log Kow)	-1 @ 25 °C

boric acid (10043-35-3)	
BCF - Fish [1]	(0 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	-1.09 (at 22 °C (at pH 7.5)

12.4. Mobility in soil

calcium chloride (10035-04-8)	
Ecology - soil	No (test)data on mobility of the substance 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	calcium chloride (10035-04-8), boric acid (10043-35-3)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	calcium chloride (10035-04-8), boric acid (10043-35-3)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. Do not re-use empty containers.
Ecological information : Avoid release to the environment.
HP Code : HP8 - “Corrosive:” waste which on application can cause skin corrosion.
HP10 - “Toxic for reproduction:” waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3264	UN 3264	UN 3264	UN 3264	UN 3264
14.2. UN proper shipping name				
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane)	Corrosive liquid, acidic, inorganic, n.o.s. (hydrogen chloride ; Tetrahydroxysilane)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane)
Transport document description				
UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane), 8, III, (E)	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane), 8, III	UN 3264 Corrosive liquid, acidic, inorganic, n.o.s. (hydrogen chloride ; Tetrahydroxysilane), 8, III	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane), 8, III	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrogen chloride ; Tetrahydroxysilane), 8, III
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	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)	:	C1
Special provisions (ADR)	:	274
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T7
Portable tank and bulk container special provisions (ADR)	:	TP1, TP28
Tank code (ADR)	:	L4BN
Tank special provisions (ADR)	:	TU42
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Hazard identification number (Kemler No.)	:	80

Orange plates : 

Tunnel restriction code (ADR) : E
EAC code : 2X

Transport by sea

Special provisions (IMDG) : 223, 274
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP28
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW2
Segregation (IMDG) : SGG1, SG36, SG49
Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y841
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 852
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 856
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3, A803
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C1
Special provisions (ADN) : 274
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C1
Special provisions (RID) : 274
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP1, TP28
Tank codes for RID tanks (RID) : L4BN
Special provisions for RID tanks (RID) : TU42
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 80

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	Gladiator ; Tetrahydroxysilane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
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 ≥ 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)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

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 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)

Name	CN designation	CAS-No.	CN code	Category, Subcategory	Threshold	Annex
Hydrochloric acid		7647-01-0	2806 10 00	Category 3		Annex I

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Abbreviations and acronyms:	
CAS-No.	Chemical Abstract Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
ED	Endocrine disrupting properties
EC-No.	European Community number
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
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
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TRGS	Technical Rules for Hazardous Substances
SDS	Safety Data Sheet
VOC	Volatile Organic Compounds
WGK	Water Hazard Class
vPvB	Very Persistent and Very Bioaccumulative

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.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H360FD	May damage fertility. May damage the unborn child.
Press. Gas	Gases under pressure
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A

Full text of use descriptors	
PC12	Fertilizers

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Met. Corr. 1	H290	
Skin Corr. 1	H314	On basis of test data
Eye Dam. 1	H318	On basis of test data
Repr. 1B	H360FD	Calculation method

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.