

## Triabon

Version: 1.5

Revision Date:  
31.03.2020

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

#### 1.1 Product identifier

Trade name : Triabon

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

Use of the Sub-  
stance/Mixture : Fertilizer

#### 1.3 Details of the supplier of the safety data sheet

Company : COMPO EXPERT GmbH  
Kroegerweg 10  
D-48155 Münster

Telephone : +49 (0) 251 29 79 81 – 000

Telefax : +49 (0) 251 29 79 81 - 111

E-mail address of person  
responsible for the SDS : info@compo-expert.com

#### 1.4 Emergency telephone number

Quality / Safety / Environment  
Telephone: +49 (0) 2151 - 579 - 0

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Supplemental Hazard : EUH210 Safety data sheet available on request.  
Statements

#### 2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).  
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

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### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

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Chemical nature : Fertilizer  
NPK-Fertilizer on basis: crotonylidenediurea, potassium sulphate, ammonium salts, phosphates, magnesium salts, other nutrients.

### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
manganese sulphate (1:1)	7785-87-7 232-089-9 01-2119456624-35-XXXX	STOT RE 2; H373 Aquatic Chronic 2; H411	<= 0,4
ammonium nitrate	6484-52-2 229-347-8 01-2119490981-27-XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	<= 5
Borates, tetra sodium salts, pentahydrate	12179-04-3 215-540-4 01-2119490790-32-XXXX	Repr. 1B; H360FD Eye Irrit. 2; H319	<= 2
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)	14025-15-1 237-864-5 05-2114842509-41-0000	Acute Tox. 4; H302	<= 0,5

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- If inhaled : If breathed in, move person into fresh air.  
On inhalation of decomposition products:  
In case of lung irritation, first treatment with dexametason aerosol (spray).  
Keep patient calm, remove to fresh air, seek medical attention.
- In case of skin contact : Wash thoroughly with soap and water.
- In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.

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

Symptoms : No information available.

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

Treatment : Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water

Unsuitable extinguishing media : Foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)  
Sand

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Can decompose at above 100 °C. Thermal decomposition products:  
carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)  
Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : No special precautions required.

### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Retain and dispose of contaminated wash water.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

### 6.4 Reference to other sections

For personal protection see section 8.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Advice on protection against fire and explosion : The product is not flammable. Keep away from sources of ignition - No smoking. Keep away from combustible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Hygiene measures : At the end of the shift the skin should be cleaned and skin-care agents applied.

#### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : When stored loose do not mix with other fertilizers. Store well away from other substances. Keep away from direct sunlight. Protect against heat. Protect from contamination. Protect against humidity (product is hygroscopic and tends to cake or disintegrate)
- Storage class (TRGS 510) : 13, Non Combustible Solids

#### 7.3 Specific end use(s)

- Specific use(s) : Not relevant

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
manganese sulphate (1:1)	manganese sulphate	(Inhalable fraction)	0,5 mg/m <sup>3</sup>	DE TRGS 900
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Inhalable fraction)	0,5 mg/m <sup>3</sup> (Manganese)	DE TRGS 900
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
			0,5 mg/m <sup>3</sup>	
Borates, tetra sodium salts, pentahydrate	12179-04-3		3 mg/m <sup>3</sup>	DE TRGS 900

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Peak-limit: excursion factor (category)	8;(II)			
Further information	Commission for dangerous substances, The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW	0,5 mg/m <sup>3</sup> (Borate)	DE TRGS 900
Peak-limit: excursion factor (category)	2;(I)			
Further information	Commission for dangerous substances, The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
			1 mg/m <sup>3</sup>	ACGIHTLV
Mangansulfat	7785-87-7, 7785-87-7	manganese: 20 µg/l (Blood)	Immediately after exposition or after working hours, In case of long-term exposition: after more than one shift	TRGS 903

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Triabon				
Remarks:	This information is not available.			

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Triabon		
Remarks:	This information is not available.	

## 8.2 Exposure controls

### Personal protective equipment

Respiratory protection : respiratory protection only if aerosol or dust is formed.

### Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.  
Retain and dispose of contaminated wash water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

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Appearance	: granular
Colour	: various
Odour	: odourless
pH	: ca. 6,1, Concentration: 100 g/l (20 °C)
Melting point/range	: > 130 °C
Boiling point/boiling range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Bulk density	: ca. 950 kg/m <sup>3</sup>
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: ca. 100 °C To avoid thermal decomposition, do not overheat. Thermal decomposition above the indicated temperature is possible.
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing substance

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### 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Evolution of ammonia under influence of alkalis.

### 10.4 Conditions to avoid

Conditions to avoid : No decomposition if stored and applied as directed.

### 10.5 Incompatible materials

Materials to avoid : alkaline reactive substances

### 10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
ammonia

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Remarks: Calculation method

##### Components:

##### **manganese sulphate (1:1):**

Acute oral toxicity : LD50 (Rat): 2.150 mg/kg

##### **ammonium nitrate:**

Acute oral toxicity : LD50 (Rat): > 2.950 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : > 88,8 mg/l  
Method: No information available.

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 402

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### **Borates, tetra sodium salts, pentahydrate:**

Acute oral toxicity : LD50 (Rat): 3.200 - 3.400 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2,0 mg/l  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

### **disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):**

Acute oral toxicity : LD50 Oral (Rat): > 1.750 mg/kg

### **Skin corrosion/irritation**

#### **Product:**

Result: non-irritant

Remarks: Calculation method

#### **Components:**

##### **ammonium nitrate:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: non-irritant

##### **Borates, tetra sodium salts, pentahydrate:**

Species: Rabbit

Result: No skin irritation

### **Serious eye damage/eye irritation**

#### **Product:**

Result: non-irritant

Remarks: Calculation method

#### **Components:**

##### **ammonium nitrate:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritant

##### **Borates, tetra sodium salts, pentahydrate:**

Species: Rabbit

Assessment: Irritant

Result: Moderate eye irritation

### **Respiratory or skin sensitisation**

#### **Product:**



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Result: non-sensitizing  
Remarks: Calculation method

### Components:

#### **ammonium nitrate:**

Result: Does not cause skin sensitisation.

#### **Borates, tetra sodium salts, pentahydrate:**

Test Type: Buehler Test

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

### **Germ cell mutagenicity**

#### Product:

Genotoxicity in vitro : Remarks: Contains no hazardous ingredients according to GHS

### Components:

#### **ammonium nitrate:**

Genotoxicity in vitro : Method: OECD Test Guideline 471  
Result: negative

#### **Borates, tetra sodium salts, pentahydrate:**

Germ cell mutagenicity- Assessment : In vitro tests showed mutagenic effects

### **Carcinogenicity**

#### Product:

Remarks: Contains no ingredient listed as a carcinogen

### Components:

#### **ammonium nitrate:**

Species: Rat

Remarks: Animal testing did not show any carcinogenic effects.

#### **Borates, tetra sodium salts, pentahydrate:**

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

### **Reproductive toxicity**

#### Product:

Effects on fertility :  
Remarks: This information is not available.

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Effects on foetal development : Remarks: This information is not available.

### **Components:**

#### **ammonium nitrate:**

Effects on fertility : Species: Rat

Remarks: Animal testing did not show any effects on fertility.

Effects on foetal development : Species: Rat  
Remarks: Did not show teratogenic effects in animal experiments.

#### **Borates, tetra sodium salts, pentahydrate:**

Reproductive toxicity - Assessment : In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance.  
May damage fertility. May damage the unborn child.

### **STOT - single exposure**

#### **Product:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

### **STOT - repeated exposure**

#### **Product:**

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### **Repeated dose toxicity**

#### **Components:**

##### **ammonium nitrate:**

Species: Rat  
NOAEL: > 1.500 mg/kg  
Application Route: Oral  
Exposure time: 28 d

Species: Rat  
NOAEL: = 256 mg/kg  
Application Route: Oral  
Exposure time: 52 w  
Method: OECD Test Guideline 453

Species: Rat  
NOAEL: >= 185 mg/kg  
Application Route: by inhalation

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Exposure time: 2 w  
Method: Repeated Dose Inhalation Toxicity: 28-day or 14-day Study.

### Further information

#### Product:

Remarks: The product was not tested. The statement was derived from products of similar structure and composition.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): > 100 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Information refers to the main component.

Toxicity to bacteria : EC50 : ca. > 100 mg/l  
Exposure time: 4 h  
Test Type: activated sludge  
Remarks: Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.  
Information refers to the main component.

#### Components:

##### **manganese sulphate (1:1):**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 30 mg/l

##### **ammonium nitrate:**

Toxicity to fish : LC50 (Fish): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 490 mg/l  
Exposure time: 48 h

LC50 : 490 mg/l

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 1.700 mg/l  
Exposure time: 10 d

##### **Borates, tetra sodium salts, pentahydrate:**

Toxicity to fish : LC50 (dab): 74 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 242 mg/l

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aquatic invertebrates	Exposure time: 24 h
Toxicity to algae	: EC10 (Scenedesmus subspicatus): 24 mg/l Exposure time: 96 h
<b>disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):</b>	
Toxicity to fish	: LC50 (Fish): > 100 mg/l
Toxicity to algae	: EC50 : 30 mg/l Exposure time: 96 h

### 12.2 Persistence and degradability

#### **Product:**

Biodegradability : Remarks: The organic components of the product are biodegradable.  
The methods for determining the biological degradability are not applicable to inorganic substances.

#### **Components:**

##### **ammonium nitrate:**

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

#### **Product:**

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

#### **Components:**

##### **ammonium nitrate:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: -3,1

### 12.4 Mobility in soil

#### **Product:**

Mobility : Remarks: No data available

### 12.5 Results of PBT and vPvB assessment

#### **Product:**

Assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).. This mixture contains

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no substance considered to be very persistent and very bio-accumulating (vPvB)..

### 12.6 Other adverse effects

**Product:**

Additional ecological information : There is a high probability that the product is acute not harmful to aquatic organisms.  
At higher pH values, which can be found in natural surface waters, an increase of toxic effects on aquatic organisms may be expected.  
The product has not been tested. The information is derived from the properties of the individual components.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Check if agriculture use is possible.  
Contact manufacturer.

Contaminated packaging : Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

## SECTION 14: Transport information

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks : Not relevant

## SECTION 15: Regulatory information

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

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Water contaminating class : WGK 1 slightly water endangering  
(Germany)

## 15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

## SECTION 16: Other information

### Full text of H-Statements

H272 : May intensify fire; oxidizer.  
H302 : Harmful if swallowed.  
H319 : Causes serious eye irritation.  
H360FD : May damage fertility. May damage the unborn child.  
H373 : May cause damage to organs through prolonged or repeated exposure.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Aquatic Chronic : Chronic aquatic toxicity  
Eye Irrit. : Eye irritation  
Ox. Sol. : Oxidizing solids  
Repr. : Reproductive toxicity  
STOT RE : Specific target organ toxicity - repeated exposure

(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New

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Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

### **Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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