

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

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

#### 1.1 Product identifier

Trade name : COMPO Universal Liquid Fertilizer  
Product code : 000000001436101004

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

Use of the Sub-  
stance/Mixture : Fertiliser

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

Company : COMPO GmbH  
Gildenstraße 38  
D-48157 Münster  
  
Telephone : +49-0251/3277-0  
  
Telefax : +49 (0)251/326225  
  
E-mail address of person  
responsible for the SDS : info@compo.de

#### 1.4 Emergency telephone number

Central Safety & Environment  
Telephone:+49-251-3277-0 (7-17:30h on working days)

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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)

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

#### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



## COMPO Universal Liquid Fertilizer

Version 4.0      Revision Date: 02.10.2018      SDS Number: C1931      Date of last issue: -  
Date of first issue: 02.10.2018

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Chemical nature : Mixture  
Fertiliser  
Aqueous solution

#### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
If the content of ammonium nitrate is $\leq 45\%$ , this corresponds to a nitrogen content of $<16\%$ . The product complies with Regulation (EC) No. 1907/2006 (REACH Regulation). The product does not fall under the regulation (EU) No. 98/2013 (marketing and use of starting materials for explosives) and also not under the German chemical prohibition regulation (ChemVerbotsV)! :			
ammonium nitrate	6484-52-2 229-347-8 01-2119490981-27-XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	$\geq 10 - \leq 45$
potassium nitrate	7757-79-1 231-818-8 01-2119488224-35-XXXX	Ox. Sol. 3; H272	$\geq 1 - \leq 10$

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

If inhaled : Move to fresh air.  
If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and plenty of water.  
If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses.  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
If eye irritation persists, consult a specialist.

If swallowed : Do NOT induce vomiting.  
Clean mouth with water and drink afterwards plenty of water.  
If symptoms persist, call a physician.

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

Symptoms : No information available.

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

### 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 : Product is compatible with standard fire-fighting agents.

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

Specific hazards during fire-fighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).  
In the event of fire and/or explosion do not breathe fumes.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.  
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.  
Avoid contact with skin, eyes and clothing.

### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

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

Methods for cleaning up : Use mechanical handling equipment.  
Prevent further leakage or spillage.  
Wipe up with absorbent material (e.g. cloth, fleece).  
After cleaning, flush away traces with water.

### 6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling



## COMPO Universal Liquid Fertilizer

Version 4.0      Revision Date: 02.10.2018      SDS Number: C1931      Date of last issue: -  
Date of first issue: 02.10.2018

- Advice on safe handling : Take notice of the directions of use on the label.  
Handle in accordance with good industrial hygiene and safety practice.  
Avoid contact with skin, eyes and clothing.  
Avoid inhalation of vapour or mist.  
Wash hands before breaks and at the end of workday.
- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.
- Hygiene measures : General industrial hygiene practice. Wash hands before breaks and at the end of workday. Keep away from food and drink.

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

- Requirements for storage areas and containers : Keep out of the reach of children. Store in original container.  
Keep tightly closed in a dry, cool and well-ventilated place.
- Advice on common storage : Keep away from food and drink.  
Keep away from oxidizing agents and strongly acid or alkaline materials.
- Storage class (TRGS 510) : 12, Non Combustible Liquids
- Recommended storage temperature : 5 - 30 °C

### 7.3 Specific end use(s)

- Specific use(s) : Always read the label and product information before use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium nitrate	Workers	Inhalation	Specific effects	36 mg/m <sup>3</sup>
Remarks:	Exposure time: 1 d			
	Workers	Skin contact	Specific effects	5,12 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Specific effects	2,56 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Inhalation	Specific effects	8,9 mg/m <sup>3</sup>
Remarks:	Exposure time: 1 d			
potassium nitrate	Workers	Inhalation	Systemic effects	36,7 mg/m <sup>3</sup>
	Workers	Skin contact	Systemic effects	20,8 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Systemic effects	12,5 mg/kg

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version 4.0      Revision Date: 02.10.2018      SDS Number: C1931      Date of last issue: -  
Date of first issue: 02.10.2018

Remarks:	Exposure time: 1 d			
	Consumers	Skin contact	Systemic effects	12,5 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Inhalation	Systemic effects	10,9 mg/m3

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

Substance name	Environmental Compartment	Value
ammonium nitrate	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	Ceiling Limit Value	4,5 mg/l
potassium nitrate	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	Ceiling Limit Value	4,5 mg/l
	Sewage treatment plant	18 mg/l

## 8.2 Exposure controls

### Personal protective equipment

Eye protection : not required under normal use  
Avoid contact with eyes.

Hand protection

Remarks : not required under normal use  
Skin should be washed after contact.

Skin and body protection : Long sleeved clothing

Respiratory protection : not required  
Do not breathe vapours or spray mist.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : various

Odour : odourless

pH : 3 - 5 (20 °C)  
Concentration: 100 g/l

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : The product is not flammable.

Upper explosion limit / Upper flammability limit : Not applicable

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

Lower explosion limit / Lower flammability limit : Not applicable

Density : ca. 1,22 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : soluble

Decomposition temperature : Stable at normal ambient temperature and pressure.  
Do not allow evaporation to dryness.

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Flammability (liquids) : Will not burn

Self-ignition : not auto-flammable

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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 : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

### 10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases  
Strong oxidizing agents

### 10.6 Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:  
Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.



## COMPO Universal Liquid Fertilizer

Version 4.0      Revision Date: 02.10.2018      SDS Number: C1931      Date of last issue: -  
Date of first issue: 02.10.2018

---

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

###### Product:

- Acute oral toxicity : Remarks: Health injuries are not known or expected under normal use.
- Acute dermal toxicity : Remarks: Health injuries are not known or expected under normal use.

###### Components:

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

- Acute oral toxicity : LD50 (Rat): 2.950 mg/kg  
Method: OECD Test Guideline 401
- Acute inhalation toxicity : LC50 (Rat): > 88,8 mg/l  
Exposure time: 4 h
- Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 402

###### **potassium nitrate:**

- Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 425
- Acute inhalation toxicity : LC50 (Rat): > 0,5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403
- Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 402

##### Skin corrosion/irritation

###### Product:

- Remarks : According to the classification criteria of the European Union, the product is not considered as being a skin irritant.  
May cause skin irritation in susceptible persons.

###### Components:

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

- Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

### potassium nitrate:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

### Serious eye damage/eye irritation

#### Product:

Remarks : According to the classification criteria of the European Union, the product is not considered as being an eye irritant. Contact with eyes may cause irritation.

#### Components:

##### ammonium nitrate:

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : Eye irritation

##### potassium nitrate:

Species : Rabbit  
Method : OECD Test Guideline 437  
Result : No eye irritation

### Respiratory or skin sensitisation

#### Product:

Result : Does not cause skin sensitisation.

#### Components:

##### ammonium nitrate:

Species : Mouse  
Method : OECD Test Guideline 429  
Result : Does not cause skin sensitisation.

##### potassium nitrate:

Method : OECD Test Guideline 429  
Result : Does not cause skin sensitisation.

### Germ cell mutagenicity

#### Product:

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

Germ cell mutagenicity- As- : Contains no ingredient listed as a mutagen





## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

essment

### **Components:**

#### **ammonium nitrate:**

Genotoxicity in vitro : Test system: Escherichia coli  
Method: OECD Test Guideline 471  
Result: negative

Germ cell mutagenicity- Assessment : Did not show mutagenic effects in animal experiments.

#### **potassium nitrate:**

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

### **Carcinogenicity**

#### **Product:**

Carcinogenicity - Assessment : Contains no ingredient listed as a carcinogen

### **Components:**

#### **ammonium nitrate:**

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

#### **potassium nitrate:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

### **Reproductive toxicity**

#### **Product:**

Reproductive toxicity - Assessment : Contains no ingredient listed as toxic to reproduction

### **Components:**

#### **ammonium nitrate:**

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

#### **potassium nitrate:**

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.



## COMPO Universal Liquid Fertilizer

Version 4.0      Revision Date: 02.10.2018      SDS Number: C1931      Date of last issue: -  
Date of first issue: 02.10.2018

---

### STOT - single exposure

**Product:**

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

**Components:**

**potassium nitrate:**

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.

**Components:**

**potassium nitrate:**

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  
Method : OECD Test Guideline 422

**potassium nitrate:**

Species : Rat  
NOAEL : >= 1.500 mg/kg  
Exposure time : 1 d

### Experience with human exposure

**Product:**

General Information : Danger of methaemoglobin formation.

### Further information

**Product:**

Remarks : Information given is based on data obtained from similar sub-



## COMPO Universal Liquid Fertilizer

Version 4.0      Revision Date: 02.10.2018      SDS Number: C1931      Date of last issue: -  
Date of first issue: 02.10.2018

---

stances.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Product:

- Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 422 mg/l  
Exposure time: 48 h  
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 555 mg/l  
Exposure time: 48 h  
Test Type: static test
- Toxicity to algae : No observed effect concentration (Desmodesmus subspicatus (green algae)): 83 mg/l  
Exposure time: 168 h  
Test Type: other
- Toxicity to microorganisms : EC20 (activated sludge): ca. 850 mg/l  
Exposure time: 0,5 h  
Test Type: other  
Method: No data available  
Remarks: Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

##### Components:

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

- Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 100 mg/l  
Exposure time: 48 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 490 mg/l  
Exposure time: 96 h
- Toxicity to algae : EC50 (diatoms): > 1.700 mg/l  
Exposure time: 10 d

###### **potassium nitrate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 490 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (diatoms): > 1.700 mg/l  
Exposure time: 10 d



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

### 12.2 Persistence and degradability

**Product:**

Biodegradability : Remarks: The product works in the soil as fertilizer and is diminished in a few weeks.

**Components:**

**ammonium nitrate:**

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

**potassium nitrate:**

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

### 12.3 Bioaccumulative potential

**Product:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

**Components:**

**ammonium nitrate:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

**potassium nitrate:**

Bioaccumulation : Remarks: Does not bioaccumulate.

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Components:**

**potassium nitrate:**

Assessment : This substance is not considered to be persistent, bioaccumu-



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

lating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### 12.6 Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Product : Do not flush into surface water or sanitary sewer system. Dispose of contents/ container to an approved waste disposal plant.  
The waste codes are manufacturer's recommendations based on the designated use of the product.  
European Waste Catalog: 02 01 09 Waste of agricultural chemicals other than those mentioned in 02 01 08.
- Contaminated packaging : Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.
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## 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 and the IBC Code

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

Water contaminating class : WGK 1 slightly water endangering

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# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

---

(Germany)

### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

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### SECTION 16: Other information

#### Full text of H-Statements

H272 : May intensify fire; oxidizer.  
H319 : Causes serious eye irritation.

#### Full text of other abbreviations

Eye Irrit. : Eye irritation  
Ox. Sol. : Oxidizing solids

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; 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; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

#### 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

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



## COMPO Universal Liquid Fertilizer

Version	Revision Date:	SDS Number:	Date of last issue: -
4.0	02.10.2018	C1931	Date of first issue: 02.10.2018

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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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