



Be Right™

# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 01-Apr-2006

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Version 5.4

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s)** LCW032-1  
**Product Name** LCW 032 Mangan/ Manganese/Manganèse, LCW 032 A; 1/3  
**Unique Formula Identifier (UFI)** 2SHE-UFFA-X80E-PVQP  
**Molecular weight** Not applicable

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

**Recommended Use** Laboratory Reagent. Water Analysis.  
**Uses advised against** Consumer use

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

#### **Supplier**

HACH LANGE GmbH  
Willstätterstr. 11  
D-40549 Düsseldorf  
Tel: +49 (0)211 5288-383  
sds@hach.com

Responsible country contact:

HACH UK  
Laser House  
Ground Floor, Suite B  
Waterfront Quay, Salford Quays  
GB - Manchester, M50 3XW  
Tel. +44 (0) 161 872 1487  
info-uk@hach.com

HACH Ireland  
Unit 34 GB Business Park  
Little Island  
IRL-Co. Cork  
T45 H681  
Tel. +353 (0)146 02 522  
info-ie@hach.com

### 1.4. Emergency telephone number

UK: Chemtrec: +44 20 3807 3798  
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

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

<b>Acute toxicity - Oral</b>	Category 4 - (H302)
<b>Acute toxicity - Inhalation (Dusts/Mists)</b>	Category 4 - (H332)
<b>Skin corrosion/irritation</b>	Category 1 - (H314)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)
<b>Specific target organ toxicity — single exposure</b>	Category 2 Category 3 - (H371, H335)
<b>Specific target organ toxicity (repeated exposure)</b>	Category 2 - (H373)
<b>Acute aquatic toxicity</b>	Category 1 - (H400)
<b>Chronic aquatic toxicity</b>	Category 2 - (H411)

### 2.2. Label elements

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

Contains Ammonium hydroxide, Potassium cyanide



#### Signal word

Danger

#### Hazard statements

H302 - Harmful if swallowed  
 H314 - Causes severe skin burns and eye damage  
 H332 - Harmful if inhaled  
 H371 - May cause damage to organs  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H400 - Very toxic to aquatic life  
 H411 - Toxic to aquatic life with long lasting effects  
 H335 - May cause respiratory irritation

#### Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P273 - Avoid release to the environment  
 P280 - Wear protective gloves and eye/face protection  
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor  
 P391 - Collect spillage

### 2.3. Other hazards

No information available.

PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)  
 This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Ammonium hydroxide	1336-21-6 215-647-6 007-001-01-2	10 - 20%	Met. Corr. 1 - H290 Acute Tox. 4 - H302 Skin Corr. 1B - H314 STOT SE 3 - H335 Aquatic Acute 1 - H400	STOT SE 3 :H335: C>=5%	-	-
Potassium cyanide	151-50-8 205-792-3 006-007-00-5	1 - 5%	Met. Corr. 1 - H290 Acute Tox. 1 - H300 Acute Tox. 1 - H310 Acute Tox. 1 - H330 STOT SE 1 - H370 STOT RE 1 - H372 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		-	-

#### Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Ammonium hydroxide 1336-21-6	350 mg/kg	None reported	None reported	None reported	None reported
Potassium cyanide 151-50-8	5 mg/kg	22.3 mg/kg	0.04 mg/L	None reported	None reported

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

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

<b>Symptoms</b>	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Note to doctors</b>	Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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## Section 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the
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surrounding environment.

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the chemical** The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**Hazardous combustion products** This material will not burn.

### **5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

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

## **Section 6: ACCIDENTAL RELEASE MEASURES**

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

**Personal precautions** Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapours or mists.

**For emergency responders** Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **Section 7: HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Avoid breathing vapours or mists.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store away from other materials.

### 7.3. Specific end use(s)

**Specific use(s)** Analytical reagent.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure Limits

Chemical name	European Union	United Kingdom	Ireland
Potassium cyanide 151-50-8	TWA: 1 mg/m <sup>3</sup> CN STEL: 5 mg/m <sup>3</sup> CN Sk*	TWA: 1 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup> Sk*	TWA: 1 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup> Sk*

#### Biological occupational exposure limits

**Derived No Effect Level (DNEL)** No information available

#### Notes

[4] Systemic health effects.  
[6] Long term.  
[7] Short term.

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2. Exposure controls

**Engineering controls** Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Personal protective equipment** **Eye/face protection**

Tight sealing safety goggles. Wear safety glasses with side shields (or goggles).

#### **Hand protection**

Wear suitable gloves. Impervious gloves.

#### **Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing.

**Respiratory protection** Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

**Physical state** Liquid

**Colour** colourless

**Odour** Slight ammonia

**Odour threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	14	@ 20 °C
<b>Melting point / freezing point</b>	No data available	
<b>Initial boiling point and boiling range</b>	No data available	
<b>Evaporation rate</b>	No data available	
<b>Vapour pressure</b>	No data available	
<b>Relative vapor density</b>	No data available	
<b>Partition coefficient</b>	No data available	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	No data available	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data available	
<b>Relative density</b>	0.95 g/mL	

#### Solubility(ies)

**Water solubility**

Water solubility classification	Water solubility	Water Solubility Temperature
Completely soluble	> 10000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

**Metal Corrosivity**

<b>Steel Corrosion Rate</b>	No data available
<b>Aluminum Corrosion Rate</b>	No data available

**Explosive properties**

<b>Upper explosion limit</b>	Not applicable
<b>Lower explosion limit</b>	Not applicable

**Flammable properties**

<b>Flash point</b>	No data available
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**Flammability**

<b>Upper flammability limit:</b>	No data available
<b>Lower flammability limit</b>	No data available

**Oxidising properties**

No data available.

**Bulk density**

Not applicable

**9.2. Other information**

No information available.

<b>Section 10: STABILITY AND REACTIVITY</b>
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**10.1. Reactivity**

<b>Reactivity</b>	No information available.
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**10.2. Chemical stability**

<b>Stability</b>	Stable under normal conditions.
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**10.3. Possibility of hazardous reactions**

<b>Possibility of hazardous reactions</b>	None under normal processing.
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<b>Hazardous polymerisation</b>	Hazardous polymerisation does not occur.
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**10.4. Conditions to avoid**

<b>Conditions to avoid</b>	Exposure to air or moisture over prolonged periods. Excessive heat.
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**10.5. Incompatible materials**

<b>Incompatible materials</b>	Acids. Bases. Oxidising agent.
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**10.6. Hazardous decomposition products**

**Hazardous Decomposition Products** Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**Section 11: TOXICOLOGICAL INFORMATION****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Based on available data, the classification criteria are not met

Mixture No data available.

Substance No data available.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium hydroxide	Rat LD <sub>50</sub>	350 mg/kg	None reported	None reported	Vendor SDS
Potassium cyanide	Rat LD <sub>50</sub>	5 mg/kg	None reported	None reported	GESTIS

**Dermal Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide	Rabbit LD <sub>50</sub>	22.3 mg/kg	None reported	None reported	Vendor SDS

**Inhalation (Dust/Mist) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide	Rat LC <sub>50</sub>	0.04 mg/L	4 hours	None reported	ERMA

**Acute Toxicity Estimate (ATE)** Not applicable

<b>ATEmix (oral)</b>	382.90 mg/kg
<b>ATEmix (dermal)</b>	2,123.80 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	3.81 mg/l

**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Skin corrosion/irritation**

Causes severe burns.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Ammonium hydroxide	Existing human experience	Human	None reported	None reported	Corrosive to skin	HSDB
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	Patch test	Rabbit	500 mg	None reported	Data Source	ECHA

**Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes serious eye damage. Causes burns.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Ammonium hydroxide	Draize Test	Rabbit	0.044 mg	None reported	Corrosive to eyes	RTECS
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	OECD Test 439: In Vitro Skin Irritation: Reconstructed Human Epidermis (Rhe) Test Method	Rabbit	100 mg	1 hours	Data Source	ECHA

**Respiratory or skin sensitisation**

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

Mixture No data available.

Substance No data available.

**STOT - single exposure**

Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). May cause damage to organs if swallowed. May cause respiratory irritation.

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium hydroxide	Human LD <sub>Lo</sub>	43 mg/kg	None reported	None reported	RTECS
Potassium cyanide	Man TD <sub>Lo</sub>	13.7 mg/kg	None reported	<b>Behavioral</b> Coma Convulsions or effect on seizure threshold <b>Blood</b> Metabolic acidosis	RTECS

**Inhalation (Vapor) Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium hydroxide	Human TC <sub>Lo</sub>	408 mg/L	None reported	<b>Lungs, Thorax, or Respiration</b> Fibrosis, focal (pneumoconiosis) Acute pulmonary edema	RTECS

**STOT - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide	Rat TD <sub>Lo</sub>	4.5 mg/kg	15 days	<b>Nutritional and Gross Metabolic</b> Evidence of thyroid hypofunction, Changes in thyroid weight	RTECS

**Germ cell mutagenicity**

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

Mixture invitro **Data** No data available.

Substance invitro **Data** Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Ammonium hydroxide	Mutation in microorganisms	<i>Salmonella typhimurium</i>	10 mg/disc	None reported	Positive test result for mutagenicity	RTECS
Potassium cyanide	DNA inhibition	Mouse lymphocyte	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	Mutation in microorganisms	<i>Salmonella typhimurium</i>	10 mg/plate	None reported	Negative	CCRIS

Mixture invivo **Data** No data available.

Substance invivo **Data** No data available.

**Carcinogenicity**

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

Mixture No data available.

Substance No data available.

**Reproductive toxicity**

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

Mixture No data available.

Substance Test data reported below.

**Oral Exposure Route:**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium cyanide	Domestic mammal - Not specified TD <sub>Lo</sub>	1767 mg/kg	12 weeks	<b>Effects on Newborn</b> Other neonatal measures or effects Weaning or lactation index (e.g. # alive at weaning per # alive at day 4)	RTECS

**Aspiration hazard**

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

**11.2. Information on other hazards**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**11.2.1. Endocrine disrupting properties****Endocrine disrupting properties****11.2.2. Other information**

**Other adverse effects** No information available.

**Section 12: ECOLOGICAL INFORMATION****12.1. Toxicity**

**Ecotoxicity** Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

**Mixture**

**Acute aquatic toxicity:** No data available.

**Aquatic Chronic Toxicity:** No data available.

**Substance**

**Acute aquatic toxicity:** Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Ammonium hydroxide	96 hours	<i>Oncorhynchus kisutch</i>	LC <sub>50</sub>	0.45 mg/L	PEEN
Potassium cyanide	96 hours	None reported	LC <sub>50</sub>	0.068 mg/L	GESTIS
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium	96 hours	None reported	LC <sub>50</sub>	612000 mg/L	ECOSARS

monosodium salt					
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Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Ammonium hydroxide	48 Hours	<i>Daphnia magna</i>	LC <sub>50</sub>	0.66 mg/L	PEEN
Potassium cyanide	48 Hours	None reported	LC <sub>50</sub>	0.25 mg/L	GESTIS
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	48 Hours	None reported	LC <sub>50</sub>	263000 mg/L	ECOSARS

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, monopotassium monosodium salt	96 hours	None reported	EC <sub>50</sub>	62377.086 mg/L	ECOSARS

**Aquatic Chronic Toxicity:** No data available.

#### **12.2. Persistence and degradability**

**Mixture** No data available.

#### **12.3. Bioaccumulative potential**

**Mixture:** No data available.

**Partition coefficient** No data available

#### **12.4. Mobility in soil**

**Soil Organic Carbon-Water Partition Coefficient** No data available

#### **12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Potassium cyanide	The substance is not PBT / vPvB

#### **12.6. Endocrine disrupting properties**

**Endocrine Disruptor Information:** This product does not contain any known or suspected endocrine disruptors

**Endocrine Disruptor Information:**

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Potassium cyanide	Group III Chemical	-	-

#### **12.7. Other adverse effects**

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Advice on Disposal

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Our local agencies will accept used cuvettes to ensure their proper disposal.

#### Waste disposal number (residues/unused products)

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

#### Waste disposal number (used product)

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

**Contaminated packaging** Dispose of contents/containers in accordance with local regulations.

**Other Information** Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION

### ADR

14.1 UN number or ID number	3316
14.2 UN proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	251, 340, 671
Classification code	M11
Tunnel restriction code	(E)

### IATA

14.1 UN number or ID number	UN3316
14.2 UN proper shipping name	Chemical kit
14.3 Transport hazard class(es)	9
14.4 Packing group	Not regulated
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	None

### IMDG

14.1 UN number or ID number	UN3316
14.2 UN proper shipping name	CHEMICAL KIT
14.3 Transport hazard class(es)	9
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	251, 340
EmS-No	F-A, S-P
14.7 Maritime transport in bulk according to IMO instruments	No information available

**Additional information**

This product forms part of a kit. Information in this section relates to the kit as a whole. If the item is not regulated, the Chemical Kit classification does not apply.

## Section 15: REGULATORY INFORMATION

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

**Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

**Take note of Directive 94/33/EC on the protection of young people at work**

**Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work**

**Authorisations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Ammonium hydroxide - 1336-21-6	Use restricted. See entry 75. Use restricted. See entry 65.	
Potassium cyanide - 151-50-8	Use restricted. See entry 75.	

**Persistent Organic Pollutants** Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

- E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1
- E2 - Hazardous to the Aquatic Environment in Category Chronic 2

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**Germany**

**Water hazard class (WGK)** obviously hazardous to water (WGK 2)

**International Inventories**

<b>EINECS/ELINCS</b>	Complies
<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Report** Chemical safety assessments for substances in this mixture were not carried out.

<b>Section 16: OTHER INFORMATION</b>
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<b>Issue Date</b>	01-Apr-2006
<b>Revision Date</b>	05-Aug-2024
<b>Revision Note</b>	updated SDS sections: None

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)



IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006]
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation
STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity — repeated exposure
STOT SE	Specific target organ toxicity — single exposure
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AwSV	Administrative regulation of water polluting substances, Germany

**Key literature references and sources for data**

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

**Classification procedure**

<b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b>	<b>Method Used</b>
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method

Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method

**Full text of H-Statements referred to under section 3**

EUH032 - Contact with acids liberates very toxic gas

H300 - Fatal if swallowed

H310 - Fatal in contact with skin

H314 - Causes severe skin burns and eye damage

H330 - Fatal if inhaled

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

**Training Advice**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Restrictions on use**

For Laboratory Use Only.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****End of Safety Data Sheet**