

# SAFETY DATA SHEET HIDROMIX S

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

1.1. Product identifier		
Mixture identification:		
Trade name:	Hidromix S	
Trade code:	1717	
1.2. Relevant identified uses of t	the substance or mixtu	re and uses advised against
Recommended use:		
Fertilizer		
1.3. Details of the supplier of the	e safety data sheet	
AGRITRADE		
1 Robin Mann Place		
Christchurch Airport		
Christchurch 8053		
New Zealand		
Ph 03 341 4587		
Fax 03 341 4584		
Free Phone 0800 333 855		
agritrade@nzagritrade.co.r	<u>1Z</u>	
1.4. Emergency telephone numb	per:	
Emergency number	: 24 Hour Emerg	ency Contact: 0800 CHEMCALL (0800 243622)
NZ POISON CENTRE CONTACT	: 111 Police, Am Zealand only)	bulance and Fire Brigade (available in New

0800 764 766 (National Poisons Information Centre)

#### **SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture <u>Classification according to the Hazardous Substances (Classification) Notice 2020, New Zealand.</u> The product is classified as non hazardous

<u>Classification according to Regulation (EC) No 1272/2008:</u> The product is not classified as hazardous

2.2. Label elements None

2.3. Other hazards vPvB Substances: None - PBT Substances: None Other Hazards: No other hazards

**SECTION 3: Composition/information on ingredients** 



3.1. Substances N.A.

3.2. Mixtures:

Name	Product identifier	%	Approval Status (NZIoC)
Boric acid	CAS:10043-35-3 EC: 10043-35-3	3 - <4.5	HSNO Approval Code HSR002995
Copper EDTA	CAS: 14025-15-1 EC: 237-864-5	1 - <3	HSNO Approval Code HSR003697

SVHC Substances:

>= 0.1% - < 0.25% boric acid

Index number: 005-007-00-2, CAS: 10043-35-3, EC: 233-139-2

Substance SVHC

Hazard Classification: 3.7/1B Repr. 1B H360FD\_Specific concentration limit >= 5.5%

For full text of H-statements: see SECTION 16

## **SECTION 4: First aid measures**

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly (shower or bath).

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time. Get medical attention if irritation persists.

In case of Ingestion:

Never give anything by mouth to an unconscious person

Rinse mouth with water and if the person is conscious give plenty of water to drink .

Do not under any circumstances induce vomiting. Get medical attention.

## In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Possible symptoms that may occur:

Inhalation: may cause irritation to the respiratory tract

Symptoms: cough, shortness of breath

Ingestion:

The product dissolved in water or in presence of moisture, cause an acid reaction and if swallowed can cause irritation and burns of the mouth, throat and digestive tract. Symptoms: vomiting, abdominal pain,gastrointestinal disorders

Contact with skin:

May cause irritation to the skin

Symptoms: redness, itching, pain.

Contact with eyes:

Causes eye irritation



Symptoms include pain and redness

 4.3. Indication of any immediate medical attention and special treatment needed In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Treatment: None

#### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing media:

- Water.
  - Carbon dioxide (CO2).
  - Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture Do not inhale explosion and combustion gases.

Burning produces heavy smoke containing carbon oxides, nitrogen oxides

#### 5.3. Advice for firefighters

Wear suitable personal protective equipment and self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely. Protective clothing for firefighters (full protective suit, helmet, gloves, boots) must conform to the standard EN469

#### **SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training.

Wear protective clothes giving a total skin protection, gloves, safety glasses and ask with filter P2

Keep away from the affected area people not involved in the emergency intervention.

Ensure adequate ventilation, move people in a safe place.

Alert the internal emergency team.

- For emergency responders:

Wear protective clothes giving a total skin protection, gloves, safety glasses and mask with filter P2.

Ensure adequate ventilation, move people in a safe place.

See protective measures under point 7 and 8.

Avoid dust generation

Dusts at sufficient concentrations can form explosive mixtures with air

Avoid any accumulation of electrostatic charge

- 6.2. Environmental precautions
  - Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it in landfill approved;

If possible, collect in clean plastic containers labeled and reuse as fertilizer.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, sol, sand.

6.3. Methods and material for containment and cleaning up



> Collect the product for example using shovel and broom Avoid raising dust Wash with plenty of water, contain the spill with absorbent material,earth, sand.

6.4. Reference to other sections See also section 8 and 13

## **SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

- Do not eat or drink while working.
- See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original containers tightly closed in a well-ventilated place far from humidity and heat source

Keep away from food, drink and feed.

Incompatible materials:

Strong oxidants.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s) None in particular

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

- Boric acid - CAS: 10043-35-3

OSHA / PEL (permissible exposure levels): 15 mg/m3 (total dust) and 5 mg/m3 (breathable dust).

DNELs (Derived No Effect Levels) for workers: Worker-DNEL long-term inhalation, systemic = 8.3 mg/m3 (1.45 mg B/m3). Worker-DNEL long-term, skin, systemic = 27460 mg/day (B 4800 mg/day). DNELs (Derived No Effect Levels) for population (consumers): DNEL long-term, oral, systemic = 0.98 mg/kg body weight/day (0.17 mg B/kg body weight / day). DNEL long-term inhalation, systemic = 4.15 mg/m3 (0.73 mg B/m3). DNEL long-term dermal, systemic (external) = 196 mg/kg body weight/day (34.3 mg B/kg body weight/day). DNEL long-term dermal, systemic = 0.98 mg/kg body weight/day (0.17 mg B/kg body weight/day. PNECs (Predicted No Effect Concentrations): PNECadd, water = 2.02 mg B/L (fresh water and sea water) and 13.7 mg B/L (water with intermittent releases). PNECadd, sediment = No exposure expected. PNECadd, soil = 5.4 mg B/kg soil weight daily. PNEC STP (industrial waste water) = 10 mg B/L.



- Copper EDTA - CAS:14025-15-1

Substance name	OSHA PEL	Cal/OSHA PEL 8-hour TWA (ST) STEL (C) CeilingTLV- STEL	NIOSH REL Up to 10-hour TWA (ST) STEL (C) Ceiling	ACGIH 2015 TLV
Copper (powder and smoke as Cu)	1 mg/m³	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	1 mg/m³

#### DNEL

Workers: Inhalation exposure to long-term systemic effects DNEL: 1.8 mg/m<sup>3</sup> Skin systemic effects long-term exposure DNEL 3750 mg / kg body weight/day General Population: Inhalation exposure to long-term systemic effects DNEL: 0.45 mg/m<sup>3</sup> Skin systemic effects long-term exposure DNEL: 1875 mg/kg body weight /day oral systemic effects long-term exposure DNEL: 0.375 mg / kg body weight /day

## PNEC

PNEC (freshwater) = 2.95 mg/L PNEC aqua (sea water) = 0.3 mg/L PNEC aqua (intermittent release) = 1.09 mg/L PNEC STP = 65.4 mg/L PNEC soil - Risk to terrestrial organisms = 0.21 mg/kg dw soil

8.2. Exposure controls

The personal protective equipment must be compliant to the regulation UNI - EN in force Eye protection:

Use close fitting safety goggles according to the standard EN 166, don't use eye lens. Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective nitrile gloves that provides comprehensive protection according to EN 374. Respiratory protection:

In case of dust generation, use anti-powder mask with P2 filters according to the EN 149:2001. The powder exposition limit must be respected

Thermal Hazards:

None

Environmental exposure controls:

Prevent the contamination of soil, surface water or groundwater

## **SECTION 9: Physical and chemical properties**



9.1. Information on basic physical and	d chemical properties	
Appearance and colour:	yellow/brown microgranules	
Odour:	odorless	
Odour threshold:	not applicable	
pH 1% at 20°C:	5,5	
Melting point / freezing point:	not applicable,solid	
Initial boiling point and boiling r	ange: not applicable,solid	
Flash point:	not applicable, solid	
Evaporation rate:	not applicable, solid	
Solid/gas flammability:	not applicable, the product doesn't contain any flammable	
	substance	
Upper/lower flammability or ex	plosive limits: not applicable, the product doesn't contain any	
	flammable or explosive substance	
Vapour pressure:	not applicable, solid	
Vapour density:	not applicable, solid	
Apparent Density:	0,9-1,1 Kg/dm3	
Solubility in water:	100 g/l at 20 °C	
Solubility in oil:	N.A.	
Partition coefficient (n-octanol/		
Auto-ignition temperature:	N.A.	
Decomposition temperature:	N.A.	
Viscosity:	not applicable, solid	
Explosive properties:	not applicable, the product doesn't contain any explosive	
	substance	
Oxidizing properties:	not applicable, the product doesn't contain any oxidizing	
0.0. Other information	substance	
9.2. Other information		
Miscibility:	N.A.	
Fat Solubility:	N.A.	
Conductivity:	N.A.	
Substance Groups relevant pro	operties N.A.	

## **SECTION 10: Stability and reactivity**

- 10.1. Reactivity Stable under normal conditions
  10.2. Chemical stability Stable under normal conditions
  10.3. Possibility of hazardous reactions
  - It reacts with strong oxidizing agents. Contact with hot surfaces may ignite the product
- 10.4. Conditions to avoid Avoid heating the product at high temperatures
- 10.5. Incompatible materials
- Strong oxidizing agents. 10.6. Hazardous decomposition products In case of fire and high temperatures can develop carbon oxides, nitrogen oxides.

## **SECTION 11: Toxicological information**

11.1. Information on toxicological effects Toxicological information of the mixture:



N.A.

Toxicological information of the main substances found in the mixture:

- a) acute toxicity:
  - Boric acid CAS: 10043-35-3

Ingestion:

- LD50 (Lethal Dose lethal doses) in rats (Sprague-Dawley): 3450 mg/kg body weight (male) and 4080 mg/kg body weight (female), (test material: Boric acid). LD50 male rat:> 2600 mg/kg body weight (Test material: boron trioxide, OECD Guideline 401 (Acute Oral Toxicity))
- Inhalation: Low toxicity Acute Respiratory.

LC50 (5h) in rat (male / female):> 2.03 mg / L air. (Material Test: Boric acid, OECD Guideline 403 (Acute Inhalation Toxicity

Dermal toxicity: Low acute dermal toxicity.

LD50 rabbit (New Zealand White) (male / female):> 2000 mg / kg body weight. (Material Test: Boric acid, FIFRA (40 CFR 163))

Copper EDTA - CAS: 14025-15-1

LD50 (Oral) = 890 mg / kg (test similar to OECD 403)

- LD50 (dermal, rat)> 2000 mg / kg bw (OECD 402 read-across from
- Ethylenediaminetetraacetic acid ferric sodium salt)
- 4h-LC50 (inhalation)> 5.32 g / m3 (OECD 436)

b) skin corrosion/irritation:

- Boric acid CAS: 10043-35-3
   Studies on rabbits, corrosion / irritation: low absorption of boric acid through intact skin.
   Based on the data available to the criteria for classification as corrosive / irritating skin are not satisfied.
- Copper EDTA CAS: 14025-15-1 slightly irritating (test on rabbit: 50% aqueous solution, OECD 404)
- c) serious eye damage/irritation:
- Boric acid CAS: 10043-35-3
- No evidence of corrosion (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798). The test material applied by washing every 24 hours on the eyes of New Zealand white rabbits causes conjunctival irritation and iris. (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798). (FIFRA guidelines (40 CFR 162) and TSCA (40 CFR 798). Years of occupational exposure to disodium tetrahydrate octoborate showed no adverse effects on the human eye.

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

- Copper EDTA CAS: 14025-15-1 irritating (Test on rabbit, OECD 405)
- d) respiratory or skin sensitisation:
- Boric acid CAS: 10043-35-3

Not skin sensitizer for for guinea pigs, OECD Guideline 406 (Skin Sensitization). Based on the available data, the classification criteria are not met as a sensitizer Copper EDTA - CAS: 14025-15-1

- not sensitizing (test on rat, OECD 429 Local Lymph Node Assay)
- e) germ cell mutagenicity:
- Boric acid CAS: 10043-35-3
   The bacterial reverse mutation test (Ames test) was performed on S. typhimurium TA 1535, TA 1537, TA 98 and TA 100. There was no mutagenic activity. (Material Test: Boric acid). Based on the available data, the classification criteria as a mutagen are not met.



- Copper EDTA CAS: 14025-15-1 not classified
- f) carcinogenicity:
- Boric acid CAS: 10043-35-3

The test performed according to OECD Guideline 451 B6C3F1 (mice treated in the diet for 103 weeks with Boric acid 0, 2500 or 5000 ppm) showed no evidence of carcinogenicity. Based on the available data, the classification criteria as a carcinogen are not met. Copper EDTA - CAS: 14025-15-1

- non-carcinogenic (read-across from hydrogen 2,2 ', 2' ', 2' " (ethane-1,2-diyldinitrilo) tetraacetate)
- g) reproductive toxicity:
  - Boric acid CAS: 10043-35-3

The exposure tests at 50 and 155 mg Borax Deca Hydrate/kg body weight (equivalent to 5.9 and 17.5 mg B/kg body weight) made of three generations of Sprague-Dawley rats showed no adverse effects on fertility, lactation, litter size, weight or other abnormalities of the unborn.

NOAEL (No Observed Adverse Effect Level) for fertility (male rats): 17.5 mg B/kg / day. Rats exposed to doses of 518 mg Borax decahydrate / kg body weight (equivalent to 58.5 mg B / kg body weight) were infertile. Microscopic examination of the testes atrophied of all the males in this group showed no viable sperm. Furthermore, the examination of the ovaries in the female rats, exposed to 58.5 mg B / kg body weight has detected a decreased ovulation in most of the ovaries examined. None of the females exposed to high doses has generated pups as a result of mating with males in the control group. LOAEL (Lowest Observed Adverse Effect Level) for fertility (rat female / male): 58.5 mg B /

kg bw / day. The group of male and female rats at high dose (58.5 mg B / kg body weight) showed clinical signs of toxicity such as sleeping rough, scaly tail, respiratory distress and inflamed eyelids.

Based on the data obtained from this study it was concluded that the exposure of rats at levels up to 17.5 mg B / kg body weight does not cause adverse reproductive effects. Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated negative effects on fertility and testes, effects on the fetus, including fetal weight loss and minor skeletal variations.

Studies of workers exposed to high boron, have not shown any adverse effects on the developing fetus.

The Disodium octaborate tetrahydrate is autoclassificato as toxic for reproduction, Repro 1B, H360FD according to the new classification criteria of the EC Regulation 1272/2008 (CLP).

- Copper EDTA CAS: 14025-15-1
   NOEL reproduction and development ≥ 500 mg/kg bw/day.
- h) STOT-single exposure:
- Boric acid CAS: 10043-35-3

Based on the available data, the classification criteria as STOT-single exposure are not met.

- Copper EDTA CAS: 14025-15-1 not classified
- i) STOT-repeated exposure:
- Boric acid CAS: 10043-35-3
   Repeated dose toxicity: 2-year feeding studies of Sprague Dawley rats (male / female) exposed to different concentrations of boric acid (0, 33 (5.9) 100 (17.5), 334 (58, 5) mg boric acid (B) / kg body weight daily) showed adverse effects such as: rough coat, hunched



posture, fingers swollen, eyes inflamed and bleeding, atrophy testicular, degeneration of the seminiferous tubules, effects observed in animals exposed to the highest levels of boric acid.

NOAEL 17.5 mg boron / kg body weight / day

LOAEL 58.5 mg boron / kg body weight / day There were no adverse effects in the group exposed to a minimum and medium level.

Copper EDTA - CAS: 14025-15-1 not classified

j) aspiration hazard:

- Boric acid CAS: 10043-35-3 Based on the available data, the classification criteria are not met. not classified
- Copper EDTA CAS: 14025-15-1

unlikely event (solid)

Symptoms related to the physical, chemical and toxicological properties:

There are no known health effects of the mixture as a whole. In base on the components present: Inhalation: may cause irritation to the respiratory tract Symptoms: cough, shortness of breath Ingestion: The product dissolved in water or in presence of moisture, cause an acid reaction and if swallowed can cause irritation and burns of the mouth, throat and digestive tract. Symptoms: vomiting, abdominal pain,gastrointestinal disorders Contact with skin: May cause irritation to the skin Symptoms: redness, itching, pain. Contact with eyes: Causes eye irritation Symptoms include pain and redness

# **SECTION 12: Ecological information**

## 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Boric acid - CAS: 10043-35-3

Aquatic compartment Short-term toxicity to fish: Fathead minnow, Pimephales promelas: 96-hr LC50 = 79.7 mg B/L (mortality) Long-term toxicity to fish: Fathead minnow, Pimephales promelas: 32-d NOEC (No Observed Effect Concentration) = 11.2 mg B/L 32-d LOEC (Lowest Observed Effect Concentration) = 23 mg B/L

Short-term toxicity to aquatic invertebrates: Daphnids, Daphnia magna: 48-hr LC50 = 133 mg B / L (mortality)

Long-term toxicity to aquatic invertebrates: Daphnids, Daphnia magna: 21-d LC50 = 34 mg B / L



> 21-d LOEC = 56 mg B/L Hyalella azteca: 42-d NOEC = 25.9 mg B / L 42-d LOEC = 51.1 mg B/L

Short-term toxicity to algae: Green algae, Pseudokirchneriella subcapitata: 72-hr EC50 - biomass = 40 mg B/L (mortality)

Long-term toxicity to algae: Blue-green algae, Agmenellum quadruplicatum: 10-d NOEC ≥ 100 mg B/L (growth rate)

Toxicity to microorganisms: The study was performed in accordance with OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test). It 'was found an inhibitory effect on the respiratory rate of microorganisms:

3-hr EC50 = 175 mg B/L 3-hr EC20 = 112 mg B/L 3-hr EC10 = 35.4 mg B/L 3-d NOEC = 17.5 mg B/L

Bodies of sediment: Chironomus riparius: 28-d NOEC = 180 mg B / kg sediment, daily weights (mortality)

28-d LOEC = 320 mg B / kg sediment, daily weights (mortality and emergency) 28-d LD50 = 278 mg B / kg sediment, daily weight (nominal)

#### Terrestrial compartment

Toxicity to terrestrial arthropods:

The study was performed in accordance with ISO 11267 (Inhibition of Reproduction of Collembola by Soil Pollutants) on the Folsomia candida, Collembola. The results obtained on artificial soil are:

28-d EC10 = 68.1 mg B / kg body weight (mortality) 28-d EC10 = 13.8 mg B / kg body weight (reproduction) 28-d EC50 = 26.1 mg B / kg body weight (reproduction) 28-d LC50> 70 mg B / kg body weight

Toxicity to terrestrial plants:

The studies were performed on different species of plants of the group of Monocotyledonae (as Allium cepa) and the Dicotyledonae (as Brassica rapa) with the following results: Allium cepa, 7-d NOEC = 56 mg B / kg soil, daily weight (growth in length of the bud) - clay soil.

Brassica rapa, 5-d NOEC = 28 mg B / kg soil, daily weight (root growth) - artificial soil

Toxicity to soil microorganisms:

The study was performed in accordance with OECD Guideline 216 (Soil Microorganisms: Nitrogen Transformation Test) based on the calculation of the rate of nitrification on the basis of the concentration of nitrates in the soil after x days (without taking into account the value of the concentration of nitrates of the day 0) for a number of days. Rate of formation of nitrate:

102-d EC10 = 15.4 mg B / kg soil weight daily (sandy soil) 102-d EC50> 17.5 mg B / kg soil weight daily (sandy soil and sandy loam)



> 102-d EC10 = 17.2 mg B / kg daily weight soil (sandy loam) Copper EDTA - CAS: 14025-15-1 Aquatic acute toxicity: Species: Fish = 555 mg/l - Notes: OECD 203 Species: Daphnia = 109.2 mg/l - Notes: OECD 202 Species: Algae = 662.6 mg/l - Notes: OECD 201 Aquatic chronic toxicity: Species: Fish = 37.2 mg/l - Notes: OECD 210 Species: Daphnia = 29.5 mg/l - Notes: OECD 211 Species: Algae = 43.7 mg/l - Notes: OECD 201 Bacteria toxicity: Endpoint: NOEC = 654 mg/l - Duration h: 3 - Notes: OECD 209 12.2. Persistence and degradability Boric acid - CAS: 10043-35-3 Boron is naturally occurring and ubiquitous in the environment. Boric acid decomposes in the environment to natural borate Copper EDTA - CAS: 14025-15-1 Abiotic degradation: half-life 20 days Resistant to hydrolysis (read across Ethylenediaminetetraacetic acid ferric sodium salt) **Biotic degradation:** The EDTA and its salts are not readily degradable; slightly alkaline pH improves the biodegradability of EDTA 12.3. Bioaccumulative potential Boric acid - CAS: 10043-35-3 Not significantly bio-accumulative. Copper EDTA - CAS: 14025-15-1 low bioaccumulation potential (log Kow <3) 12.4. Mobility in soil The product is soluble and mobile in both terrestrial and aquatic compartments 12.5. Results of PBT and vPvB assessment vPvB Substances: None - PBT Substances: None 12.6. Other adverse effects None **SECTION 13: Disposal considerations** 13.1. Waste treatment methods Product :Recover if possible. In so doing, comply with the local and national regulations currently in force. Packaging: Dispose according to regulations.

# **SECTION 14: Transport information**

#### 14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

- 14.2. UN proper shipping name
- N.A.
- 14.3. Transport hazard class(es)
  - N.A.
- 14.4. Packing Group
  - N.A.
- 14.5 Environmental hazards



- IMDG-Marine pollutant: No
- 14.6. Special Precautions for User

N.A.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code N.A.

#### **SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

15.1.2. National regulations

#### **New Zealand**

Classification

: Classified as non-hazardous according to the Hazardous Substances (Classification) Notice 2020, New Zealand..

National Chemical Inventory (NZIoC)

## **SECTION 16: Other information**

Issue date:September 17, 2021 Text of phrases referred to under heading 3:

H360FD May damage fertility. May damage the unborn child.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

CCNL - Appendix 1

Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

Paragraphs modified from previous version: all paragraphs This MSDS cancels and replaces any preceding release.

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
- CAS: Chemical Abstracts Service (division of the American Chemical Society).
- CLP: Classification, Labeling, Packaging.
- DNEL: Derived No Effect Level.
- EINECS: European Inventory of Existing Commercial Chemical Substances.
- GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IATA: International Air Transport Association.

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IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day.
	(ACGIH Standard).
WGK:	German Water Hazard Class.
N.A.:	no data available