

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 04/18/2024

Reviewed on 04/18/2024

1 Identification

- **Product identifier**
- **Trade name:** Hardness Y / N
- **Catalogue number:** 00515361, 515360BT, 515361BT, 503541, 00515369BT, 4515360BT, 4515361BT, 00503541
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

- **Classification of the substance or mixture**



Skin Irritation 2 H315 Causes skin irritation.
Eye Irritation 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
- **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 If on skin: Wash with plenty of water.
P313 Get medical advice/attention.
- **Other hazards** No further relevant information available.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 9004-34-6	cellulose	90–100%
EINECS: 232-674-9		
RTECS: FJ5691460		

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CAS: 1310-65-2	lithium hydroxide	1-≤2.5%
EINECS: 215-183-4	⚠ Skin Corrosion 1A, H314; Eye Damage 1, H318; ⚠ Acute Toxicity - Oral 4, H302	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:**
Immediately rinse with plenty of water.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
- **Most important symptoms and effects, both acute and delayed**
irritations
after inhalation:
mucous membrane irritation
coughing
breathing difficulty
after swallowing of large amounts:
sickness
vomiting
cramps
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Can burn in fire.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
LiO_x
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
- **Advice for emergency responders:** Protective equipment: see section 8
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.

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Dispose contaminated material as waste according to section 13.

Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Precautions for safe handling· **Advice on safe handling:** Prevent formation of dust.**Hygiene measures:**

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities· **Requirements to be met by storerooms and receptacles:** Store in a cool location.· **Information about storage in one common storage facility:** Store away from oxidizing agents.**Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Protect from exposure to the light.

Protect from humidity and water.

This product is hygroscopic.

· **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

Control parameters**Components with limit values that require monitoring at the workplace:****CAS: 9004-34-6 cellulose**

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust, **respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ paper fibre, total dust

CAS: 1310-65-2 lithium hydroxide

WEEL (USA)	Ceiling limit value: 1 mg/m ³
EL (Canada)	Ceiling limit value: 1 mg/m ³
EV (Canada)	Short-term value: 1 mg/m ³ anhydrous

· **Additional information:** The lists that were valid during the creation were used as basis.· **Engineering measures:** No further data; see section 7.**Personal protective equipment:**

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

· **Breathing equipment:** Use respiratory protective device against the effects of fume/dust/aerosol.· **Recommended filter device for short term use:** Filter P2**Protection of hands:**

Protective gloves

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

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- **Penetration time of glove material**

Value for the permeation: Level \leq 1 (10 min)

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed goggles

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment:**

Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **Appearance:**

- **Form / Physical state:** Tablets

- **Color:** Grey

- **Odor:** Odorless

- **Odor threshold:** Not applicable.

- **pH-value (1.4 g/l) at 20°C (68°F):** 10.8

- **Melting point/freezing point:** Not determined.

- **Initial boiling point and boiling range:** Not determined.

- **Flash point:** 260°C (500°F) (CAS: 9004-34-6 cellulose)

- **Flammability (solid, gas):** The mixture is capable of catching fire or being set on fire.

- **Auto igniting:** 420°C (788°F) (CAS 9004-34-5)

Not applicable (solid).

- **Decomposition temperature:** > 150°C (> 302°F) (CAS 9004-34-5)

- **Auto-ignition temperature:** Product is not self-igniting.

- **Danger of explosion:** As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.

- **Flammability or explosive limits:**

- **Lower:** Not determined.

- **Upper:** Not applicable (solid).

- **Oxidizing properties:** none

- **Vapor Pressure:** Not applicable.

- **Density:** Not determined.

- **Relative density:** Not determined.

- **Vapor density:** Not applicable.

- **Evaporation rate:** Not applicable.

- **Solubility(ies)**

- **Water:** Slightly soluble.

- **Partition coefficient (n-octanol/water):** Not applicable (mixture).

- **Viscosity:**

- **Kinematic:** Not applicable (solid).

- **Other information**

- **Solids content:** 100.0 %

10 Stability and reactivity

- **Reactivity** Dust can combine with air to form an explosive mixture.

- **Chemical stability** Stable at ambient temperature (room temperature).

- **Possibility of hazardous reactions**

Aqueous solution reacts alkaline.

Aqueous solution reacts with metals.

Corrodes aluminium.

- **Conditions to avoid**

strong heating

Exposure to moisture.

- **Incompatible materials:**

organic substances

aluminum

zinc

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· **Hazardous decomposition products:** see section 5

*11 Toxicological information

· Information on toxicological effects

· **Acute toxicity:** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

CAS: 9004-34-6 cellulose

Oral	LD50.	>5000 mg/kg (rat)
Dermal	LD50.	>2000 mg/kg (rabbit) (RTECS, limit test)
Inhalative	LC50/4h	>5.8 mg/l /4h (rat)

CAS: 1310-65-2 lithium hydroxide

Oral	LD50	330 mg/kg (ATE) (Registrant, ECHA) Acute toxicity data are available for oral route of exposure: LD50 (rat, oral): female: 210 mg/kg bw; male: 280 mg/kg bw, both for lithium hydroxide anhydrous. As these values are most likely linked to local tissue damage due to the corrosiveness of the substance and are not only a result of "primary" systemic toxicity the LD50 oral of lithium chloride and lithium carbonate were taken into account after conversion. A LD50 value of 330 mg/kg bw were found to reflect properly the systemic toxicity of the corrosive substance lithium hydroxide anhydrous.
Dermal	LD50.	>2000 mg/kg /bw (rat) (Registrant, ECHA)
Inhalative	LC50	>3.4 mg/l /4h (rat) (Registrant, ECHA)
	NOAEL	13.9–84.8 mg/kg /bw/d (rat) (Registrant, ECHA: oral)

· Primary irritant effect:

· **on the skin:** Causes skin irritation.

· **on the eye:** Causes serious eye irritation.

· Information on components:

CAS: 9004-34-6 cellulose

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 492	(rabbit: no irritation)

· **Sensitization:** Based on available data, the classification criteria are not met.

· Information on components:

CAS: 9004-34-6 cellulose

Sensitization	OECD 406	(guinea pig: negative)
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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· **Other information:** see section 8 / 15

· **Synergistic Products:** None

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** The following statements refer to the mixture:

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.

· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
The following applies to lithium compounds in general:
after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

CAS: 1310-65-2 lithium hydroxide

EC50	19.1 mg/l/48h (Daphnia magna) without pH-adjustment
NOEC	5.71 mg/l/72h (Pseudokirchneriella subcapitata)
NOEC	9.9 mg/l /34d (zebrafish)
	2.3 mg/l /21d (Daphnia magna)
EC50	87.57 mg/l/72h (Pseudokirchneriella subcapitata)
LC50	62.2 mg/l/96h (zebrafish)

- **Other information:**

The following applies for lithium compounds in general:
fish toxic from 100 mg/l, Daphnia toxic from 16 mg/l, plants toxic from 0,2 mg/l

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Other adverse effects** Avoid transfer into the environment.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to hazardous waste disposers.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**

- **DOT, IMDG, IATA** none

- **UN proper shipping name**

- **DOT, IMDG, IATA** none

- **Transport hazard class(es)**

- **DOT, IMDG, IATA**
- **Class** none

- **Packing group**

- **DOT, IMDG, IATA** none

- **Environmental hazards:**

- **Marine pollutant:** No

- **Special precautions for user** Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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Transport/Additional information:	Not dangerous according to the above specifications.
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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

Section 355 (Extremely hazardous substances):
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None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):
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None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

Hazardous Air Pollutants

None of the ingredients is listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
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None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
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None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

New Jersey Right-to-Know List:

CAS: 9004-34-6 cellulose

New Jersey Special Hazardous Substance List:

None of the ingredients is listed.

Pennsylvania Right-to-Know List:

CAS: 9004-34-6 cellulose

Pennsylvania Special Hazardous Substance List:

None of the ingredients is listed.

EPA (Environmental Protection Agency)
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None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- **Information about limitation of use:** Not required.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

- **Version number / date of revision:** 42 / 04/18/2024

- **Abbreviations and acronyms:**

EC50: effective concentration, 50 percent (in vivo)

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

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EC50: half maximal effective concentration
 IC50: half maximal inhibitory concentration
 NOEL or NOEC: No Observed Effect Level or Concentration
 ACGIH® - American Conference of Governmental Industrial Hygienists
 •A1 - Confirmed human carcinogen
 •A2 - Suspected human carcinogen
 •A3 - Confirmed animal carcinogen with unknown relevance to humans
 •A4 - Not classifiable as a human carcinogen
 •A5 - Not suspected as a human carcinogen
 IARC - International Agency for Research on Cancer
 •Group 1 - Carcinogenic to humans
 •Group 2A - Probably carcinogenic to humans
 •Group 2B - Possibly carcinogenic to humans
 •Group 3 - Not classifiable as to carcinogenicity to humans
 •Group 4 - Probably not carcinogenic to humans
 NTP - National Toxicology Program, U.S. Department of Health and Human Services
 •Group K - Known to be Human Carcinogens
 •Group R - Reasonably Anticipated to be Human Carcinogens
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Acute Toxicity - Oral 4: Acute toxicity – Category 4
 Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
 Skin Irritation 2: Skin corrosion/irritation – Category 2
 Eye Damage 1: Serious eye damage/eye irritation – Category 1
 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

• Sources

Data arise from safety data sheets, reference works and literature.
 GESTIS- Stoffdatenbank (Substance Database, Germany)
 RTECS (Registry of Toxic Effects of Chemical Substances)
 ECHA: European CHemicals Agency <http://echa.europa.eu>

• * Data compared to the previous version altered.