Lovibond® Water Testing

Tintometer® Group



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

Printing date 10/06/2017 Reviewed on 10/06/2017

1 Identification

- · Product identifier
- · Trade name: Tannin No.1
- · Catalogue number: 00515291, (4)515290(BT), (4)515291, (4)515293(0), 503500, 00515299
- · 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 Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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



GHS07

- · Signal word Warning
- Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.
P302+P352 If on skin: Wash with plenty of water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: 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

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· Composition and Information on Ingredients:

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Percent ranges are used due to the confidential product information.

ſ	CAS: 5329-14-6	sulfamic acid	♦ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Aquatic Chronic 3, H412	50–60%
	EINECS: 226-218-8		•	
	Index number: 016-026-00-0			
	RTECS: WO 5950000			
ľ	CAS: 9004-34-6	cellulose		30-40%
	EINECS: 232-674-9			
	RTECS: FJ5691460			

· 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; consult doctor in case of complaints.
- · 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.

Do not induce vomiting.

If symptoms persist consult doctor.

Most important symptoms and effects, both acute and delayed

irritations

after inhalation:

coughing

breathing difficulty

after swallowing:

sickness

gastric or intestinal disorders

pain

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: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture

The product is not combustible.

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

nitrous gases

Nitrogen oxides (NOx)

Sulfur oxides (SOx)

Carbon monoxide (CO) and carbon dioxide (CO₂)

- · 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.

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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

Avoid formation of dust.

· Advice for emergency responders: Protective equipment: see section 8

Environmental precautions:

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

Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

· Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

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

Avoid contact with the skin.

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
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- Information about storage in one common storage facility: Do not store together with alkalis (caustic solutions).
- · 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/m³ *total dust **respirable fraction		
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction		
TLV (USA)	Long-term value: 10 mg/m³		
EL (Canada)	Long-term value: 10* 3** mg/m³ *total dust, **respirable fraction		
	Long-term value: 10 mg/m³ paper fibre, total dust		

· Additional information: The lists that were valid during the creation were used as basis.

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· Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Personal protective equipment:

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

Protective gloves

Preventive skin protection by use of skin-protecting agents is recommended.

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

· Penetration time of glove material

Value for the permeation: Level ≤ 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: Safety glasses
- · 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:	White	
· Odor:	Odorless	
· Odor threshold:	Not applicable.	
· pH-value (15.2 g/l) at 20 °C (68 °F):	1,3	
· Melting point/freezing point:	Not determined.	
· Initial boiling point and boiling range:	Not determined.	
· Flash point:	Not applicable.	
· Flammability (solid, gas):	The product is not combustible.	
· Decomposition temperature:	> 200 °C (>392 °F) (CAS 5329-14-6)	
· Auto-ignition temperature:	Product is not self-igniting.	
· Danger of explosion: · Flammability or explosive limits:	Product does not present an explosion hazard.	
Lower:	Not applicable.	
Upper:	Not applicable.	
· Oxidizing properties:	none	
· Vapor Pressure:	Not applicable.	
Density at 20 °C (68 °F):	1,97 g/cm³ (16.44 lbs/gal)	
Relative density:	Not determined.	
Vapor density:	Not applicable.	
· Evaporation rate:	Not applicable.	
· Solubility(ies)		
Water:	Partially insoluble.	
· Partition coefficient (n-octanol/water)	Not applicable.	
· Viscosity:	Not applicable.	
· Solvent content:		
Organic solvents:	0,0 %	
Solids content:	100,0 %	
	(O. I.)	

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Other information

No further relevant information available.

*10 Stability and reactivity

- · Reactivity see section "Possibility of hazardous reactions"
- · Chemical stability Stable at ambient temperature (room temperature).
- Possibility of hazardous reactions

Reacts with water.

Aqueous solution reacts acidic.

Aqueous solution reacts with metals.

Forms hydrogen in aqueous solution with metals (Danger of explosion!).

Reacts with acids, alkalis and oxidizing agents.

Reacts with halogenated compounds.

Violent reactions possible with:

nitrates

chlorine

- · Conditions to avoid Strong heating (decomposition)
- · Incompatible materials: metals
- · 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: 5329	CAS: 5329-14-6 sulfamic acid				
Oral LD50 3160 mg/kg (rat) (GESTIS)					
CAS: 9004-34-6 cellulose					
Oral	LD50.	>5000 mg/kg (rat)			
Dermal	LD50.	>2000 mg/kg (rabbit) (RTECS, limit test)			
Inhalative	LC50.	>5.8 mg/l/4h (rat) (RTECS, limit test)			

- · Primary irritant effect:
- on the skin: Causes skin irritation.
- on the eye: Causes serious eye irritation.

Γ	Information on components:		
Ī	CAS: 5329-14-6 sulfamic acid		
	Irritation of skin	OECD 404	(rabbit: irritation)
	Irritation of eyes	OECD 405	(rabbit: irritation)
Ī	CAS: 9004-34-6 cellulose		
ľ	Irritation of skin	OECD 404	(rabbit: no irritation)
	Irritation of eyes	OECD 405	(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)

- · 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.

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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

- · Other information: see section 8 / 15
- · Synergistic Products: None
- · CMR effects (carcinogenity, 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.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Information on components:

OECD 414: Teratogenicity testing

OECD 473: Mutagenicity testing

OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 5329-14-6 sulfamic acid		
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test)	
	(Salmonella typhimurium)	
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test)	
OECD 487	(negative) (In Vitro Mammalian Cell Micronucleus Test)	

12 Ecological information

· Toxicity

· Aquatic toxicity:

CAS: 5329-14-6 sulfamic acid

LC50 | 14.2 mg/l/96h (fish) (GESTIS)

· Bacterial toxicity:

CAS: 5329-14-6 sulfamic acid

EC10 ≥1000 mg/l (Pseudomonas putida) (16h) (IUCLID)

- Persistence and degradability No further relevant information available.
- · Bioaccumulative potential

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

CAS: 5329-14-6 sulfamic acid

log Pow 0.1 (.) (experimental)

(Merck)

- **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.

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14 Transport information

· UN-Number · DOT, IMDG, IATA UN2967

· UN proper shipping name

· DOT Sulfamic acid mixture · IMDG, IATA SULPHAMIC ACID mixture

· Transport hazard class(es)

· DOT



· Class 8 Corrosive substances

· Label

· IMDG, IATA



· Class 8 Corrosive substances

·Label

· Packing group

DOT, IMDG, IATA Ш

· Environmental hazards: Not applicable.

· Special precautions for user Warning: Corrosive substances

· Danger code (Kemler): · EMS Number: F-A,S-B Acids · Segregation groups Stowage Category

Transport in bulk according to Annex II of MARPOL73/78

and the IBC Code Not applicable.

· Transport/Additional information:

· Quantity limitations On passenger aircraft/rail: 25 kg

On cargo aircraft only: 100 kg

· Limited quantity (LQ): 5 kg Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· IMDG

· Limited quantities (LQ) 5 kg

· Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Section 355 (Extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

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· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

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: 5329-14-6 sulfamic acid

CAS: 9004-34-6 cellulose

New Jersey Special Hazardous Substance List:

CAS: 5329-14-6 sulfamic acid

CO

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)

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: Employment restrictions concerning young persons must be observed.
- 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

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

· Date of preparation / last revision 10/06/2017 / 35

Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: hallf 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

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of

Dangerous Goods by Rail)
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

Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· Sources

Data arise from safety data sheets, reference works and literature.

GESTIS- Stoffdatenbank (Substance Database, Germany)

IUCLID (International Uniform Chemical Information Database)

* Data compared to the previous version altered.

US -