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

Printing date 08/15/2024 Reviewed on 08/15/2024

1 Identification

· **Product identifier**

· **Trade name: Tannin Indicator TN1**

· **Catalogue number:**
56Z014698, 56P014650, 56U014620, 56U014650, 56P014690, 56P014610, 56U014610, 56P014620, 56U014690, 56P0146, 56P014640, 56U014640, 56P014671, 56U014671, SDT094

· **CAS Number:**
5329-14-6

· **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**

GHS07

Skin Irritation 2	H315 Causes skin irritation.
Eye Irritation 2A	H319 Causes serious eye irritation.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

· **Label elements**
· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
· **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**

P280	Wear protective gloves / eye protection.
P273	Avoid release to the environment.
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.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)

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

Printing date 08/15/2024 Reviewed on 08/15/2024

Trade name: Tannin Indicator TN1

(Contd. of page 1)

· **Other hazards** No further relevant information available.

3 Composition/information on ingredients

· **Chemical characterization: Substances**
· **CAS No. Description**
CAS: 5329-14-6 sulfamic acid
· **EC number:** 226-218-8

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air.
· **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.
Call a doctor immediately.
· **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
Do not induce vomiting.
· **Most important symptoms and effects, both acute and delayed**
Irritation and corrosion
after inhalation:
mucosal irritations, cough, breathing difficulty
damage to the affected mucous membranes possible
after swallowing:
coughing
breathing difficulty
sickness
vomiting
pain
cramps
gastric or intestinal disorders
· **Danger:** Danger of pulmonary edema.
· **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)
· **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.

(Contd. on page 3)

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

Printing date 08/15/2024 Reviewed on 08/15/2024

Trade name: Tannin Indicator TN1

(Contd. of page 2)

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
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 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:**
Ensure good ventilation/exhaustion at the workplace.
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**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Unsuitable material for container: metals, metal alloys
· **Information about storage in one common storage facility:** Do not store together with alkalis (caustic solutions).
· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Protect from exposure to the light.
Store in dry conditions.
Protect from humidity and water.
· **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:** Not required.

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

· **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:**
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:** Combination filter B-P2

(Contd. on page 4)

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

Printing date 08/15/2024 Reviewed on 08/15/2024

Trade name: Tannin Indicator TN1

(Contd. of page 3)

· **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
Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).
· **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:**	Powder
· **Color:**	White
· **Odor:**	Odorless
· **Odor threshold:**	Not applicable.
· **pH-value (10 g/l) at 25°C (77°F):**	1.2
· **Melting point/freezing point:**	> 190°C (> 374°F)
· **Initial boiling point and boiling range:**	Not applicable. Decomposition
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	The product is not combustible.
· **Auto igniting:**	Not applicable.
· **Decomposition temperature:**	> 209°C (> 408.2°F)
· **Auto-ignition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Flammability or explosive limits:**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Oxidizing properties:**	none
· **Vapor Pressure:**	Not applicable (solid).
· **Density at 20°C (68°F):**	2.1 g/cm³ (17.52 lbs/gal)
· **Relative density:**	Not determined.
· **Vapor density:**	Not applicable.
· **Evaporation rate:**	Not applicable.
· **Solubility(ies)**	
· **Water at 20°C (68°F):**	213 g/l Easily soluble.
· **Partition coefficient (n-octanol/water):**	0.1 log POW
· **Viscosity:**	
· **Kinematic:**	Not applicable (solid).
· **Other information**	
· **Solids content:**	100 %
· **Information with regard to physical hazard classes**	
· **Corrosive to metals**	Based on available data, the classification criteria are not met.

10 Stability and reactivity

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

(Contd. on page 5)

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

(Contd. of page 4)

· **Possibility of hazardous reactions**
Reacts with water.
Aqueous solution reacts acidic.
Forms hydrogen in aqueous solution with metals (Danger of explosion!).
Aqueous solution reacts with metals.
Hydrogen is formed in the presence of aluminum or zinc.
Reacts with acids, alkalis and oxidizing agents.
Reacts with halogenated compounds.
Violent reactions possible with:
nitrates
chlorine
· **Conditions to avoid**
Exposure to moisture.
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: 5329-14-6 sulfamic acid		
Oral	LD50	3160 mg/kg (rat) (GESTIS)

· **Primary irritant effect:**

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

· **Information on components:**		
CAS: 5329-14-6 sulfamic acid		
Irritation of skin	OECD 404	(rabbit: irritation)
Irritation of eyes	OECD 492	(rabbit: irritation)

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

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
Substance is not listed.

· **NTP (National Toxicology Program)**
Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
Substance is not listed.

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

· **Synergistic Products:** None

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Bacterial mutagenicity: Salmonella typhimurium - negative (NTP)

· **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

(Contd. on page 6)

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

Printing date 08/15/2024 Reviewed on 08/15/2024

Trade name: Tannin Indicator TN1

(Contd. of page 5)

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 474	(negative) (mouse, oral)
OECD 487	(negative) (In Vitro Mammalian Cell Micronucleus Test)

· **Additional toxicological information:**

CAS: 5329-14-6 sulfamic acid
. (source: GESTIS) Main toxic effects Acute: Irritative through to corrosive effects to the mucous membranes and skin; insufficient information available on systemic effects Chronic: No information available

· **Other information** Other dangerous properties can not be excluded.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

CAS: 5329-14-6 sulfamic acid	
EC50	71.6 mg/l/48h (Daphnia magna) (OECD 202)
EC50	14.2 mg/l/96h (fish) (GESTIS)
LC50	70.3 mg/l/96h (fathhead minnow) (OECD 203) (Merck)

· **Bacterial toxicity:**

CAS: 5329-14-6 sulfamic acid	
EC10	≥1000 mg/l (Pseudomonas putida) (16h) (IUCLID)

· **Persistence and degradability** No further relevant information available.
· **Other information:**
Does not cause biolocigal oxygen deficit.
Methods for the determination of biodegradability are not applicable to inorganic substances.
· **Bioaccumulative potential**
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**
Harmful effect due to pH shift.
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.

(Contd. on page 7)

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

Printing date 08/15/2024 Reviewed on 08/15/2024

Trade name: Tannin Indicator TN1

(Contd. of page 6)

14 Transport information

· **UN-Number**
· **DOT, IMDG, IATA** UN2967

· **UN proper shipping name**
· **DOT** Sulfamic acid
· **IMDG, IATA** SULPHAMIC ACID

· **Transport hazard class(es)**

· **DOT**

· **Class** 8 Corrosive substances
· **Label** 8

· **IMDG, IATA**

· **Class** 8 Corrosive substances
· **Label** 8

· **Packing group**
· **DOT, IMDG, IATA** III

· **Environmental hazards:**
· **Marine pollutant:** No

· **Special precautions for user** Warning: Corrosive substances
· **Hazard identification number (Kemler code):** 80
· **EMS Number:** F-A,S-B
· **Stowage Category** A

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

· **Transport/Additional information:**

· **DOT**
· **Quantity limitations** On passenger aircraft/rail: 25 kg
On cargo aircraft only: 100 kg

· **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**
· **Sara**

· **Section 355 (Extremely hazardous substances):**
Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**
Substance is not listed.

· **TSCA (Toxic Substances Control Act):**
ACTIVE

· **Hazardous Air Pollutants**
Substance is not listed.

(Contd. on page 8)

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

Printing date 08/15/2024 Reviewed on 08/15/2024

Trade name: Tannin Indicator TN1

(Contd. of page 7)

· **Proposition 65**

· **Chemicals known to cause cancer:**
Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**
Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**
Substance is not listed.

· **Chemicals known to cause developmental toxicity:**
Substance is not listed.

· **New Jersey Right-to-Know List:**
Substance is listed.

· **New Jersey Special Hazardous Substance List:**
CO

· **Pennsylvania Right-to-Know List:**
Substance is not listed.

· **Pennsylvania Special Hazardous Substance List:**
Substance is not listed.

· **EPA (Environmental Protection Agency)**
Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
Substance is not 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.

· **Version number / date of revision:** 7 / 08/15/2024

· **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
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
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

(Contd. on page 9)

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

(Contd. of page 8)

Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 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.
ECHA: European CHemicals Agency http://echa.europa.eu
IUCLID (International Uniform Chemical Information Database)
GESTIS- Stoffdatenbank (Substance Database, Germany)

· *** Data compared to the previous version altered.**