Safety Data Sheet TANNIC ACID

SDS no. DHZE294B • Version 1.0 • Date of issue: 2024-08-14

SECTION 1: Identification

GHS Product identifier

Product name	TANNIC ACID

Other means of identification

Product	Product Number
Digallic acid Tannin TANNIC ACID White LR Gallotannic acid penta-(m-digalloyl)-glucose Gallotannin	TL037

Recommended use of the chemical and restrictions on use

Chemicals (tannates, gallic acid, pyrogallic acid, hydrosols of the noble metals); alcohol denaturant; tanning; textiles (mordant and fixative); electroplating; galvanoplastics (gelatin precipitant); clarification agent in wine manufacture, brewing and foods; writing inks; pharmaceuticals; deodorization of crude oil; photography; paper (sizing, mordant for coloured papers); treatment of minor burns; laboratory reagent.

Additional information: Tannins are a broad group of plant-derived phenolic compounds characterised by their ability to precipitate proteins. Some are more toxic than others, depending on their source. Those derived from nutgalls are believed to be carcinogens, while those found in tea and coffee may be virtually non-toxic.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

Not a hazardous substance or mixture.

GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 1701.28

Information on Composition: Extraction of powdered nutgalls with water and alcohol.

Components

Component	CAS no.	Concentration
Tannic acid (EC no.: 215-753-2)	**1401-55-4**	**70 - 100 % (weight)**
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected areas with copious quantities of water. If irritation occurs seek medical advice.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. If persistent irritation occurs, obtain medical attention.
If swallowed	Rinse mouth thoroughly with water immediately. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
May burn but do not ignite readily.
Small fire: Use dry chemical, CO2, water spray or foam.
Large fire: Use water spray, fog or foam.

Specific hazards arising from the chemical
Hazards from Combustion Products: May librate toxic fumes in fire (carbon oxides).

Special protective actions for fire-fighters
Wear SCBA and structural firefighter's uniform.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid inhalation, contact with skin, eyes and clothing. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up
Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid generation or accumulation of dusts. Use in well ventilated areas away from all ignition sources.
In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities
Store away from oxidizing agents. Store in well ventilated area. Keep containers closed at all times. Store in a cool,dry place. Keep away from direct sunlight and other sources of heat or ignition.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls
In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against
chemicals should comply with AS 3765 Clothing for Protection Against Hazardous
Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Lustrous, faintly yellowish, amorphous powder, glistening scales, or spongy mass.
Color	No data available.
Odor	Slight characteristic odour.
Odor threshold	No data available.
Melting point/freezing point	218 °C
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	~ 3.5 (100 g/l, H2O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Soluble, approx 250g/L at 20°C. Solubility in Organic Solvents: Soluble in alcohol, acetone. Insoluble in benzene, chloroform and ether.
Partition coefficient n-octanol/water (log value)	log Pow: -0.19
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	No data available.
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
Other Information: Taste: Strong, astringent taste.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Chemical stability
Darkens on exposure to light and air. Hydrolysed to gallic acid and glucose or quinic acid.

Possibility of hazardous reactions
Hazardous Polymerization: Will not occur.

Conditions to avoid
Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials
Strong oxidisers, strong bases. Salts of heavy metals. Lime water, albumin, gelatin and alkaloids.

Hazardous decomposition products
Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Ingestion: May cause gastrointestinal discomfort (nausea, vomiting) due to irritant and astringent action after swallowing of large amounts.

Inhalation: Nuisance dust with astringent action. May cause coughing and sneezing. High concentrations can lead to breathing difficulties. Exposure can cause nausea, headache and vomiting.

Skin corrosion/irritation
Mild irritant and astringent. May cause inflammation on prolonged contact. May be absorbed through open wounds or burns.

Serious eye damage/irritation
Mild irritant. Cause cause reddenng and tearing, possibly pain and blurred vision.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
Tannic acid [1401-55-4] and tannins is evaluated in the IARC Monographs (Vol. 10, Suppl. 7; 1987) as Group 3: Unclassifiable as to carcinogenicity to humans.

Reproductive toxicity
No data available

Specific target organ toxicity (STOT) - single exposure
No data available

Specific target organ toxicity (STOT) - repeated exposure
No data available

Aspiration hazard
No data available

Additional information
Chronic Effects: Prolonged or repeated exposure may cause gastritis, acute ingestion, liver damage and kidney damage.

Tannic acid: domestic animals - goat/sheep LDLo intraperitoneal 1gm/kg (1000mg/kg) BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED ACTIVITY)

BEHAVIORAL: FOOD INTAKE (ANIMAL)

LIVER: "JAUNDICE, OTHER OR UNCLASSIFIED" Research in Veterinary Science. Vol. 53, Pg. 280, 1992.
Link to PubMed
domestic animals - goat/sheep LDLo oral 1gm/kg (1000mg/kg) GASTROINTESTINAL: ULCERATION OR BLEEDING FROM STOMACH

LIVER: "HEPATITIS (HEPATOCELLULAR NECROSIS), ZONAL"

KIDNEY, URETER, AND BLADDER: "CHANGES IN TUBULES (INCLUDING ACUTE RENAL FAILURE, ACUTE TUBULAR NECROSIS)" Veterinary and Human Toxicology. Vol. 37, Pg. 50, 1995.
Link to PubMed
guinea pig LDLo intravenous 40mg/kg (40mg/kg) "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 571, 1969.
mouse LD50 intramuscular 120mg/kg (120mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intramuscular 350mg/kg (350mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intramuscular > 1600mg/kg (1600mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intramuscular > 1600mg/kg (1600mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intraperitoneal 120mg/kg (120mg/kg) Planta Medica. Vol. 52, Pg. 272, 1986.
mouse LD50 intraperitoneal 150mg/kg (150mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intraperitoneal 320mg/kg (320mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intraperitoneal 360mg/kg (360mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intravenous 50mg/kg (50mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intravenous 130mg/kg (130mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 intravenous 130mg/kg (130mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 subcutaneous 140mg/kg (140mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 subcutaneous > 1600mg/kg (1600mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LD50 subcutaneous > 1600mg/kg (1600mg/kg) Journal of Pharmacy and Pharmacology. Vol. 9, Pg. 98, 1957.
Link to PubMed
mouse LDLo intravenous 10mg/kg (10mg/kg) SENSE ORGANS AND SPECIAL SENSES: HEMORRHAGE: EYE

LUNGS, THORAX, OR RESPIRATION: RESPIRATORY DEPRESSION Journal of Pharmacology and Experimental Therapeutics. Vol. 77, Pg. 63, 1943.
mouse LDLo oral 2gm/kg (2000mg/kg) SENSE ORGANS AND SPECIAL SENSES: HEMORRHAGE: EYE

LUNGS, THORAX, OR RESPIRATION: RESPIRATORY DEPRESSION Journal of Pharmacology and Experimental Therapeutics. Vol. 77, Pg. 63, 1943.
mouse LDLo subcutaneous 75mg/kg (75mg/kg) SENSE ORGANS AND SPECIAL SENSES: HEMORRHAGE: EYE

LUNGS, THORAX, OR RESPIRATION: RESPIRATORY DEPRESSION Journal of Pharmacology and Experimental Therapeutics. Vol. 77, Pg. 63, 1943.
rabbit LD50 oral 5gm/kg (5000mg/kg) GASTROINTESTINAL: GASTRITIS

LUNGS, THORAX, OR RESPIRATION: CHRONIC PULMONARY EDEMA American Journal of Veterinary Research. Vol. 23, Pg. 1264, 1962.
Link to PubMed
rat LD50 oral 2260mg/kg (2260mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

LUNGS, THORAX, OR RESPIRATION: DYSPNEA

GASTROINTESTINAL: OTHER CHANGES "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 571, 1969.
rat LDLo parenteral 1400mg/kg (1400mg/kg) Food and Cosmetics Toxicology. Vol. 14, Pg. 565, 1976.
Link to PubMed
rat LDLo subcutaneous 200mg/kg (200mg/kg) Wiener Klinische Wochenschrift. Vol. 62, Pg. 270, 1950.
Link to PubMed

SECTION 12: Ecological information

Bioaccumulative potential
Not expexted, log Pow: -0.19

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal
Not expexted, log Pow: -0.19

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
Not dangerous goods

IMDG
Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer
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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)