

Safety Data Sheet **Picro Indigo Carmine**

SDS no. GLES4WCA • Version 1.0 • Date of issue: 2023-02-12

SECTION 1: Identification

GHS Product identifier

Product name Picro Indigo Carmine

Recommended use of the chemical and restrictions on use

Histological selective staining of tissue structures

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

National contact

Name Australian Biostains Pty Ltd
Address 16 Shipwright Road
5016 Largs North SA
Australia

Emergency phone number

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

SECTION 2: Hazard identification

General hazard statement

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

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

Other components either not classified as Hazardous under the GHS, or below cut-off concentrations to be classified as Hazardous.

Hazardous components

Component	CAS no.	Concentration
Water/Aqua/Eau	7732-18-5	<= 96.5 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.		
Picric acid (EC no.: 201-865-9; Index no.: 609-009-00-X)	88-89-1	<= 2 % (weight)
CLASSIFICATIONS: Explosives, Division 1.1; Acute toxicity, inhalation, Cat. 3; Acute toxicity, dermal, Cat. 3; Acute toxicity, oral, Cat. 3. HAZARDS: H201 - Explosive; mass explosion hazard; H301 - Toxic if swallowed; H311 - Toxic in contact with skin; H331 - Toxic if inhaled.		
Ethanol (EC no.: 200-578-6; Index no.: 603-002-00-5)	64-17-5	<= 1 % (weight)
CLASSIFICATIONS: Flammable liquids, Cat. 2; Serious eye damage/eye irritation, Cat. 2A. HAZARDS: H225 - Highly flammable liquid and vapor; H319 - Causes serious eye irritation.		
Indigo carmine (EC no.: 212-728-8)	860-22-0	<= 0.5 % (weight)
CLASSIFICATIONS: Skin sensitizer, Cat. 1; Acute toxicity, oral, Cat. 4. HAZARDS: H302 - Harmful if swallowed; H317 - May cause an allergic skin reaction.		

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. Apply artificial respiration if not breathing.
In case of skin contact	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
In case of eye contact	If in eyes wash out immediately with water.
If swallowed	If swallowed, do NOT induce vomiting.

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

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam. This material is substantially water.

Specific hazards arising from the chemical

Material does not burn. Runoff may pollute waterways

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. For personal protection see section 8.

Methods and materials for containment and cleaning up

Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal. Wash area down with excess water.

SECTION 7: Handling and storage

Precautions for safe handling

Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 64-17-5

Ethanol

AU/SWA (Australia): 1000 ppm; 1880 mg/m³ TWA inhalation;

CAS: 88-89-1

Picric acid

AU/SWA (Australia): 0.1 mg/m³ TWA inhalation;

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

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: Normally not required but if in doubt ensure hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear green-purple liquid
Color	Green Purple
Odor	No data available.
Odor threshold	No data available.
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	Approx 100C
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	Acidic
Kinematic viscosity	No data available.
Solubility	Soluble
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Approx 1.0
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Reacts with incompatible materials

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal use conditions.

Conditions to avoid

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Avoid storing in direct sunlight and avoid extremes of temperature.

Keep away from heat. Do not allow to dry. Risk of explosion in case of drying up.

Incompatible materials

Keep away from: Base, Oxidizing agent, Peroxides. Reducing agent Oxidizing agents. Aluminium. Ammonia. Base. Heavy metal salts. fluorine. potassium.

Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

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

The ATE (gas inhalation) of the mixture is: 43750 ppmV

The ATE (oral) of the mixture is: 5000 mg/kg bw

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/irritation

May be irritating to eyes. The symptoms may include redness, itching and tearing.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

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

Carcinogenicity

Based on available data, the classification criteria are not met. Picric acid: Limited evidence of a carcinogenic effect.

Reproductive toxicity

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

Specific target organ toxicity (STOT) - single exposure

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

Specific target organ toxicity (STOT) - repeated exposure

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

Aspiration hazard

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

Additional information

Indigo carmine: Oral, mouse: LD₅₀ = 2500 mg/kg;

Oral, rat: LD₅₀ = 2 gm/kg;

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Ethanol: Stomach - Irregularities - Based on Human Evidence

Picric acid: *TOXICITY:

typ. dose mode specie amount unit other

LDLo scu dog 60 mg/kg

LDLo unk dog 60 mg/kg

LDLo orl cat 250 mg/kg

LDLo orl rbt 120 mg/kg

LDLo orl gpg 100 mg/kg

LDLo scu pgn 200 mg/kg

LDLo scu frg 200 mg/kg

*AQTX/TLM96: Not available

*SAX TOXICITY EVALUATION:

THR: MUTATION data. HIGH via oral, dermal and subcutaneous routes. An irritant and an allergen. Dermal exposure may cause local and systemic allergic reactions. Can cause allergic as well as irritative dermatitis.

*CARCINOGENICITY: Not available

*MUTAGENICITY:

Mutation Data:

mno-esc 1800 ppm

mno-sat 5 umol/plate

mma-sat 5 umol/plate

sln-dmg-ork 1250 umol/L

*TERATOGENICITY: Not available

*STANDARDS, REGULATIONS & RECOMMENDATIONS:

OSHA: Federal Register (1/19/89) and 29 CFR 1910.1000 Subpart Z

Transitional Limit: PEL-TWA 0.1 mg/m³ (skin) [610]

Final Limit: PEL-TWA 0.1 mg/m³ (skin) [610]

ACGIH: TLV-TWA 0.1 mg/m³ (skin); STEL 0.3 mg/m³, with a notice of intent to delete STEL [610]

NIOSH Criteria Document: None

NFPA Hazard Rating: Health (H): None

Flammability (F): None

Reactivity (R): None

*OTHER TOXICITY DATA:

Standards and Regulations: DOT-Hazard: Class A explosive; Label: Explosive A

Review: Toxicology Review

Status: "NIOSH Manual of Analytical Methods" Vol. 4

"NIOSH Manual of Analytical Methods" to be revised by June 1985

Reported in EPA TSCA Inventory, 1983

EPA Genetic Toxicology Program, January 1984

From NIH:

cat LDLo oral 250mg/kg (250 mg/kg) "Abderalden's Handbuch der Biologischen Arbeitsmethoden." Vol. 4, Pg. 1289, 1935.

dog LDLo subcutaneous 60mg/kg (60 mg/kg) "Abderalden's Handbuch der Biologischen Arbeitsmethoden." Vol. 4, Pg. 1289, 1935.

dog LDLo unreported 60mg/kg (60 mg/kg) CARDIAC: PULSE RATE

LUNGS, THORAX, OR RESPIRATION: OTHER CHANGES

LUNGS, THORAX, OR RESPIRATION: RESPIRATORY DEPRESSION U.S. Public Health Service, Public Health Bulletin. Vol. 271, Pg. 151, 1941.
guinea pig LDLo oral 100mg/kg (100 mg/kg) "Abdernalden's Handbuch der Biologischen Arbeitsmethoden." Vol. 4, Pg. 1289, 1935.
mouse LD50 intraperitoneal 56300ug/kg (56.3 mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD Nippon
Yakurigaku Zasshi. Japanese Journal of Pharmacology. Vol. 56, Pg. 450, 1960.
pigeon LDLo subcutaneous 200mg/kg (200 mg/kg) "Abdernalden's Handbuch der Biologischen Arbeitsmethoden." Vol. 4, Pg. 1289,
1935.
rabbit LDLo oral 120mg/kg (120 mg/kg) BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

GASTROINTESTINAL: "HYPERMOTILITY, DIARRHEA" U.S. Public Health Service, Public Health Bulletin. Vol. 271, Pg. 151, 1941.
rat LD50 oral 200mg/kg (200 mg/kg) SENSE ORGANS AND SPECIAL SENSES: CHROMODACYRORREA: EYE

BEHAVIORAL: TREMOR

BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD Journal of Toxicology and Environmental Health. Vol. 37, Pg. 313, 1992

SECTION 12: Ecological information

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

No data available.

Other adverse effects

No data available.

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.

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

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 for 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 Airborne 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)