HURST SCIENTIFIC

Safety Data Sheet
Picro Acetone

SECTION 1: Identification

GHS Product identifier

Product name	Picro Acetone
Product number	PICRO-500M
Brand	Hurstchem

Other means of identification

Picric Acid - Acetone 1%

Recommended use of the chemical and restrictions on use

Laboratory Chemical

Supplier's details

Name	Hurst Scientific
Address	2/36 Hensbrook Loop 6112 Forrestdale WA Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

Emergency phone number

Australian Poisons Information Centre 131 126
Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement

Classified as a Hazardous substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Classified as a Dangerous goods according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 8

- Eye damage/irritation, Cat. 2A
- Flammable liquids, Cat. 2
- Specific target organ toxicity, single exposure, Cat. 3

GHS label elements, including precautionary statements

Pictograms

1. Exclamation mark; 2. Flame

Signal word	**Danger**

Hazard statement(s)

H319	Causes serious eye irritation
H225	Highly flammable liquid and vapor
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

Precautionary statement(s)

P264	Wash … thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
P337+P313	If eye irritation persists: Get medical advice/attention.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P370+P378	In case of fire: Use … to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to …
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Acetone

Concentration	< 99 %
CAS no.	67-64-1

2. Picric acid

Concentration	< 1 %
CAS no.	88-89-1

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled	Evacuate to fresh air immediately. Apply artificial respiration if not breathing. Seek medical attention.
In case of skin contact	Remove contaminated clothing and wash affected area with soap and water thoroughly. If irritation develops, seek medical attention.
In case of eye contact	Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention.
If swallowed	DO NOT induce vomiting. Rinse mouth out with water. Give water to drink if patient is conscious. Seek medical attention.

Personal protective equipment for first-aid responders
Eye wash station, safety shower and First Aid kit.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Water spray, Dry chemical, Carbon Dioxide or Alcohol-resistant foam.

Specific hazards arising from the chemical
Vapours are heavier than air and may travel to an ignition source and flash back. Vapours can spread along the ground and collect in low or confined areas. Incompatible with oxidizing agents, acids, reducing agents, bases, halogenated compounds, hexachloromelamine, sulphur dichloride, potassium tert-butoxide and sources of ignition. During a fire, irritating and highly toxic gases may be emitted by thermal decomposition or combustion including carbon monoxide and carbon dioxide.

Special protective actions for fire-fighters
Fire fighters should wear a positive-pressure Self-Contained Breathing Apparatus (SCBA) and protective clothing (includes helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas where gases or fumes can accumulate. Do not use direct water stream. Eliminate ignition sources.

Further information
Hazchem code 2YE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear full protective clothing. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid walking through spilled
product as it may be slippery. Stop leak if safe to do so. Do NOT let product contaminate drains or waterways. If product does enter a waterway, advise
the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment.

Methods and materials for containment and cleaning up

Soak up using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. Collect material into suitably labelled dry
chemical- waste containers and dispose of promptly as hazardous waste.

SECTION 7: Handling and storage

Precautions for safe handling
Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated, fire-proof area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Ground and bond storage containers. Store away from incompatible materials including oxidizing agents, acids, reducing agents, bases, halogenated compounds, hexa-chloromelamine, potassium tert-butoxide, sulphur dichloride and ignition sources. Protect from direct sunlight and static charges.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 67-64-1
Acetone
AU/SWA (Australia): 1000 ppm; 2375 mg/m3 STEL inhalation; 500 ppm; 1185 mg/m3 TWA inhalation

CAS: 88-89-1
Picric acid
AU/SWA (Australia): 0.1 mg/m3 TWA inhalation

Appropriate engineering controls
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use a flame proof exhaust ventilation system.

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

Eye/face protection
Use with adequate ventilation. If determined by a risk assessment to be an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Skin protection
Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Color	Clear, yellow
Odor	Pungent, sweet odour
Melting point/freezing point	-95.3°C
Boiling point or initial boiling point and boiling range	56.2°C
Flammability	Flammable liquid
Lower and upper explosion limit/flammability limit	2.6-12.8%

Flash point	-20°C (closed cup)
Solubility	Water soluble
Vapor pressure	24 kPa (20°C)
Density and/or relative density	0.79g/cm3 (water = 1)

SECTION 10: Stability and reactivity

Reactivity
No information available.

Chemical stability
Stable under recommended conditions for use and storage.

Possibility of hazardous reactions
Polymerisation will not occur.

Conditions to avoid
Avoid excessive heat, direct sunlight, moisture, freezing, static discharges and high temperatures.

Incompatible materials
Oxidising agents, mineral acids, strong alkalis and Bromine.

Hazardous decomposition products
During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion including carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Eye Contact Irritating, risk of corneal clouding.
Skin Contact May cause irritation. Will have a degreasing action on the skin. Prolonged/repeated skin contact may cause skin dryness, cracking and chronic dermatitis.
Inhalation Can cause irritation. May cause headaches, drowsiness, dizziness, salivation, nausea, vomiting and coma. Irritating to mucous membranes and respiratory tract.
Ingestion Moderately toxic. May cause gastric irritation, gastro-intestinal complaints, headache, salivation, nausea, vomiting, dizziness, narcosis and coma.

Skin corrosion/irritation
Repeated exposure may cause skin dryness and cracking.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory or skin sensitization
No classification.

Germ cell mutagenicity
No classification.

Carcinogenicity
No evidence of carcinogenic properties.

Reproductive toxicity
No classification.

Specific target organ toxicity (STOT) - single exposure
The substance may cause effects on the central nervous system, liver, kidneys and gastrointestinal tract.

Specific target organ toxicity (STOT) - repeated exposure
Repeated or prolonged contact with skin may cause dermatitis.

Aspiration hazard
No classification

Additional information
Oral LD50 Rat: 5,800mg/kg
Inhalation LC50 Rat: > 20mg/L (4hr)
Dermal LD50 Rabbit: >7,400mg/kg

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:
mmo-esc 1800 ppm
mmo-sat 5 umol/plate
mma-sat 5 umol/plate
sln-dmg-orl 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) "Abdernalden's Handbuch der Biologischen Arbeitsmethoden." Vol. 4, Pg. 1289, 1935.
dog LDLo subcutaneous 60mg/kg (60 mg/kg) "Abdernalden'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
Readily biodegradable: 91% in 28 days.

Bioaccumulative potential
Not expected to bio-accumulate.

Mobility in soil
High mobility in soil.

Other adverse effects
Environmental fate (exposure) Do not contaminate drains and waterways.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of in accordance with local authority guidelines.

Packaging disposal
Dispose of in accordance with local authority guidelines.

Other disposal recommendations
Special precautions Nil.

SECTION 14: Transport information

UN Number	1090
Hazchem emergency action code (EAC)	2YE
UN Proper Shipping Name	Acetone
Transport hazard class(es)	3
Packing group	II

Special precautions for user
Incompatible with loads containing: Class 1, Class 2.1, if both the Class 3 and Class 2.1 dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are Nitro methane, Class 7.

SECTION 15: Regulatory information

Chemical Safety Assessment
• Poison Schedule: S5
• TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day week.
• STEL (Short Term Exposure Limit): The average airborne concentration over a 15-minute period, which should not be exceeded at any time during a normal eight-hour workday.

SECTION 16: Other information

Further information/disclaimer
This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used.

Preparation information
References
1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013)
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); Canprint: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).