



chem-supply

Safety Data Sheet

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Infosafe No™	1CHCE	Issue Date : October 2017	RE-ISSUED by CHEMSUPP
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Product Name : **METOL**

Classified as hazardous

1. Identification

GHS Product Identifier METOL

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 AustraliaTelephone/Fax Number
Tel: (08) 8440-2000
Fax: (08) 8440-2001

Recommended use of the chemical and restrictions on use Developing agent used in black and white photographic developers and for most continuous tone developer applications and laboratory reagent.

Other Names

Name

Product Code

METOL Photographic Grade

p-Methylaminophenol sulfate

(4-Methylamino)phenol sulfate salt

Bis(4-hydroxy-N-methylanilinium) sulphate

MT037

Other Information

EMERGENCY CONTACT NUMBER: +61 08 8440 2000

Business hours: 8:30am to 5:00pm, Monday to Friday.

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture
 Hazardous to the Aquatic Environment - Acute Hazard: Category 1
 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
 Acute Toxicity - Oral: Category 4
 Specific target Organ Toxicity - Repeated Exposure Category 2
 Sensitization - Skin: Category 1

Signal Word (s) WARNING

Hazard Statement (s)
 H302 Harmful if swallowed.
 H317 May cause an allergic skin reaction.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s) Health hazard, Exclamation mark, Environment



Precautionary statement – Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.

Precautionary statement – Response

P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P330 Rinse mouth.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.
 P314 Get medical advice/attention if you feel unwell.



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Precautionary statement – Disposal	P501 Dispose of contents/container according to local, state and federal regulations.
Other Information	Health effects of exposure to the substance have not been investigated adequately. The use of Metol in highly caustic solutions and the presence of other materials in darkrooms that have been implicated in dermatitis such as Cr(VI) salts may exacerbate some health impacts.

3. Composition/information on ingredients

Chemical Characterization	Solid				
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	4-Methylaminophenol sulphate	55-55-0	100 %		

4. First-aid measures

Inhalation	Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Do not use direct mouth-to-mouth. Seek medical advice if effects persist.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. Seek medical attention in severe cases, or if irritation develops.
Eye contact	If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion	Irritating or highly toxic fumes (or gases), including carbon dioxide and probably carbon monoxide. Oxides of sulfur and nitrogen may also be present.
Products	
Specific Methods	Small fire: Use dry chemical, CO ₂ , water spray or foam. Large fire: Use water spray, fog or foam. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
Specific hazards arising from the chemical	May burn but do not ignite readily. Runoff may pollute waterways. Fire may produce irritating, poisonous and/or corrosive fumes. Containers may explode when heated.
Hazchem Code	2Z
Decomposition Temp.	260 °C.
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.
Other Information	As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

6. Accidental release measures

Personal Precautions	Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

7. Handling and storage

Precautions for Safe Handling	Avoid ingestion and inhalation of dust. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated contact with skin. Minimize dust generation and accumulation. Keep containers tightly closed when not in use. Use with adequate ventilation.
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Conditions for safe storage, including any incompatibilities	Store in tightly closed, labelled containers, in a cool, dry, well-ventilated area away from incompatible substances. Absorbs oxygen from the air and will darken upon exposure. Protect from direct sunlight, air and moisture. Do not store in direct sunlight. Store separately from reactive or combustible materials.
Storage	Store away from sources of heat or ignition.
Temperatures	Store at room temperature (15 to 25 °C recommended).

8. Exposure controls/personal protection

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts when limits have not otherwise been established.
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.
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.
Eye 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.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
Body Protection	Clean clothing or protective clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White to off-white, or beige, fine crystalline powder or crystals. Discolours in air.
Odour	Odourless.
Decomposition Temperature	260 °C.
Melting Point	260 °C (decomposes)
Solubility in Water	Moderately soluble (4.7 g/100 ml at 15 °C).
Solubility in Organic Solvents	Soluble in alcohol. Insoluble in ether.
Specific Gravity	> 1.0
pH	3.5 - 5 (5% H ₂ O)
Evaporation Rate	Negligible (n-butyl acetate = 1).
Volatile Component	0 %vol @ 21 °C
Flash Point	256 °C (CC)
Flammability	Combustible.
Auto-Ignition Temperature	531 °C; 532 °C.
Explosion Properties	Finely dispersed dust in air in sufficient concentrations, and on exposure to an ignition source is a potential dust explosion hazard.
Molecular Weight	344.39

10. Stability and reactivity

Chemical Stability	Stable under normal temperatures, pressures and conditions of use and storage. Sensitive to air and light - may discolour on exposure.
Conditions to Avoid	Heat, flames, ignition sources, light, air, dust generation and incompatible materials.

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Incompatible Materials	Oxidizing agents, acids, acid anhydrides and acid chlorides.
Hazardous Decomposition Products	Toxic fumes, including nitrogen oxides and sulfur oxides, carbon dioxide and probably carbon monoxide.
Possibility of hazardous reactions	Reacts with acids, acid anhydrides, acid chlorides and oxidants.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhoea. May cause blood abnormalities. Effects from ingestion by humans are not well documented. May resemble phenol and aniline poisoning which can cause headache, shallow respiration, low blood pressure and methaemoglobin formation.
Inhalation	May be harmful by inhalation. Dusts may irritate the respiratory system. Symptoms may include, coughing and sore throat. Exposure to high air concentrations of substance may cause systemic toxic effects.
Skin	May cause mechanical irritation and irritation in aqueous solutions, resulting in redness and itching. May cause local dermatitis at site of contact, as well as some evidence of sensitization (an allergic skin reaction) dermatitis in which subsequent exposure triggers a chronic condition that is resistant to medication.
Eye	May cause abrasive irritation in contact with the eyes, resulting in redness, pain, itching and damage to eye tissue.
Skin Sensitisation	H317 May cause an allergic skin reaction.
Carcinogenicity	Not listed in the IARC Monographs.
Chronic Effects	Harmful: danger of serious damage to health by prolonged exposure if swallowed. Nervous system, liver, kidneys and bone marrow may be affected. The substance may have effects on the blood, resulting in lesions of blood cells. Weight loss, anaemia, weakness and irritability may occur. Prolonged or repeated ingestion of high and intermediate doses may produce brown urine, necrosis of the renal tubular epithelial cells, degeneration of haemoglobin in circulating erythrocytes, haemolytic anaemia, discoloured and enlarged spleens, and haemoglobinuric nephrosis, decreased activity, and death. Prolonged or repeated ingestion of low doses may produce minor kidney, spleen and red blood cell effects. Prolonged or repeated skin contact may cause skin irritation and skin sensitization dermatitis in some individuals.
Serious eye damage/irritation	Eye irritation (rabbit): moderate to strong irritation.
Other Information	HUMAN HEALTH TIER II ASSESSMENT FOR p-Methylaminophenol and its sulfate - https://www.nicnas.gov.au/chemical-information/imap-assessments/imap-group-assessment-report?assessment_id=892#cas-A_55-55-0 NICNAS.

12. Ecological information

Ecotoxicity	Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. This chemical has a high biological oxygen demand, and it is expected to cause significant oxygen depletion in aquatic systems. It has a high potential to affect aquatic organisms and secondary waste treatment microorganisms. It has a moderate potential to affect the germination and growth of some plants.
Persistence and degradability	Biological degradableness: ~ 30 % (test in closed bottle). Biologically not readily degradable. TOD: 1.49 g/g. Oxygen Demand Data: BOD5: 0.75 g/g; 0.55 g/g acclimated sludge.
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Acute Toxicity - Fish	Pimephales promelas LC50: 0.25 mg/l /96 h.
Sewage Treatment	This product is very toxic to aquatic organisms however, the direct instantaneous discharge to a receiving body of water of an amount of this chemical which will rapidly reduce, by dilution, a final concentration of 0.001 mg/L or less is not expected to cause an adverse environmental effect. After dilution with a very large amount of water, followed by secondary waste treatment, this chemical is not expected to have any adverse environmental impact. Secondary Waste Treatment Compatibility: 5 hour IC50: 20 mg/L.



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13. Disposal considerations

Disposal Considerations Dispose of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Class 9 Miscellaneous dangerous goods shall not be loaded in a vehicle with: - Class 1 Explosives - Class 5. 1 Oxidizing agents (when Class 9 substance capable of igniting and burning - Class 5. 2 Organic peroxides (when Cl. 9 capable of igniting/burnin SPECIAL PROVISION AU01 States: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail;
(a) packagings;
(b) IBCs; or
(c) any other receptacle not exceeding 500 kg(L).

U.N. Number 3077

Hazchem Code 2Z

15. Regulatory information

Poisons Schedule Not Scheduled

16. Other Information

Literature References 'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & Structural Formula Empirical Formula: C₁₄H₂₀N₂O₆S.
Structural Formula: (CH₃NHC₆H₄OH)₂.H₂SO₄.

Other Information R22 Harmful if swallowed.
R43 May cause sensitization by skin contact.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S36/37 Wear suitable protective clothing and gloves.
S46 If swallowed, seek medical advice immediately and show this container or label.
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/safety data sheet.
...End Of MSDS...

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