AUSTRALIAN CHEMICAL REAGENTS

SAFETY DATA SHEET

Date Prepared: March 2018
Version No: 4

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	Malolactic Acid Solvent
Product Code:	1333
Other Names:	Nil
Uses:	Analytical Reagent
Supplier:	Australian Chemical Reagents 38-50 Bedford Street Gillman SA 5013
Contacts:	Telephone: 61 08 84402000 Fax: 61 08 84402001 Emergency Phone: 61 08 84402000 Mon – Fri 8:30am – 5:00pm

2. HAZARDS INFORMATION

GHS Classification

Eye Damage/Irritation: Category 1
Flammable Liquids: Category 3
Acute Toxicity - Oral: Category 4
Specific Target Organ Toxicity - Single Exposure Category 3

Signal Word(s) DANGER

Pictogram(s)

Hazard Statement(s)

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statement(s)

Preventative

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face.

Response	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. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P332+P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P370+P378 In case of fire: Use foam, dry chemical, CO2 or water spray for extinction.
Storage	P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.
Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients :

Chemical Entity	CAS No	Proportion
Bromocresol green	[76-60-8]	0.2%
Formic acid	[64-18-6]	10%
Butanol	[71-36-3]	to 100%

4. FIRST AID MEASURES

Safety showers and eye wash facilities should be provided.

Swallowed :

If conscious wash out mouth with water. Seek medical advice. Show this SDS to medical practitioner.

Eye :

Immediately hold eyelids open and flood with water for at least 15 minutes. Obtain medical aid. Show this SDS to medical practitioner.

Skin :

Remove contaminated clothing. Immediately wash skin thoroughly with water and mild soap. Seek medical advice if irritation persists. Show this SDS to medical practitioner. Launder clothing before reuse.

Inhaled :

Remove from contaminated air. Maintain breathing with artificial respiration if necessary. Seek medical assistance. Show this SDS to a doctor.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Hazards From Combustion Products:

Flash back possible over considerable distance. Decomposition products include oxides of carbon.

Precautions For Fire Fighters and Special Protective Equipment:

Fire fighters and others who may be exposed to combustion products during fire should wear full protective clothing including positive pressure self-contained breathing apparatus (SCBA). Wear SCBA with full face-piece, operated in positive pressure mode when fighting fires.

Hazchem Code: : •3WE

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:
Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Prevent from entering waterways. Restrict access to area. Remove chemicals that can react with the spilled material.

Methods and materials for containment and clean up:
Use inert material such as sand or earth to contain spill or leak. Absorb spills with chemical absorber or vermiculite and dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.
Conditions for Safe Storage:
Flammable liquid storage required. Store sealed in original container in a cool well ventilated situation away from foods and other chemicals. Do not store in direct sunlight. . Refer to AS 1940 - *The storage and handling of flammable and combustible liquids* for storage procedures. Observe good hygiene and housekeeping practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:
Safe Work Australia – n-Butanol 150 mg/m3 (TWA & Peak limitation)
Formic acid 9 mg/m3 (TWA)
Biological Limit Values: No data available.

Engineering Controls:
Not required with normal use. If mists are likely to be generated maintain atmospheric concentrations well below exposure standards with extraction ventilation.

Personal Protective Equipment (PPE):
The use of nitrile or neoprene gloves complying with AS 2161 and the use of faceshield, chemical goggles or safety glasses with side shield protection complying with AS/NZS 1337 is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :	Clear liquid
Odour:	Nil
pH:	Not available
Boiling Point (^{0}C) :	117.7
Freezing/melting Point:	-90
Vapour Pressure (mm of Hg @ 25^{0}C) :	4
Vapour Density:	2.56
Specific Gravity :	0.81
Flash Point (^{0}C) :	35 closed cup
Flammability Limits (%) :	1.4% lower 11.2% upper
Solubility in Water (g/L) :	Partly Soluble

10. STABILITY AND REACTIVITY

Chemical stability:
Stable.
Conditions to avoid:
Heat flames and sparks
Incompatible materials:
Oxidizing agents, Alkali metals, bases, strong acids, halogens
Hazardous decomposition products:
Refer to section 5 (Fire Fighting Measures).
Hazardous reactions:
Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Effects:
Swallowed : May be harmful if swallowed. For butanol oral rat LD50 790 mg/kg.
Eye : May be irritating to eye tissue.
Skin : May be irritating to skin tissue.
Inhaled : May be harmful if mists are inhaled.

Chronic Effects: No data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity:
No data available.
Persistence and degradability:
No data available.
Mobility:
No data available.

13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state and local environmental regulations.

14. TRANSPORT INFORMATION

UN Number: 1993
UN Proper Shipping Name: : FLAMMABLE LIQUID N.O.S (Contains butanol 90%)
Class and subsidiary risk(s): : 3
Packing Group: **:** II
Hazchem Code: : •3WE
Special precautions for user : Nil

15. REGULATORY INFORMATION

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP):

16. OTHER INFORMATION

Disclaimer:
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END of SDS