SDS Formaldehyde

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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**

Address: 39 Woodside Ave, Northcote, Auckland , New Zealand

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Product	Formaldehyde, formaldehyde solution			**Code**	24201, 24208, 1007, 2106, 5128	
CAS#	**HSNO#**	**UN #**	**DG Class/es**	**Packing group #**	**Tracking?**	**Handlers Certificate?**
50-00-0 67-56-1	HSR001162	1198	3 (8)	III	6.1B	No

Recommended use: Laboratory Investigations

2. Hazards identification

New Zealand hazards classification: 3.1C, 6.1B (All), 6.1B (I), 6.1C (O), 6.1C (D), 6.5B, 6.6B, 6.7A, 6.9B (All), 6.9B (O), 6.9B (I), 8.2C, 8.3A, 9.1D (All), 9.1D (F), 9.1D (C), 9.2A, 9.3B.

2.1 GHS Classification

Flammable Liquids (Category D), H227

Acute toxicity, Oral (Category C), H301

Acute toxicity, Inhalation (Category C), H331

Acute toxicity, Dermal (Category C), H311

Skin corrosion (Category B), H314

Serious eye damage (Category A), H318

Skin sensitisation (Category B), H317

Carcinogenicity (Category B), H351

Specific Target Organ Toxicity (Category A), H370

Aquatic toxicity (Acute or Chronic) (Category D), H402

Pictogram 

Signal word **Danger**

Hazard statement(s)

H227 Combustible liquid.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H351 Suspected of causing cancer.

H370 Causes damage to organs.

H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P361 Remove/take off immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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
Substance/mixture: mixture
3.2 Mixtures
Synonyms: Formalin
Formula: CH_2O
Molecular weight: 30.03 g/mol
Hazardous components

Component	Classification	Concentration
Formaldehyde		
CAS No. 50-00-0	3.1 D; 6.1 C; 8.2 B; 8.3 A; 6.5 B; 6.7 B; 9.1 D; H227, H301, H331, H311, H314, H318, H317, H351, H402	>= 30 - < 50 %
Methanol		
CAS No. 67-56-1	3.1 B; 6.1 C; 6.9 A; H225, H301, H331, H311, H370	>= 10 - < 20 %

4. First aid measures
4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. Firefighting measures
5.1 Extinguishing media
Suitable extinguishing media
Dry powder, dry sand.
Unsuitable extinguishing media
Do NOT use water jet.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
Use water spray to cool unopened containers.

6. Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal.

7. Handling and storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure controls/personal protection
8.1 Control parameters
Components with workplace control parameters

Component	**CAS No.**	**Value**	**Control parameters**	**Basis**
Formaldehyde	50-00-0	WES-Ceiling	1 ppm	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Carcinogen – known or presumed human carcinogen. Sensitiser.		
		WES-TWA	0.5 ppm	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Carcinogen – known or presumed human carcinogen. 8-hour shift. Sensitiser.		

		WES-TWA	0.33 ppm	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Carcinogen – known or presumed human carcinogen. 12-hour shift. Sensitiser.		
Methanol	67-56-1	WES-TWA	200 ppm 262 mg/m^3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Exposure can also be estimated by biological monitoring. Skin absorption.		
		WES-STEL	250 ppm 328 mg/m^3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Exposure can also be estimated by biological monitoring. Skin absorption.		

Biological occupational exposure limits

Component	**CAS No.**	**Parameters**	**Control parameters**	**Biological specimen**	**Basis**
Methanol	67-56-1	Methyl alcohol	15 mg/l	Urine	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment
Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and chemical properties
9.1 Information on basic physical and chemical properties
a) Appearance
Form: liquid, clear
Colour: colourless
b) Odour

Pungent
c) Initial boiling point and boiling range
100 °C
d) Flash point
56 °C - closed cup
e) Evaporation rate
1
f) Upper/lower flammability or explosive limits
Upper explosion limit: 70 %(V)
Lower explosion limit: 7 %(V)
g) Vapour pressure
53 hPa at 39 °C
h) Vapour density
1.04 - (Air = 1.0)
i) Relative density
1.09 g/cm^3 at 25 °C
j) Water solubility
Completely soluble
k) Partition coefficient: n-octanol/water
log Pow: 0.35

10. Stability and reactivity
10.1 Chemical stability
Stable under recommended storage conditions.
Contains the following stabiliser(s):
Methanol (>=10 - <15 %)
10.2 Conditions to avoid
Heat, flames and sparks.
10.3 Incompatible materials
Strong oxidizing agents, aniline, phenol, isocyanates, acid anhydrides, strong acids, strong bases, amines, peroxides, acid chlorides, alkali metals, reducing agents.
10.4 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions:
Carbon oxides.

11. Toxicological information
Respiratory or skin sensitisation
May cause sensitisation by skin contact.
Carcinogenicity
IARC: 1 - Group 1: Carcinogenic to humans
Additional Information
Contains methanol. May be fatal or cause blindness if swallowed. Cannot be made non-poisonous.

12. Ecological information
Toxic to aquatic life.

13. Disposal considerations
13.1 Waste treatment methods
Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	**UN Number**	1198	1198	1198
14.2	**UN Proper Shipping name**	FORMALDEHYDE SOLUTION, FLAMMABLE	FORMALDEHYDE SOLUTION, FLAMMABLE	Formaldehyde solution, flammable
14.3	**Transport Hazard Class**	3 (8)	3 (8)	3 (8)
14.4	**Packaging group**	III	III	III
14.5	**Environmental Hazards**	No	No	No
14.6	**Special precautions for user**	None		

15. Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information
HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006
Tracking Required: 6.1B
Approved Handler Cert.: not required

16. Disclaimer
The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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