## 1. Product and Company Identification

<table>
<thead>
<tr>
<th><strong>Product Name:</strong></th>
<th>FIL FORMALIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proper Shipping Name:</strong></td>
<td>FORMALDEHYDE Solution &gt; 25% with &lt;10% methanol</td>
</tr>
<tr>
<td><strong>Synonyms:</strong></td>
<td>Formalin, Formaldehyde solution</td>
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<tr>
<td><strong>Recommended Use:</strong></td>
<td>Footrot treatment, preservative, biocide.</td>
</tr>
<tr>
<td><strong>Molecular Formula:</strong></td>
<td>Mixture of CH2O and CH3OH</td>
</tr>
<tr>
<td><strong>Manufacturer:</strong></td>
<td>FIL is a wholly owned subsidiary of GEA Farm Technologies New Zealand Ltd</td>
</tr>
<tr>
<td><strong>Address:</strong></td>
<td>72 Portside Drive, Mt Maunganui</td>
</tr>
<tr>
<td><strong>Telephone Number:</strong></td>
<td>07 575 2162</td>
</tr>
<tr>
<td><strong>Fax Number:</strong></td>
<td>07 575 2161</td>
</tr>
<tr>
<td><strong>Emergency phone No: 24hr</strong></td>
<td>0508 434 569</td>
</tr>
<tr>
<td><strong>Website:</strong></td>
<td><a href="http://www.fil.co.nz">www.fil.co.nz</a></td>
</tr>
<tr>
<td><strong>Email:</strong></td>
<td><a href="mailto:info@fil.co.nz">info@fil.co.nz</a></td>
</tr>
</tbody>
</table>

## 2. Hazards Identification

| **Dangerous Goods:** | Dangerous Goods Class 8, 6, packing group III |

### Hazardous Substance (HSNO):

![Danger symbol]

### HSN0 Classification and Hazard Statements:

**3.1D (Low Hazard Flammable Liquid)**
- H227 Combustible liquid.

**6.1B (Acutely Toxic Substance)**
- H300 Fatal if swallowed.
- H310 Fatal in contact with skin.
- H330 Fatal if inhaled.

**6.5B (Contact Sensitiser)**
- H317 May cause an allergic skin reaction.

**6.6B (Suspected Mutagen)**
- H341 Suspected of causing genetic defects.

**6.7A (Known Carcinogen)**
- H350 May cause cancer.

**6.9B (Suspected Toxic to Target Organs or Systems)**
- H371 May cause damage to organs.
- H373 May cause damage to organs through prolonged or repeated exposure.
8.2C (Corrosive to Dermal Tissue)
H314 Causes severe skin burns and eye damage.

8.3A (Corrosive to Ocular Tissue)
H318 Causes serious eye damage.

9.1D (Ecotoxic in the Aquatic Environment)
H401 Toxic to aquatic life.

9.2A (Ecotoxic in the Soil Environment)
H421 Very toxic to the soil environment.

9.3B (Ecotoxic to Terrestrial Vertebrates)
H432 Toxic to terrestrial vertebrates.

Prevention statements:

P102 Keep out of reach of children.
P103 Read label before use.
P104 Read safety data sheet before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from flames and hot surfaces. No smoking.
P260 Do not breathe vapours.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash hands 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 and eye/face protection.
P281 Use personal protective equipment as required.
P284 Wear respiratory protection. (50 ppm) Chemical cartridge respirator with organic vapor cartridge with full facepiece. Or see section 8 for more options.

Response statements:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. And P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P350 IF ON SKIN: Gently 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.
P304+P340 IF INHALED: Remove 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.
P308+P313 IF exposed or concerned: Get medical advice.
P309+P311 IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P320 Dilute with milk or water in alert patients as a first aid measure may reduce corrosive effects at the scene
P321 If skin comes into contact, treat as any burn to prevent allergic contact dermatitis. Exposure to formaldehyde or formaldehyde-containing products should be minimized.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P361 Remove immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage statements:
P403+P233 Store in a well-ventilated place. Keep container tightly closed and keep cool.
P405 Store locked up.

3. Composition/Information on Ingredients

Appearance: Clear liquid, pungent odour.

<table>
<thead>
<tr>
<th>CAS No</th>
<th></th>
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<tbody>
<tr>
<td>50-00-0</td>
<td>Formaldehyde (&gt;25%)</td>
<td></td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol (&lt;10%)</td>
<td></td>
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</tbody>
</table>

4. First Aid Measures

Ingestion: Call a doctor. Wash out mouth and give a glass or two of water or milk.
Do not induce vomiting.

Eye Contact: Wash eye with gently running water for at least 20 minutes. Do not rub the eye. Cover with sterile dressing. Seek medical attention immediately.

Skin Contact: Quickly remove contaminated clothing. Wash skin with large quantities of water. Bath affected areas in warm saline solution.

Inhalation: Remove the casualty from further contamination.

Notes to Physician: Treat symptomatically.

5. Fire-fighting Measures

Specific Hazards: May flash or add to fire. Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of decomposition.

Suitable Extinguishing Media: Water fog (or if unavailable fine water spray), foam, dry chemical powder, carbon dioxide.

6. Accidental Release Measures

Spill Cleanup Methods: Follow procedures in FIL Emergency response plan: Chemical Spill. Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment (Section 8). Isolate hazard area. Contain and absorb with dry sand or other inert material. Recover in HDPE container. Avoid contamination of waterways.
7. Handling and Storage

Handling: Keep away from sources of ignition. Avoid spilling, skin and eye contact. Wear protective clothing. Ventilate well. Avoid breathing vapours. Use approved respirator if air contamination is above acceptable level. After use wash hands before eating, drinking or smoking. Do not handle broken packages unless wearing appropriate personal protective equipment.

Storage: Don’t store with D.G. classes 1, 5, 7, food or food containers. Store in original container, tightly closed, away from foodstuffs and out of reach of children.

8. Exposure Control/Personal Protection

Exposure Standards: TWA 0.016ppm, STEL 2ppm - product is mainly used outside.

Engineering Controls: Use with adequate ventilation - avoid creation and inhalation of aerosols.

Personal Protection: Wear full protective clothing. Wear trousers outside boots. PVC gloves & apron. Suitable respiratory and eye protection should also be worn. Safety glasses.

Suitable respiratory protection: Respirator selection: (50 ppm) Chemical cartridge respirator with organic vapor cartridge with full facepiece; Gas mask with organic vapor canister (chin-style or front- or back-mounted canister); supplied air respirator with full facepiece, helmet, or hood; self-contained breathing apparatus with full facepiece; (100 ppm): Type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode; (escape): Gas mask with organic vapor canister (chin-style or front- or back-mounted canister); self-contained breathing apparatus.

9. Physical and Chemical Properties

Appearance and Odour: Clear liquid with a pungent irritating odour.
Solubility in Water (g/l): Fully miscible
Specific Gravity: 1.09
Boiling Point/Melting Point (C): 101
Vapour Pressure: 55 mm Hg at 37 C
Flashpoint (C): 70
Flammability Limits (%): Not Available
pH Value: 3.5

10. Stability and Reactivity

Stability: Stable. Strong reducing agent, especially in alkaline solution. Substances to be avoided include strong bases, strong acids, strong oxidising agents, aniline, phenol, isocyanates, anhydrides. Combustible. Light and air sensitive. Polymerizes spontaneously.

11. Toxicological Information

General: Corrosive and damaging to tissue. Carcinogen, sensitizer. Dangerous if swallowed, inhaled, gets in eyes or absorbed through the skin. May cause damage to kidneys, may cause allergic reactions.
Inhalation Human - TCLo 17 mg/m³/30m

Inhalation Rat LC₅₀ 203 mg/m³

Formaldehyde LC₅₀ Rainbow trout 118 ul/l/96 hr
Flow-through bioassay.

Contain and recover spills in HDPE containers

Oral (rat) LD₅₀ 100mg/kg

Secure from ingestion by animals

Triple rinse containers when empty, add rinsings to use solutions.

After cleaning, all existing labels should be removed.

Keep records of date, time, quantity & location of discharge, name & address of user.

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After cleaning, all existing labels should be removed.

Keep records of date, time, quantity & location of discharge, name & address of user.

12. Ecotoxicity Information

9.1D Harmful to aquatic life
Formaldehyde LC₅₀ Rainbow trout 118 ul/l/96 hr
Avoid contamination of waterways
Flow-through bioassay.

9.2A Ecotoxic in the Soil Environment
Contain and recover spills in HDPE containers

9.3B Harmful to Terrestrial Vertebrates
Oral (rat) LD₅₀ 100mg/kg
Secure from ingestion by animals

13. Disposal Considerations

Container Disposal:
Dispose of empty containers safely in accordance with local regulations.

Triple rinse containers when empty, add rinsings to use solutions.

Avoid contamination of any water supply with chemical or empty container.

After cleaning, all existing labels should be removed.

Product Disposal:
Dispose of container and unused contents in accordance with and local regulations.

Keep records of date, time, quantity & location of discharge, name & address of user.

14. Transport Information

UN No: 2209

Dangerous Goods Class: 8 Corrosive

Hazchem Code: 2Z

Packing Group: III

Proper Shipping Name: Formaldehyde Solution >25% with <10% Methanol

Segregation: Don’t store with D.G. classes 1, 5, 7, food or food containers

Limited quantities 1L

Schedule 1 Quantity: 250 litres

15. NZ Regulatory Information

ERMA Approval Code: HSR001518

Substance Name: Formaldehyde, >25% aqueous solution, with < 10% methanol

HSNO Classifications: 3.1D (Low Hazard Flammable Liquid)
6.1B (Acute/Toxic Substance)
6.5B (Contact Sensitiser)
6.6B (Suspected Mutagen)
6.7A  (Known Carcinogen)
6.9B  (Suspected Toxic to Target Organs or Systems)
8.2C  (Corrosive to Dermal Tissue)
8.3A  (Corrosive to Ocular Tissue)
9.1D  (Ecotoxic in the Aquatic Environment)
9.2A  (Ecotoxic in the Soil Environment)
9.3B  (Ecotoxic to Terrestrial Vertebrates)

HSNO Controls:

**Trigger quantities for this substance by itself in a Place:**

- Approved Handler Test Certificate: Any Quantity
- Hazardous Substance Location: Not Required
- Location Test Certificate: Not Required
- Hazardous Atmosphere Zone: Not Required
- Emergency Plan: 100 litres
- Tracking: Any quantity
- Warning Sign: 100 litres
- Record of application or discharge: Any quantity

16. Other Information

**Issue Date:** 12-Mar-12
**Review Date:** 12-Mar-17

**Definitions:**

- **DG** Dangerous Good
- **LC50** Lethal concentration 50 % kill
- **LD50** Lethal dose 50 % kill
- **LDLO** lowest published lethal dose
- **PEL** Permissible exposure limit
- **STEL** Short term exposure limit
- **TCLo** Lowest published toxic concentration
- **TLM 24** 24 Hour median threshold limit
- **TWA** Time weighted average: The 8-hour time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure