POCD

SCIENTIFIC

MATERIAL SAFETY DATA SHEET

Section 1: IDENTIFICATION

FORMALDEHYDE, 37%

Synonyms – Formalin, Formaldehyde solution.

Product Code – FORM2.5LT

Recommended use – Laboratory reagent.

Point of Care Diagnostics t/a POCD Scientific
ABN: 93 067 939 824
Unit 14/76 Reserve Rd
Artarmon NSW 2064
☎ 1800 640 075 | ☏ 02 9437 1399

Australian Emergency Services: 000 (24 hours) Australian
Poisons Information Centre: 131 126 (24 hours)

Section 2: HAZARDS IDENTIFICATION

Classified as a Hazardous substance according to criteria of NOHSC.
Classified as a Dangerous good according to the ADG Code for the Transport of Dangerous Goods by Road and Rail.

R Phrases

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.
R34 - Causes burns.
R40 – Possible risk of irreversible effects.
R41 – Risk of serious damage to eyes.
R43 - May cause sensitization by skin contact.

S Phrases

S1/2 – Keep locked up and out of reach of children.
S7 – Keep container tightly closed.
S9 – Keep container in a well-ventilated place.
S16 – Keep away from sources of ignition.
S23 - Do not breathe vapour.
S24/25 – Avoid contact with skin and eyes.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.
S38 - If insufficient ventilation, wear suitable respiratory equipment.
S45 - In case of accident or if you feel unwell, seek medical advice immediately.
S51 – Use only in well ventilated areas.

Section 3: COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Remainder</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>37%</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>7%</td>
</tr>
</tbody>
</table>

Date of issue: August 2011
Section 4: FIRST AID MEASURES

**Eye contact**
Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention immediately.

**Skin contact**
Remove contaminated clothing and wash affected area with soap and water thoroughly. Seek medical attention.

**Inhalation**
Remove patient to fresh air. If breathing stops, apply artificial respiration and seek medical attention immediately.

**Ingestion**
DO NOT induce vomiting. Wash mouth out with copious amounts of water. Seek medical attention immediately.

**First aid facilities**
Eye wash station, safety shower and First Aid kit.

**Advice to Doctor**
Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

**Suitable extinguishing media**
Carbon Dioxide, Dry chemical, foam or water spray

**Hazards for combustion products**
Vapour may form explosive mixtures with air and toxic gases may evolve. Vapour may travel to source of ignition and flash back.

**Special protective precautions and equipment for fire fighters**
Wear SCBA (Self-Contained Breathing Apparatus) and full protective equipment. Use water spray to cool fire-exposed surfaces and to protect personnel.

**Hazchem code**
2X

Section 6: ACCIDENTAL RELEASE MEASURES

**Emergency procedures**
Wear appropriate protective equipment and ensure adequate ventilation. Remove all sources of ignition and stop leak if safe to do so. Evacuate all unnecessary personnel. Do not contaminate drains and waterways.

**Clean up methods**
Absorb with vermiculite or similar and place into suitably labelled containers for later disposal.

Section 7: HANDLING AND STORAGE

**Precautions for safe handling**
Use only in a well ventilated area and use appropriate protective equipment to avoid inhalation of vapour and mists. Do not use near ignition sources and avoid sparks. Follow good personal hygiene practices.

**Conditions of safe storage**
Store in a cool, dry well-ventilated area away from heat, sources of ignition, oxidisers and out of direct sunlight. Keep containers tightly closed when not in use and protected against physical damage.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**National exposure standards**
Formaldehyde: [TWA] 1ppm, 1.2mg/m³
[TWEL] 2ppm, 2.5mg/m³
Methanol: [TWA] 200ppm, 262 mg/m³
[TWEL] 250ppm, 328 mg/m³

**Biological Limit Values**
Not available.

**Engineering Controls**
Ensure adequate ventilation is provided to keep concentrations below standards.

**Personal Protective Equipment**
Safety glasses or chemical goggles, gloves and protective clothing.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
Clear, colourless liquid

**Odour**
Pungent odour

**pH**
Acidic

**Vapour pressure**
1.3mmHg @ 20°C

**Vapour density**
1.04

**Boiling point**
96°C
Material Safety Data Sheet

Formaldehyde, 37%

Melting point: Not available
Solubility: Water soluble
Specific gravity: 1.08
Information for flammable materials: Flash point: 85°C (closed cup)
Upper and lower flammable limits in air: 7-73% (formaldehyde)

Section 10: STABILITY AND REACTIVITY

Chemical stability: Stable under recommended conditions for use and storage. May become cloudy on standing when cold (<20°C).
Conditions to avoid: Heat, direct sunlight and ignition sources. Storage at low temperatures.
Incompatible materials: Oxidisers, strong acids and alkalis, Ammonia, phenols, and salts of Copper, Iron and Silver.
Hazardous decomposition products: Toxic gases may evolve.
Hazardous reactions: Reacts violently with Magnesium Carbonate, acids, strong oxidisers and Hydrogen Peroxide. Corrosive to carbon steel, copper and its alloys.

Section 11: TOXICOLOGICAL INFORMATION

HEALTH EFFECTS
Acute:  
Eye contact: Exposure may result in burns to the eyes, pain, swelling, lacrimation, conjunctivitis and if duration of exposure is long enough, blindness will occur.
Skin contact: Will cause burns to the skin, redness, blistering, localized pain and dermatitis. May cause sensitisation.
Inhalation: Irritation to the nose, throat and respiratory system may occur resulting in dizziness, headache, in co-ordination, chest pains, coughing, respiratory paralysis and or failure.
Ingestion: Can result in burns to the mouth, mucous membranes, throat, oesophagus and stomach. Can cause nausea, vomiting, diarrhoea and abdominal pain. If sufficient quantities are ingested death may occur.

TOXICITY DATA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD₅₀ (mg/kg)</th>
<th>RTECS Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>LD₅₀/oral/rat: 800mg/kg</td>
<td>RTECS Code</td>
</tr>
<tr>
<td></td>
<td>LC₅₀/inhalation/rat: 578mg/m³/4hr</td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>LD₅₀/oral/rat: 8000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LC₅₀/inhalation/rat: 128.2 mg/l/4 h</td>
<td></td>
</tr>
</tbody>
</table>

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects on the environment.
Persistence and degradability: Readily biodegradable.
Mobility: Mobile in soil.
Environmental fate (exposure): Do not contaminate drains and waterways.
Bioaccumulative potential: Not expected to bio-accumulate.

Section 13: DISPOSAL CONSIDERATIONS

Disposal methods and containers: Dispose of in accordance with local authority guidelines.
Special precautions: Avoid exposure.
Section 14: TRANSPORT INFORMATION

Classified as dangerous goods by the criteria of the Australian Dangerous Goods Code.

<table>
<thead>
<tr>
<th>UN Number</th>
<th>2209</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Proper shipping name</td>
<td>Formaldehyde solution</td>
</tr>
<tr>
<td>Class and subsidiary risk</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Special precautions</td>
<td>Class 8 - Corrosive Substances are incompatible in a placard load with any of the following: - Class 1, Explosives, - Class 4.3, Dangerous When Wet Substances, - Class 5.1, Oxidising Agents &amp; Class 5.2 - Organic Peroxides, - Class 6, Toxic Substances (where the Toxic substances are cyanides and the corrosives are acids), - Class 7, Radioactive Substances, - Class 8, Corrosive Substances (concentrated strong acid is to be segregated from strong alkali), and are incompatible with food and food packaging in any quantity.</td>
</tr>
<tr>
<td>Hazchem code</td>
<td>2X</td>
</tr>
</tbody>
</table>

Section 15: REGULATORY INFORMATION

- TWA (Time-Weighted Average) - airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.
- 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

Release Information
Date of preparation 1 September 2011
Issue Number 1

References

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