

MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material Name: Carnoy's fixative.
Catalogue Number: ACFM-500.
Other Names: Carnoy's Fluid.
Recommended Use: A tissue fixative used in Hospital and Pathology laboratories.

Supplier Name: ProSciTech
Street Address: 1/11 Carlton Street, Kirwan, Qld. 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)

SECTION 2 - HAZARDS IDENTIFICATION

Hazard Classification:
 Hazardous according to criteria of Hazardous Substances Information System [HSIS Worksafe Australia].

Hazardous and/or Dangerous Nature:
 HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Risk Phrases:
 R10 Flammable.
 R11 Highly flammable.
 R22 Harmful if swallowed.
 R35 Causes severe burns.
 R38 Irritating to skin.
 R40 Limited evidence of a carcinogenic effect.
 R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

Safety Phrases:
 S1/2 Keep locked up and out of reach of children.
 S7 Keep container tightly closed.
 S16 Keep away from sources of ignition - No smoking.
 S23 Do not breathe fumes.
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37 Wear suitable protective clothing and gloves.
 S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Refer to Section 15 for Poisons Schedule.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Pure Substance (Proportion 100%):

Chemical Identity: Carnoy's fixative.
Common Name(s): Carnoy's Fluid.
CAS Number): Mixture – see below.

Mixture Substance:

<i>Ingredients</i>	<i>Cas Number(s)</i>	<i>Proportion (%)</i>
Ethyl alcohol (Ethanol)	64-17-5	~ 60
Trichloromethane (Chloroform)	67-6-3	~ 30
Acetic acid ~10% (Acetic Acid)	64-19-7	~ 10

SECTION 4 - FIRST AID MEASURES

Ingestion: If swallowed, Do Not induce vomiting. Seek urgent medical assistance.
Inhalation: Remove victim to fresh air. Apply resuscitation if victim is not breathing - DO NOT USE DIRECT MOUTH - TO - MOUTH METHOD if victim ingested or inhaled substance; use alternative respiratory method or proper respiratory device - Administer oxygen if breathing is difficult.
Eye Contact: If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. Immediately transport to hospital or doctor.
Skin Contact: If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with water and soap if available.
First Aid Facilities: Eyebath/eyewash, Safety shower & general washroom facilities.

Medical Attention & Special Treatment:

Treat Symptomatically.

Additional Information:

Not available.

SECTION 5 - FIRE FIGHTING MEASURES**Suitable Extinguishing Media:**

Use dry chemical, carbon dioxide, foam or water spray.

Hazards from Combustion Products:

Vapours from this product may travel or be moved by air currents and be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge or other ignition sources at locations distant from the point of handling.

Precautions for Fire Fighters:

Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. If possible to do so safely, shut off fuel to fire. Use water spray to spray to cool fire-exposed surfaces and to protect personnel. Avoid spreading burning liquid with water used for cooling fire exposed containers when using water spray; boil-over may occur when the product temperature reaches the boiling point of water.

Hazchem Code: 3WE

SECTION 6 - ACCIDENTAL RELEASE MEASURES**Emergency Procedures:**

Keep unnecessary people away; Isolate hazard area and deny entry. Stay upwind; Keep out of low areas. Isolate for 800 m in all directions if tank, rail car or tanker truck is involved in fire.

Containment & Clean up:

Shut off ignition sources, no flares, smoking or flames in hazard area. Stop leak if you can do it without risk.

Water spray may reduce vapour; but it may not prevent ignition in closed spaces.

SMALL SPILLS: Take up with sand, dirt or vermiculite. DO NOT use sawdust. Use non-sparking tools. Place into labelled drum(s) for later disposal.

LARGE SPILLS: Notify Emergency Services (Police or Fire Brigade). Tell them location, nature and any information that would be helpful. Contain spill. Remove all ignition sources and safely stop flow of spill. Bund area. Trained personnel should wear Personal Protective equipment as highlighted in this MSDS. Blanket the spill with foam or use water fog to disperse vapour clouds. Consult an expert regarding disposal of this product.

SECTION 7 - HANDLING & STORAGE**Precautions for Safe Handling:**

Wear appropriate protective equipment – refer to Section 8. Use good work hygiene – wash after handling. Do not eat/smoke/drink around substance. Use only in a well-ventilated area.

Precautions for Safe Storage:

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition, strong alkalis, acids, combustibles and oxidizing agents. All equipment must be earthed. Store in original packages as approved by manufacturer. Check all fittings, valves, reticulation (piping) and any ancillary equipment for leaks. A supplied air respirator or a Self-Contained Breathing Apparatus (SCBA) for emergencies should be available and checked regularly. For further information please refer to the Engineering Controls of this MSDS.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards: Ethanol, Cas 64-17-5:
(Worksafe Australia)
TWA 1,000 ppm; TWA 1,880 mg/m³

Chloroform, Cas 67-66-3:
(Worksafe Australia)
TWA 10 ppm; TWA 49 mg/m³

Acetic acid, Cas 64-19-7:
(Worksafe Australia)
TWA 10 ppm; TWA 25 mg/m³
STEL 15 ppm; STEL 37 mg/m³

Biological Limit Values: No biological limits.

Engineering Controls:

Highly flammable and toxic liquid. Single significant exposure may cause death. Maintain adequate ventilation

at all times. Prevent accumulation of gas in hollows or sumps. Eliminate any sources of ignition. DO NOT enter room unless monitored by another person (i.e. buddy-buddy system). Sampling of the atmosphere if possible should be conducted automatically, for example, by use of sensors, instead of human operator and any leaks discovered should then be directed digitally to a command centre where the event can be acted upon, with all appropriate procedures being implemented and including any protective equipment as outlined in this MSDS.

Personal Protective Equipment:

CLOTHING: PVC or rubber apron.

GLOVES: PVC or rubber.

EYES: Chemical goggles or face shield to protect eyes.

RESPIRATORY PROTECTION: Avoid breathing of vapours/gases. Select and use respirators in accordance with AS/NZS 1715/1716. When gases exceed the exposure standards then the use of a half-face respirator with organic vapour cartridge is recommended. For high concentration use an atmosphere-supplied, positive pressure demand self-contained or airline breathing apparatus, complying with the requirements of AS/NZS 1715 is recommended. Filter capacity and respirator type depends on exposure levels and type of contaminant. If entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Clear liquid.
Odour:	Not available.
pH:	Not available.
Vapour pressure:	102hPa @ 20°C.
Vapour density:	Not available.
Boiling point/range (°C):	Not available.
Freezing/melting point (°C):	Not available.
Solubility:	Sparingly soluble in water.
Specific gravity or density:	About 1.02
Flash Point:	12°C.
Flammable (explosive) limits:	Not determined.
Ignition temperature:	Not available.
Additional Information:	Not available.

SECTION 10 - STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Conditions to avoid:	Sources of ignition/heat and incompatible materials.
Incompatible Materials:	Strong alkalis, acids, nitrates and oxidizing agents.
Hazardous Decomposition Products:	None known, hazardous vapours may be caused if under fire condition.
Hazardous Reactions:	Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Exposure and Health Effects:

Harmful. Prolonged or repeated skin contact may lead to dermatitis. This product may cause severe eye irritation and depending upon duration of exposure, some form of permanent eye damage may occur. Prolonged or repeated exposure may lead to irreversible damage to health. Prolonged or repeated exposure may lead to permanent irreversible injury.

Ingestion:

Harmful if swallowed. May cause irritation to mouth, throat and stomach with effects including mucous build up, irritation to the tongue and lips and pains in the stomach.

Inhalation:

Harmful if inhaled. May cause irritation to the nose, throat and respiratory system with effects including: Dizziness, headache and possible confusion.

Eye Contact:

Will cause irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision. Depending upon duration of exposure, eye damage may occur.

Skin Contact:

Harmful by skin contact. Will cause irritation to the skin, with effects including; Redness, itchiness, and possible dermatitis.

Human/Animal data: Not available.

Carcinogenic Category: Group 2B: Possibly carcinogenic to humans.

Other Carcinogenic Information: Ethanol is only classed as a group 1 carcinogen if in an alcohol beverage.
Chloroform is classed as a group 2B carcinogen.
Acetic Acid is not classed by the IARC.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Not available.
Persistence and degradability: Not available.
Mobility: Not available.
Additional Information: Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Methods:
Dispose of in accordance with Federal, State and Local regulations.
Special Precautions/Additional Informational:
Not available.

SECTION 14 - TRANSPORT INFORMATION

UN Number: UN 1992
UN Proper Shipping Name: Flammable liquid, toxic, n.o.s. (Carnoy's Fixative)
Class and Subsidiary risk: 3/6.1
Packing Group: PG II
Special Precautions for User: Not available.
Hazchem Code: 3WE

SECTION 15 - REGULATORY INFORMATION

Poison Schedule Number: S6

SECTION 16 - OTHER INFORMATION

Date of preparation of MSDS: October 10

Comments:

List of Publications referenced when creating this MSDS;

- Hazardous Substances Information System Consolidated Lists: Safe Work Australia.
- APPROVED CRITERIA FOR CLASSIFYING HAZARDOUS SUBSTANCES [NOHSC:1008(2004)] 3rd Edition: National Occupational Health and Safety Commission.
- Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997).
- IATA Dangerous Goods Regulations.
- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)].
- Australia Standard for the Uniform Scheduling of Drugs and Poisons [SUSPD] (Australian Government Department of Health and Ageing).

This Material Safety Data Sheet (MSDS) has been prepared in compliance with the National code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this MSDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.

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