

# Chem Alert Report

Manufacturer's Material Safety Data Sheet

Product Name **CONCENTRATED BUFFERED FORMALIN**

Ingredient	Conc.	CAS No.
FORMALDEHYDE	30 - 60%	50-00-0
WATER	30 - 60%	7732-18-5
MONOSODIUM PHOSPHATE	<10%	7558-80-7
DISODIUM HYDROGEN PHOSPHATE	<10%	7558-79-4
METHANOL (STABILISER)	Not Available	67-56-1

**Shipping** **CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA**  
FORMALDEHYDE SOLUTION, FLAMMABLE

**Synonyms** BUFFERED FORMALIN, CBF, CONCENTRATED BUFFERED FORMALDEHYDE.

**Appearance** CLEAR COLOURLESS LIQUID

**Odour** PUNGENT CHARACTERISTIC ODOUR

**Use(s)** LABORATORY REAGENT.

**Supplier** FRONINE LABORATORY SUPPLIES Ph: 02 9627 3600 Emerg. Ph: 13 11 26

**Stock No.** 301.

**Poison Sched** 6

**Hazchem 2YE**

**UN No.** 1198

**D.G Class** 3

**Pkg Group** III

**EPG** 3A4

**Sub/Tert Risk** 8

## HEALTH HAZARDS

**Health Hazard Summary** Toxic - corrosive. Use safe work practices to avoid eye or skin contact and vapour inhalation. Direct contact may result in burns. Potential skin and respiratory sensitiser. Formaldehyde is classified as a probable human carcinogen (IARC Group 2A). Chronic exposure may cause cell mutations, reproductive system effects, liver damage and insomnia. Chronic or high level exposure to methanol may cause optic nerve damage.

**Eye** Corrosive - severe irritant. Exposure may result in pain, redness, corneal burns and ulceration with possible permanent damage with prolonged contact.

**Inhalation** Toxic - corrosive. May cause mucous membrane irritation, coughing, chest pain and sensitisation with asthma-like symptoms, breathing difficulties, pulmonary oedema & convulsions at high levels. Chronic effects include liver damage & fertility effects (sperm count & viability, increase in spontaneous abortions).

**Skin** Corrosive. Prolonged and repeated contact may result in skin rash, burns, dermatitis and sensitisation.

**Ingestion** Toxic - corrosive. Ingestion may result in gastrointestinal ulceration, nausea, vomiting, abdominal pain, acidosis and diarrhoea (bloody). Large doses may cause kidney and liver damage, pulmonary oedema, unconsciousness and death which may be delayed.

## PRECAUTIONS

**Flammability** Flammable. May evolve toxic gases (hydrocarbons, carbon oxides, formaldehyde) when heated to decomposition.

**Reactivity** Incompatible with oxidising agents (eg. peroxides), acids (eg. sulfuric acid), alkalis, amines, phenols, urea and heat sources.

**Ventilation** Do not inhale vapours. Use in well ventilated areas. In poorly ventilated areas, mechanical extraction ventilation is recommended.

## PERSONAL PROTECTIVE EQUIPMENT

**PPE** Wear coveralls, splash-proof goggles, a Formaldehyde Respirator and butyl or nitrile gloves. At high vapour levels, wear an Air-line respirator.



Colour  
Rating  
**AMBER**

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## FIRST AID

- Eye** Hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre, or for at least 15 minutes.
- Inhalation** Leave area of exposure immediately. If other than minor symptoms occur, seek urgent medical attention. If assisting a victim avoid becoming a casualty, wear a Formaldehyde respirator or an Air-line respirator in confined areas. If victim is not breathing apply artificial respiration and seek URGENT medical advice.
- Skin** Gently flush affected areas with water. Seek medical attention if irritation develops.
- Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor. If swallowed, do not induce vomiting.

## SAFE HANDLING

- Storage** Store in cool, dry, well ventilated area, removed from oxidising agents (eg. peroxides, hypochlorites), acids, alkalis, amines, phenol, urea, direct sunlight, heat sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation systems.
- Waste Disposal** For small amounts absorb with sand, vermiculite or similar and dispose of to an approved landfill site or burn in an open pit or incinerator. Alternatively, dissolve in a flammable solvent (eg. acetone) & spray into an incinerator equipped with an afterburner. Contact the manufacturer for additional information if required. Prevent contamination of drains and waterways as aquatic life may be threatened.
- Transport** Class 3 Flammable liquid. Do not transport with chemicals of class; 1 (Explosives), 2.1/ 2.3 (Flammable/ Toxic gases), 4.2 (Spontaneously combustibles), 5.1 (Oxidising agents), 5.2 (Organic peroxides), 6 (Toxics), 7 (Radioactives) and foodstuffs.

## EMERGENCY

- Spillage** If spilt (bulk), contact emergency services. Wear goggles, butyl/nitrile gloves, a Formaldehyde respirator or Full-face Air-line respirator, coveralls and boots. Ventilate & clear area of all unprotected personnel. Absorb with sand or similar & place in containers for disposal. For small spills, cover with sodium bisulfite & mix with water, discharge with large quantities of water to sewer. Wash site with soap & water.
- Environment** Formaldehyde is removed from the atmosphere by direct photolysis and oxidation by photochemically produced hydroxyl radicals (half-life of a few hours). Additional quantities are removed by dry deposition, rain or by dissolving in the ocean and other surface waters. If release to water biodegradation takes place in a few days. Toxic to fish and aquatic microorganisms.
- Fire and Explosion** Flammable. Evacuate area and contact emergency services. Toxic gases (hydrocarbons, carbon oxides, formaldehyde) may be evolved when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool nearby storage areas.
- Extinguishing** Dry agent, carbon dioxide, foam or water fog. Prevent contamination of drains or waterways, absorb runoff with sand or similar.

## PHYSICAL AND CHEMICAL PROPERTIES

<b>Flammability:</b> FLAMMABLE	<b>Flash Point:</b> < 61 C
<b>Boiling Point:</b> NOT AVAILABLE	<b>Melting Point:</b> NOT AVAILABLE
<b>Exposure Standard:</b> 1 ppm (Formaldehyde)	<b>Evaporation Rate:</b> NOT AVAILABLE
<b>pH:</b> NOT AVAILABLE	<b>% Volatiles:</b> > 95 %
<b>Specific Gravity:</b> 1 (Approximately)	<b>Solubility (water):</b> SOLUBLE
<b>Vapour Pressure:</b> NOT AVAILABLE	<b>Upper Explosion Limit:</b> 73.0 %
<b>Lower Explosion Limit:</b> 7.0 %	