

Material Safety Data Sheet

Issue Date: 20 November 2013

Hazardous according to criteria of NOHSC

Formalin Solution

1. Chemical Product and Company Identification

Company Details: Aquasonic Pty Ltd
14 Commerce St
WAUCHOPE NSW 2446

Contact Details in case of emergency: Australian Poison Information Centre 131 126

Company Contact for information regarding Formalin/Malachite Solution

Ph: +61 2 6586 4933

Fax: +61 2 6586 4944

Product Details

Product Name: Formalin Solution

Use: Disinfectant, Germicide, fungicide, insecticide. Used in industry for organic chemicals, explosives, rubber, photography, tanning, resins, fabric, fabric treatment and dyes. Used in chemical analysis.

UN Number: 1198

Dangerous Goods Class: 3

Subsidiary Risk: 8

Packing Group: III

Hazchem Code: 2YE

Poisons Schedule: S6

2. Physical Data

Appearance: Water white or blue solution, suffocating odour ODOUR THRESHOLD:
0.5 – 1ppm

Melting Point: -118°C

Boiling Point: -21°C

Vapour Pressure: Reid Vapour Pressure: 0.09psia

Specific Gravity: approx 1.1

Flash Point: 54°C

Flamm. Limit LEL: No Data

Explosion Data: (LEL) 7.0% - (UEL) 73%

3. Other Properties

Auto ignition Temp: 430°C

Vapour Density: 1.08 (Air = 1)

pH Value: 2.4 to 4.0

Conversion Factor: 1ppm = 1.23mg/m³

Solubility in Water: Very Soluble

4. Health Hazard Identification

Acute Health Effects

Swallowed: Ingestion causes immediate irritation of the mouth, throat and stomach resulting in nausea. In extreme cases severe abdominal pain may be followed by collapse.

Eye: Formalin solution is a severe irritant to the eye and may cause permanent damage. The vapour may cause inflammation of the eyelids.

Skin: Formalin is a moderate skin irritant and can cause hardening or cracking of the skin. It may cause skin sensation and dermatitis.

Inhaled: Formalin vapour irritates all upper parts of the respiratory system and also affects the eyes. Most individuals can detect formalin at concentrations of as low as 0.5ppm, and as exposure increases up to current maximum exposure of 1ppm, irritation becomes more pronounced. Formalin is an animal carcinogen. Squamous cell carcinogens were produced in the nasal cavities of rats following prolonged exposure to high levels of formalin vapour. Similar exposure of mice or hamsters did not produce squamous cell carcinomas. Some European and American authorities believe that Formalin is possibly carcinogenic to man. See exposure standards.

Chronic: Suspected carcinogen, ACGIH
IARC Cancer review – animal sufficient evidence, human inadequate evidence.
Worksafe Aust. Class 2 carcinogen, Probable human carcinogen.

Other Information: Health hazards from formalin arise mainly from the gaseous formalin released into the atmosphere from the solution. Formalin is a pungent irritant colourless gas with a suffocating odour.

5. First Aid Measures

Eye: Irrigate with large quantities of water for at least fifteen minutes. Hold eyelids open. Remove all contaminated clothing and wash contaminated skin. Seek medical advice.

Skin: Remove contaminated clothing and wash skin thoroughly. Wash contaminated clothing before re-use or discard.

6. Advice to Doctor

Advice to Doctor: Consult Poisons Information Centre

7. Precautions for Use

Exposure Limits Name	STEL (mg/m ³)	STEL (ppm)	TWA (mg/m ³)	TWA (ppm)
Formalin			1.2	1
Methanol			262	200

Other Exposure Info: (TLV-TWA) 1.2mg/m³ (1ppm), sensitiser; Worksafe Australia
Short Term Exposure Limits (TLV-STEL) 2.5mg/m³ (2ppm)

Exposure limit comments class 2 carcinogen: Probable human carcinogens are those substances for which there is sufficient evidence to prove a strong presumption that human exposure may result in the development of cancer. This evidence is generally based on appropriate long term animal studies, limited epidemiological evidence or other relevant information.

8. Personal Protection

Protective Equip: The following personal protective equipment must be worn. Use good industrial hygiene. Avoid all skin and eye contact. Use with adequate ventilation. If generating vapour or mist and inhalation risk occurs, wear respirator or half mask organic vapour cartridge. Use full mash organic vapour cartridge if eye protection is required.

9. Flammability

Fire Hazards: Avoid all ignition sources

Other Precautions: Toxic and irritant vapour and liquid. Avoid skin and eye contact. Ensure adequate ventilation. Adhere to exposure standards. Adequate ventilation must be provided to ensure that the atmospheric concentration of formalin does not exceed the Exposure Standards at any time. Flammable.

10. Safe Handling Information

Storage and Transport

Storage Precautions: Store in a cool dry place and out of direct sunlight. Store away from sources of heat or ignition. Store away from alkalis
Class 3 products are not to be loaded with Class 1, 2,1(When both classes are in bulk), 2.3, 4.2, 5, 6 (When class 3 is nitromethane) or 7. Subsidiary risk..6.1b

Other storage info: Do not decant liquid unless properly equipped. Avoid breathing vapours or mist. Avoid contact with skin or eyes. Wash thoroughly after handling.

Proper Shipping Name: Formaldehyde Solution

EPG Number: 3.0.015

IERG Number: 19

Packing Method: 5.9.3RT1,RT7,RT

Spills and Disposal

Spills and disposal: Review Fire/Explosion Hazard and Precautions for Use before proceeding with cleanup. Use appropriate Personal Protection during cleanup. Slippery when wet. Clean up immediately. Increase ventilation. Contain with inert material, dry earth or sand. Recover free liquid. Put absorbed material into sealed, labelled drums. Treatment, storage, transportation and disposal must be in accordance with the relevant federal, state and local regulations. Seek assistance from the relevant authority if in doubt.

Fire/Explosion Hazard

Fire/Explos. Hazard: Flammable.

Extinguishing Media: Water, Chemical foam, dry chemical or CO₂
Special fire fighting instructions: Wear self contained breathing apparatus. Flood with water.

Hazardous Reaction: STABILITY: Stable
INCOMPATIBILITY: Incompatible with strong acids, oxidants and alkalis
DECOMPOSITION: Decomposed with extreme heat to carbon monoxide and carbon dioxide.
POLYMERISATION: Polymerises with heat and time

Hazchem Code: 2YE

11. Other Information

Toxicology: Inhalation TCL₀(human): 17mg/m³/30min
Oral Lowest Lethal Dose (woman): 180mg/kg
More detailed information about the effects of chemicals on health can be obtained from Worksafe Australia

Ecological Effects: Harmful to aquatic life

Risk Statement: R34 Causes Burns
R43 May cause sensitisation by skin contact
R40 (3) Possible risk of irreversible effects
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

Safety Statement: S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre
S51 Use only in well ventilated areas
S36/37 Wear suitable protective clothing and gloves

Pkg. & Label: As required by the ADG Code and the Standard of the Uniform Scheduling of Drugs and Poisons

Hazard Category: Toxic, Corrosive

12. Contact Point

Contact Point: Aquasonic Pty Ltd
14 Commerce St
WAUCHOPE NSW 2446
Ph: +61 2 6586 4933

Disclaimer: The information herein is to the best of our knowledge, correct and complete. It describes the safety requirements for this product and should not be construed as guaranteeing specific properties. Since methods and conditions are beyond our control we do not accept liability for any damages resulting from the use of, or reliance on, this information in inappropriate contexts.