

Safety Data Sheet

Formalin 10% Neutral Buffered

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Formalin 10% Neutral Buffered

Synonyms/Generic Names: Methylene Oxide; Methyl Aldehyde

Product Number: 2182

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Combustible Liquid, Carcinogen, Target organ effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Skin sensitizer, Irritant, Corrosive

Target Organs: Eyes, Kidney, Liver, Heart, Central nervous system

Signal Words: Danger

Pictograms:



GHS Classification:

Combustible liquids	Category 4
Acute toxicity, Oral	Category 4
Skin irritation	Category 3
Serious eye damage	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity – single exposure	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H227	Combustible liquid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H370	Causes damage to organs.

Precautionary Statements:

P260	Do not breathe dust/mist/gas/vapors/spray/fume.
P280	Wear protective gloves/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or doctor/physician.

Potential Health Effects

Eyes	Causes eye burns.
Inhalation	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Toxic if absorbed through skin. Causes skin burns.
Ingestion	Toxic if swallowed.

NFPA Ratings

Health	3
Flammability	2
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	3
Fire	2
Reactivity	0
Personal	G

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Formaldehyde	1-5	50-00-0	200-001-8	CH ₂ O	30.03 g/mol
Methyl Alcohol	1-5	67-56-1	200-659-6	CH ₄ O	32.04 g/mol
Sodium Phosphate, monobasic	<1	10049-21-5	231-449-2	NaH ₂ PO ₄ · H ₂ O	137.99 g/mol
Sodium Phosphate, dibasic	<1	7558-79-4	231-448-7	Na ₂ HPO ₄	141.96 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.01 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use flooding quantities of water to cool containers.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides, sodium oxides, phosphorus oxides) under fire conditions. See also Stability and Reactivity section.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment. Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with inert absorbent material. Keep in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well ventilated place. Ground all containers. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Formaldehyde	0.3 ppm 0.37 mg/m ³	CEIL	ACGIH
	0.75 ppm	PEL	OSHA
	2 ppm	STEL	OSHA
	0.016 ppm	REL	NIOSH
	0.1 ppm	CEIL	NIOSH
Methyl Alcohol	200 ppm 262 mg/m ³	TLV	ACGIH
	250 ppm 328 mg/m ³	STEL	ACGIH
	200 ppm 260 mg/m ³	PEL	OSHA
	200 ppm 260 mg/m ³	REL	NIOSH
	250 ppm 325 mg/m ³	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses with face shield if splashing is likely to occur.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear neoprene or nitrile gloves, full body suit. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear liquid
Odor	Slight odor.
Odor threshold	Not Applicable
pH	6.9-7.1
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	85 °C (185 °F): Closed Cup
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	LEL: 7% UEL: 70%
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	1.0200 (water = 1)
Solubility (ies)	Completely soluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	None
Incompatible Materials	Strong bases, acids, oxidizing agents, alkali metals, strong oxidizing agents, amines, strong acids, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline.
Hazardous Decomposition Products	Carbon oxides, sodium oxides, phosphorus oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Formaldehyde

Skin	LD50 Dermal – rabbit – 15800 mg/kg
Eyes	Not Available
Respiratory	LC50 Inhalation (mist) – mouse – 454000 mg/m – 4 hours
Ingestion	LD50 Oral – mouse – 42 mg/kg

Carcinogenicity

IARC	1 – Group 1: Carcinogenic to humans (Formaldehyde)
ACGIH	Classified A2 – Suspected for human (Formaldehyde)
NTP	Reasonably anticipated to be a human carcinogen (Formaldehyde)
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Eyes	Burns, eye burns, pain, watering eyes.
Inhalation	Burns, coughing, shortness of breath, burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea.
Skin	Burns, irritation, itching and pain.
Ingestion	Weakness, confusion, central nervous system effects, nausea and skin eruptions.

Chronic Toxicity	May cause cancer.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	NA1993, Combustible liquid, n.o.s., (formaldehyde and methanol),CBL, pg III
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Formaldehyde
SARA 302	Listed: Formaldehyde
SARA 304	Listed: Formaldehyde
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313	Listed: Formaldehyde, Methanol
WHMIS Canada	Class B-3: Flammable and combustible liquid- Combustible liquid Class D-1A: Poisonous and infectious material- Immediate and serious effects- Very toxic Class D-2A: Poisonous and infectious material- Other effects- Very toxic Class D-2B: Poisonous and infectious material- Other effects- Toxic Class E: Corrosive material

16. OTHER INFORMATION

Revision	Date
Revision 1	02/17/2014

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