

# Safety Data Sheet

According to Hazardous Products Regulation (SOR/2015-17)

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## SECTION 1: Identification

### Product identifier

Trade name/designation:	Prefilled 10% Neutral Buffered Formalin
Product No.:	16004-122
Synonyms:	none/none
CAS No.:	50-00-0
Other means of identification:	

### Relevant identified uses of the substance or mixture and uses advised against

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

### Details of the supplier of the safety data sheet

#### Supplier

##### **VWR International**

Street	2360 Argentia Road
Postal code/City	Mississauga, Ontario
	Canada L5N 5Z7
Telephone	+1-800-932-5000 toll-free within US/Canada
Telefax:	+1-610-728-2103

## Emergency phone number

Telephone +1-613-996-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)

## Preparation Information

VWR International - Product Information Compliance

E-mail sds@vwr.com

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

#### Classification according to Hazardous Products Regulation (SOR/2015-17)

Hazard classes and hazard categories	Hazard statements
Skin irritation, category 2	H315
Skin sensitization, category 1	H317
Serious eye damage, category 1	H318
Germ cell mutagenicity, category 2	H341
Carcinogenicity, category 1B	H350
Specific target organ toxicity (single exposure), category 1	H370
Specific target organ toxicity (repeated exposure), category 2	H373

### 2.2 Label elements

#### Labelling in accordance with (SOR/2015-17)

#### Hazard pictograms



Signal word: Danger

Hazard statements	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements	
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.

**Hazards not otherwise classified (HNOC)**  
none/none

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

**Hazardous ingredients GHS Classification in accordance with (SOR/2015-17)**

Substance name	Concentration	Identifier	Hazard classes and hazard categories
Formaldehyde	3.5 - 5%	CAS No.: 50-00-0	Acute Tox. 3 - H301+H311+H331 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1B - H350 STOT SE 3 - H335
Methanol	< 1.5%	CAS No.: 67-56-1	Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Eye Irrit. 2 - H319 Repr. 1B - H360 STOT SE 2 - H371 STOT SE 3 - H336

## SECTION 4: First aid measures

### 4.1 General information

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

#### In case of inhalation

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

**After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**In case of ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

**Self-protection of the first aider**

First aider: Pay attention to self-protection!

**4.2 Most important symptoms/effects, acute and delayed**

no data available

**4.3 Indication of any immediate medical attention and special treatment needed**

no data available

**SECTION 5: Fire fighting measures****5.1 Extinguishing media****Suitable extinguishing media**

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons**

no restriction

**5.2 Specific hazards arising from the chemical**

In case of fire may be liberated:

Carbon monoxide

Carbon dioxide (CO<sub>2</sub>)

**5.3 Advice for firefighters**

DO NOT fight fire when fire reaches explosives.

Protective equipment and precautions for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.

Use water spray/stream to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Do not breathe gas/vapor/spray. Provide adequate ventilation. Use personal protection equipment. In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

## 6.2 Environmental precautions

Do not allow to enter into surface water or drains. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.  
Discharge into the environment must be avoided.

## 6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Collect in closed and suitable containers for disposal.

## 6.4 Additional information

Clear spills immediately.

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Avoid:

Inhalation

Avoid contact with eyes and skin.

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Protect from moisture.

## 7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: 15-25 °C

Keep container tightly closed and in a well-ventilated place.

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Formaldehyde	CNESST	CA	VECD	3 (1) mg/m <sup>3</sup> - 2 (1) ppm
Methanol	CNESST	CA	VECD	328 mg/m <sup>3</sup> - 250 ppm
Methanol	CNESST	CA	VEMP	262 mg/m <sup>3</sup> - 200 ppm

## 8.2 Engineering controls

### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Personal protection equipment (PPE)**

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

*Eye/face protection*

Eye glasses with side protection

*Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time::	240-480 min

By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time::	-

*Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

*Additional information*

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

*Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odour:	no data available
(c) Odour threshold:	no data available

#### Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	no data available
(f) Initial boiling point and boiling range:	no data available
(g) Flash point:	no data available
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	not applicable
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapour pressure:	no data available
(l) Vapour density:	no data available
(m) Relative density:	1.013 g/cm <sup>3</sup> (20 °C)
(n) Solubility(ies)	
Water solubility (g/L):	no data available
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	no data available
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

### 9.2 Other information

Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapors may form explosive mixtures with air.

## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.3 Possibility of hazardous reactions

Formation of explosive mixtures with:

Oxidising agent

Nitrogen oxides (NO<sub>x</sub>)

Material, oxygen-rich, Oxidizing

Nitric acid

Chlorine

Bromine

Exothermic reaction with:

Reducing agent

Acid

Acid halides

Alkali (lye), concentrated

Violent reaction with:

Alkali metals

Alkaline earth metal

Formation of:

Hydrogen

## 10.4 Conditions to avoid

UV-radiation/sunlight

Heat

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

## 10.5 Incompatible materials

light metals

Plastic articles

## 10.6 Hazardous decomposition products

no data available

## 10.7 Additional information

Slowly corrodes aluminium and zinc under hydrogen evolution.

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute effects

*Acute oral toxicity:*

Formaldehyde - LD50: > 100 mg/kg - Rat - (CHP)

Methanol - LDLo: > 143 mg/kg - Human - (RTECS)

Methanol - LD50: 1187 - 2769 mg/kg - Rat - (IUCLID)



*Acute dermal toxicity:*

Formaldehyde - LD50: > 270 mg/kg - Rabbit - (CHP)

Methanol - LD50: > 15800 mg/kg - Rabbit

*Acute inhalation toxicity:*

Formaldehyde - LC50: > 0.578 mg/l (4h) - Rat - (CHP)

Methanol - TCLo: > 160 ppm (4h) - Human

**Irritant and corrosive effects**

*Primary irritation to the skin:*

Causes skin irritation.

*Irritation to eyes:*

Causes serious eye damage.

*Irritation to respiratory tract:*

not applicable

**Respiratory or skin sensitization**

In case of skin contact: sensitising

In case of inhalation: not sensitising

**STOT-single exposure**

Causes damage to organs.

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

**Germ cell mutagenicity**

Suspected of causing genetic defects.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

## SECTION 12: Ecological information

### 12.1 Ecotoxicity

**Fish toxicity:**

Formaldehyde - LC50: 52.5 mg/l (96 h)

Methanol - LC50: 24000 mg/l (96 h) - Poirier, S.H., M.L. Knuth, C.D. Anderson-Buchou, L.T. Brooke, A.R. Lima, and P.J. Shubat 1986. Comparative Toxicity of Methanol and N,N-Dimethylformamide to Freshwater Fish and Invertebrates. Bull.Environ.Contam.Toxicol. 37(4):615-621

**Daphnia toxicity:**

Formaldehyde - LC50: 1070 mg/l (48 h)

Formaldehyde - EC50: 14 mg/l (48 h)

Methanol - LC50: 3290 mg/l (48 h) - Guilhermino, L., T. Diamantino, M.C. Silva, and A.M.V.M. Soares 2000. Acute Toxicity Test with Daphnia magna: An Alternative to Mammals in the Prescreening of Chemical Toxicity?. Ecotoxicol.Environ.Saf. 46(3):357-362

Methanol - EC50: 24500 mg/l (48 h) - Randall, T.L., and P.V. Knopp 1980. Detoxification of Specific Organic Substances by Wet Oxidation. J.Water Pollut.Control Fed. 52(8):2117-2130

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6 Other adverse effects

no data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Appropriate disposal / Product**

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

**Appropriate disposal / Package**

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

**Additional information**

no data available

## SECTION 14: Transport information

### Land transport (TDG)

No dangerous good in sense of this transport regulation.

### Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
not relevant

### Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Domestic Substance List:

## SECTION 16: Other information

### Abbreviations and acronyms

H225 - Highly flammable liquid and vapor.  
H301 - Toxic if swallowed.  
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.  
H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.  
H336 - May cause drowsiness or dizziness.  
H341 - Suspected of causing genetic defects.  
H350 - May cause cancer.  
H360 - May damage fertility or the unborn child.  
H371 - May cause damage to organs.

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
vPvB - very Persistent, very Bioaccumulative

Training advice: Provide adequate information, instruction and training for operators.

**Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure**

Hazard statements	Hazard classes and hazard categories	Classification procedure
H315	Skin Irrit. 2	Calculation method.
H317	Skin Sens. 1	Calculation method.
H318	Eye Dam. 1	Calculation method.
H341	Muta. 2	Calculation method.
H350	Carc. 1B	Calculation method.
H370	STOT SE 1	Calculation method.
H373	STOT RE 2	Calculation method.

**Additional information**

Indication of changes      none/none

*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.*