



# SAFETY DATA SHEET

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Preparation Date: 01/01/2019

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Revision Number: 1

**SECTION 1 Identification****1.1. Product Identifier**

Trade Name or Designation: Formaldehyde, 10% v/v, Buffered (Formalin)

Product Number: B16047

**1.2. Recommended Use and Restrictions on Use**

General Laboratory Reagent

**1.3. Details of the Supplier of the Safety Data Sheet****Dawn Scientific Inc**

121 Liberty Street, Metuchen, NJ, 08840

Tel : 732-902-6300 | Fax : 973-802-1005

sales@dawnscientific.com | www.dawnscientific.com

**1.4. Emergency Telephone Number (24 hours)**

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 1A	H350	May cause cancer (Inhalation)
Hazardous to the aquatic environment - Acute Hazard Category 3	H402	Harmful to aquatic life

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS-US labeling**

Hazard pictograms (GHS-US)

:



GHS05



GHS07



GHS08

Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H350 - May cause cancer (Inhalation)  
H402 - Harmful to aquatic life

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P264 - Wash exposed skin thoroughly after handling  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P273 - Avoid release to the environment  
P280 - Wear protective gloves, protective clothing, eye protection, face protection  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
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+P313 - IF exposed or concerned: Get medical advice/attention  
P310 - Immediately call a poison center or doctor/physician  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention  
P362+P364 - Take off contaminated clothing and wash it before reuse

P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
Water	(CAS-No.) 7732-18-5	95
Formaldehyde, 37% w/w	(CAS-No.) 50-00-0	3.7
Methanol	(CAS-No.) 67-56-1	0.5
Phosphoric Acid, 85% w/w	(CAS-No.) 7664-38-2	0.5
Sodium Hydroxide	(CAS-No.) 1310-73-2	0.3

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Wash skin with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause cancer by inhalation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Nausea. Vomiting. Diarrhoea. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

No additional information available

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Protective clothing. Gloves. Combined gas/dust mask with filter type A/P3.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing gas, mist, vapors, spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use.
- Incompatible products : Strong oxidizers. Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Formaldehyde, 37% w/w (50-00-0)		
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	0.37 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	0.75 ppm
OSHA	OSHA PEL (STEL) (ppm)	2 ppm
IDLH	US IDLH (ppm)	20 ppm
NIOSH	NIOSH REL (TWA) (ppm)	0.016 ppm
NIOSH	NIOSH REL (ceiling) (ppm)	0.1 ppm 15 min.
Methanol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm (Methanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	250 ppm (Methanol; USA; Short time value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
IDLH	US IDLH (ppm)	6000 ppm

<b>Methanol (67-56-1)</b>		
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	250 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	325 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (ppm)	250 ppm
NIOSH	Remark (NIOSH)	Skin
<b>Sodium Hydroxide (1310-73-2)</b>		
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (Sodium hydroxide; USA; Momentary value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Phosphoric Acid, 85% w/w (7664-38-2)</b>		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
IDLH	US IDLH (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>Water (7732-18-5)</b>		
Not applicable		

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

## 8.3. Individual protection measures/Personal protective equipment

### Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Gas mask at concentration in the air > TLV.



### Hand protection:

Wear protective gloves

### Eye protection:

Chemical goggles or safety glasses

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

Wear appropriate mask

### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Color : Colorless

Odor	: characteristic
Odor threshold	: No data available
pH	: 7
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available.
Oxidizing properties	: No data available.

## 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Phosphorus oxides. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

Formaldehyde, 37% w/w (50-00-0)	
LD50 oral rat	500 mg/kg
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	2000 mg/kg body weight
ATE US (vapors)	0.578 mg/l/4h
Methanol (67-56-1)	
LD50 oral rat	> 5000 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	15800 mg/kg (Rabbit; Literature study)

<b>Methanol (67-56-1)</b>	
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat; Literature study)

<b>Sodium Hydroxide (1310-73-2)</b>	
ATE US (dermal)	1350 mg/kg body weight

<b>Water (7732-18-5)</b>	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation. pH: 7
Serious eye damage/irritation	: Causes serious eye damage. pH: 7
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (Inhalation).

<b>Formaldehyde, 37% w/w (50-00-0)</b>	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: May cause an allergic skin reaction. May cause cancer by inhalation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Nausea. Vomiting. Diarrhoea. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water	: Harmful to aquatic life.
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<b>Formaldehyde, 10% v/v, Buffered</b>	
EC50 Daphnia 1	54 mg/l

<b>Formaldehyde, 37% w/w (50-00-0)</b>	
LC50 fish 1	41 mg/l (LC50; 96 h)
EC50 Daphnia 1	14.7 mg/l (EC50; 24 h)
EC50 Daphnia 2	2 mg/l
Threshold limit algae 1	2.5 mg/l (EC0; 192 h)

<b>Methanol (67-56-1)</b>	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)

<b>Sodium Hydroxide (1310-73-2)</b>	
LC50 fish 1	45.4 mg/l (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)

<b>Phosphoric Acid, 85% w/w (7664-38-2)</b>	
LC50 fish 1	138 mg/l (LC50)

## 12.2. Persistence and degradability

<b>Formaldehyde, 10% v/v, Buffered</b>	
Persistence and degradability	Not established.

<b>Formaldehyde, 37% w/w (50-00-0)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available. No test data on mobility of the components available. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.64 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.06 g O <sub>2</sub> /g substance
ThOD	1.068 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.6 (5 days; Literature study)

<b>Methanol (67-56-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 (Literature study)

<b>Sodium Hydroxide (1310-73-2)</b>	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

<b>Phosphoric Acid, 85% w/w (7664-38-2)</b>	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

<b>Water (7732-18-5)</b>	
Persistence and degradability	Not established.

## 12.3. Bioaccumulative potential

<b>Formaldehyde, 10% v/v, Buffered</b>	
Bioaccumulative potential	Not established.

<b>Formaldehyde, 37% w/w (50-00-0)</b>	
Log Pow	-0.78 - 0.0
Bioaccumulative potential	Bioaccumulation: not applicable.

<b>Methanol (67-56-1)</b>	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>Sodium Hydroxide (1310-73-2)</b>	
Bioaccumulative potential	No bioaccumulation data available.

<b>Phosphoric Acid, 85% w/w (7664-38-2)</b>	
Bioaccumulative potential	Not bioaccumulative.

<b>Water (7732-18-5)</b>	
Bioaccumulative potential	Not established.

#### 12.4. Mobility in soil

Formaldehyde, 37% w/w (50-00-0)	
Ecology - soil	Toxic to flora.
Methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value

#### 12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.
Other information	: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT  
Not regulated

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

Formaldehyde, 10% v/v, Buffered	
SARA Section 311/312 Hazard Classes	Health hazard - Carcinogenicity Health hazard - Respiratory or skin sensitization Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Methanol	CAS-No. 67-56-1	0.5%
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Formaldehyde, 37% w/w (50-00-0)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	0.1 %
Methanol (67-56-1)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard
Sodium Hydroxide (1310-73-2)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Phosphoric Acid, 85% w/w (7664-38-2)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb



## 15.2. International regulations

### CANADA

<b>Formaldehyde, 37% w/w (50-00-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Methanol (67-56-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Sodium Hydroxide (1310-73-2)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Phosphoric Acid, 85% w/w (7664-38-2)</b>
Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

<b>Formaldehyde, 37% w/w (50-00-0)</b>
Listed on the Canadian IDL (Ingredient Disclosure List)

## 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

<b>Formaldehyde, 37% w/w (50-00-0)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	Yes	No	No	40 µg/day
<b>Methanol (67-56-1)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

## SECTION 16: Other information

Revision date : -None.  
Other information : -None.

Full text of H-phrases: see section 16:

H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H330	Fatal if inhaled
H331	Toxic if inhaled
H350	May cause cancer
H370	Causes damage to organs
H401	Toxic to aquatic life
H402	Harmful to aquatic life

NFPA health hazard

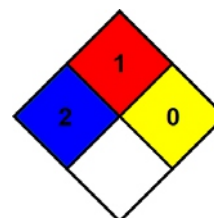
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur  
\* - Chronic (long-term) health effects may result from repeated overexposure

Flammability

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

Last Revision Date: 01/01/2019

## DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and Dawn scientific Inc assumes no legal responsibility or liability whatsoever resulting from its use.