



# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Trade name : FIXATIVE SOLUTION  
Product code : 25085B  
Formula : mixture

#### 1.2. Recommended use and restrictions on use

Recommended use : Use as laboratory reagent, Manufacture of substances

#### 1.3. Supplier

##### Supplier

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number : 24-hour emergency phone number ChemTel 1-800-255-3924

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

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

No additional information available

#### 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	%	GHS US classification
Paraformaldehyde	(CAS-No.) 30525-89-4	0 – 5	Flam. Sol. 2, H228 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 1, H370 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Sodium hydroxide	(CAS-No.) 1310-73-2	0 – 5	Met. Corr. 1, H290 Acute Tox. 4 (Dermal), H312 Skin Corr. 1, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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            | : Call a poison center/doctor/physician if you feel unwell.  |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.   |
| First-aid measures after skin contact | : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation 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. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion    | : Call a poison center/doctor/physician if you feel unwell.  |

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

- |                                     |                        |
|-------------------------------------|------------------------|
| Symptoms/effects after skin contact | : Irritation.          |
| Symptoms/effects after eye contact  | : Mild eye irritation. |

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

Treat symptomatically.

### SECTION 5: Fire-fighting measures

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

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

#### 5.2. Specific hazards arising from the chemical

- |  |                                |
|--|--------------------------------|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |
|--|--------------------------------|

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

- |                                |  |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|--|

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

- |                      |   |
|----------------------|---|
| Emergency procedures | : Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. |
|----------------------|---|

##### 6.1.2. For emergency responders

- |                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

#### 6.2. Environmental precautions

Avoid release to the environment.

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

- |                         |   |
|-------------------------|---|
| Methods for cleaning up | : Take up liquid spill into absorbent material.                 |
| Other information       | : Dispose of materials or solid residues at an authorized site. |

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- |                               |  |
|-------------------------------|--|
| Precautions for safe handling | : Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment. |
| Hygiene measures              | : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.                             |

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

- |                    |  |
|--------------------|--|
| Storage conditions | : Store at room temp. Keep cool. Store in a well-ventilated place. |
|--------------------|--|

# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>FIXATIVE SOLUTION</b>	
No additional information available	
<b>Paraformaldehyde (30525-89-4)</b>	
No additional information available	
<b>Sodium hydroxide (1310-73-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Sodium hydroxide
ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Remark (ACGIH)	TLV® Basis: URT, eye, & skin irr
Regulatory reference	ACGIH 2018
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Sodium hydroxide
OSHA PEL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>USA - IDLH - Occupational Exposure Limits</b>	
US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

##### Personal protective equipment symbol(s):



### SECTION 9: Physical and chemical properties

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

- Physical state : Liquid  
Appearance : clear solution.  
Color : Mixture contains one or more component(s) which have the following colour(s):  
white  
Odor : Mixture contains one or more component(s) which have the following odour:  
Odor threshold : No data available  
pH : no data

# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Melting point	: 0 °C
Freezing point	: No data available
Boiling point	: 99 °C
Flash point	: no data
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 18 mm Hg
Relative vapor density at 20°C	: 0.6
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/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

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified.

#### Paraformaldehyde (30525-89-4)

LD50 oral rat	800 mg/kg
LC50 Inhalation - Rat	1070 mg/l/4h (Exposure time: 4 h)

#### Sodium hydroxide (1310-73-2)

LD50 dermal rabbit	1350 mg/kg
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Skin corrosion/irritation	: Not classified. pH: no data
Serious eye damage/irritation	: Not classified pH: no data
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

### Paraformaldehyde (30525-89-4)

STOT-single exposure	Causes damage to organs. May cause respiratory irritation.
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STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Mild eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

### Paraformaldehyde (30525-89-4)

LC50 fish 1	60 mg/l
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### Sodium hydroxide (1310-73-2)

LC50 fish 1	45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
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EC50 Daphnia 1	40.4 mg/l Test organisms (species): Ceriodaphnia sp.
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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Paraformaldehyde (30525-89-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ 1000 lb

#### Sodium hydroxide (1310-73-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ 1000 lb

### 15.2. International regulations

#### CANADA

#### Paraformaldehyde (30525-89-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Sodium hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

### National regulations

#### Paraformaldehyde (30525-89-4)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Poisonous and Deleterious Substances Control Law  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

Component	State or local regulations
Paraformaldehyde(30525-89-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List
Sodium hydroxide(1310-73-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

# FIXATIVE SOLUTION

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Hazard Rating	
Health	: 2 Moderate Hazard - Temporary or minor injury may occur
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 III B)
Physical	: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

SDS US (GHS HazCom 2012)

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