

## SAFETY DATA SHEET

Version 6.13  
Revision Date 03/02/2024  
Print Date 06/15/2024

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Formaldehyde solution, 36.5-38%

Product Number : F8775

Brand : Sigma

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765

Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 3), H226  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 2), H330  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318  
 Skin sensitization (Category 1), H317  
 Germ cell mutagenicity (Category 2), H341  
 Carcinogenicity (Category 1B), H350  
 Specific target organ toxicity - single exposure (Category 1), Eyes, Central nervous system, H370  
 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
 Short-term (acute) aquatic hazard (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard Statements

|             |                                                         |
|-------------|---------------------------------------------------------|
| H226        | Flammable liquid and vapor.                             |
| H301 + H311 | Toxic if swallowed or in contact with skin.             |
| H314        | Causes severe skin burns and eye damage.                |
| H317        | May cause an allergic skin reaction.                    |
| H330        | Fatal if inhaled.                                       |
| H335        | May cause respiratory irritation.                       |
| H341        | Suspected of causing genetic defects.                   |
| H350        | May cause cancer.                                       |
| H370        | Causes damage to organs (Eyes, Central nervous system). |
| H401        | Toxic to aquatic life.                                  |

Precautionary Statements

|                    |                                                                               |
|--------------------|-------------------------------------------------------------------------------|
| P201               | Obtain special instructions before use.                                       |
| P202               | Do not handle until all safety precautions have been read and understood.     |
| P210               | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.           |
| P233               | Keep container tightly closed.                                                |
| P240               | Ground/bond container and receiving equipment.                                |
| P241               | Use explosion-proof electrical/ ventilating/ lighting/ equipment.             |
| P242               | Use only non-sparking tools.                                                  |
| P243               | Take precautionary measures against static discharge.                         |
| P260               | Do not breathe mist or vapors.                                                |
| P264               | Wash skin thoroughly after handling.                                          |
| P270               | Do not eat, drink or smoke when using this product.                           |
| P271               | Use only outdoors or in a well-ventilated area.                               |
| P272               | Contaminated work clothing must not be allowed out of the workplace.          |
| P273               | Avoid release to the environment.                                             |
| P280               | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P284               | Wear respiratory protection.                                                  |
| P301 + P310 + P330 | IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.          |
| P301 + P330 + P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                            |

|                           |                                                                                                                                                                            |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P303 + P361 + P353        | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.                                                                       |
| P304 + P340 + P310        | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.                                                       |
| P305 + P351 + P338 + P310 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. |
| P307 + P311               | IF exposed: Call a POISON CENTER or doctor/ physician.                                                                                                                     |
| P333 + P313               | If skin irritation or rash occurs: Get medical advice/ attention.                                                                                                          |
| P362                      | Take off contaminated clothing and wash before reuse.                                                                                                                      |
| P370 + P378               | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                                                                                       |
| P403 + P233               | Store in a well-ventilated place. Keep container tightly closed.                                                                                                           |
| P403 + P235               | Store in a well-ventilated place. Keep cool.                                                                                                                               |
| P405                      | Store locked up.                                                                                                                                                           |
| P501                      | Dispose of contents/ container to an approved waste disposal plant.                                                                                                        |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

| Component           |                   | Classification              | Concentration  |
|---------------------|-------------------|-----------------------------|----------------|
| <b>formaldehyde</b> |                   |                             |                |
| CAS-No.             | 50-00-0           | Flam. Liq. 4; Acute Tox. 3; | >= 30 - < 50 % |
| EC-No.              | 200-001-8         | Acute Tox. 2; Acute Tox.    |                |
| Index-No.           | 605-001-00-5      | 3; Skin Corr. 1B; Eye       |                |
| Registration        | 01-2119488953-20- | Dam. 1; Skin Sens. 1;       |                |
| number              | XXXX              | Muta. 2; Carc. 1B; STOT     |                |
|                     |                   | SE 3; Aquatic Acute 2;      |                |
|                     |                   | H227, H301, H330, H311,     |                |
|                     |                   | H314, H318, H317, H341,     |                |
|                     |                   | H350, H335, H401            |                |
|                     |                   | Concentration limits:       |                |
|                     |                   | >= 25 %: Skin Corr. 1B,     |                |
|                     |                   | H314; 5 - < 25 %: Eye       |                |
|                     |                   | Irrit. 2, H319; >= 5 %:     |                |
|                     |                   | STOT SE 3, H335; >= 0.2     |                |
|                     |                   | %: Skin Sens. 1, H317; 5    |                |
|                     |                   | - < 25 %: Skin Irrit. 2,    |                |
|                     |                   | H315; >= 25 %: Skin         |                |
|                     |                   | Corr. 1B, H314; 5 - < 25    |                |
|                     |                   | %: Skin Irrit. 2, H315; 5 - |                |
|                     |                   | < 25 %: Eye Irrit. 2,       |                |
|                     |                   | H319; >= 5 %: STOT SE       |                |
|                     |                   | 3, H335; >= 0.2 %: Skin     |                |
|                     |                   | Sens. 1, H317;              |                |

| <b>Methanol</b>     |                       |                                                        |                |
|---------------------|-----------------------|--------------------------------------------------------|----------------|
| CAS-No.             | 67-56-1               | Flam. Liq. 2; Acute Tox. 3;                            | >= 10 - < 20 % |
| EC-No.              | 200-659-6             | STOT SE 1; H225, H301,                                 |                |
| Index-No.           | 603-001-00-X          | H331, H311, H370                                       |                |
| Registration number | 01-2119433307-44-XXXX | Concentration limits:                                  |                |
|                     |                       | >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371; |                |

For the full text of the H-Statements mentioned in this Section, see Section 16.

---

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour). Do not attempt to neutralise.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides

Mixture with combustible ingredients.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

**5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**5.4 Further information**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

---

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains. Risk of explosion.

**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g.

Chemizorb®). Dispose of properly. Clean up affected area.

**6.4 Reference to other sections**

For disposal see section 13.

---

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

**Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

**Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

**Storage stability** Recommended storage temperature

15 - 25 °C

### Storage class

Storage class (TRGS 510): 3: Flammable liquids

## 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

#### Ingredients with workplace control parameters

| Component    | CAS-No. | Value                                                                           | Control parameters | Basis                                             |
|--------------|---------|---------------------------------------------------------------------------------|--------------------|---------------------------------------------------|
| formaldehyde | 50-00-0 | TWA                                                                             | 0.1 ppm            | USA. ACGIH Threshold Limit Values (TLV)           |
|              | Remarks | Dermal Sensitization<br>Respiratory sensitization<br>Confirmed human carcinogen |                    |                                                   |
|              |         | STEL                                                                            | 0.3 ppm            | USA. ACGIH Threshold Limit Values (TLV)           |
|              |         | Dermal Sensitization<br>Respiratory sensitization<br>Confirmed human carcinogen |                    |                                                   |
|              |         | TWA                                                                             | 0.016 ppm          | USA. NIOSH Recommended Exposure Limits            |
|              |         | Potential Occupational Carcinogen                                               |                    |                                                   |
|              |         | C                                                                               | 0.1 ppm            | USA. NIOSH Recommended Exposure Limits            |
|              |         | Potential Occupational Carcinogen                                               |                    |                                                   |
|              |         | PEL                                                                             | 0.75 ppm           | OSHA Specifically Regulated Chemicals/Carcinogens |
|              |         | OSHA specifically regulated carcinogen                                          |                    |                                                   |
|              |         | STEL                                                                            | 2 ppm              | OSHA Specifically Regulated Chemicals/Carcinogens |
|              |         | OSHA specifically regulated carcinogen                                          |                    |                                                   |

|          |         |                                   |                      |                                                                                         |
|----------|---------|-----------------------------------|----------------------|-----------------------------------------------------------------------------------------|
|          |         | PEL                               | 0.75 ppm             | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|          |         | STEL                              | 2 ppm                | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|          |         | TWA                               | 0.016 ppm            | USA. NIOSH Recommended Exposure Limits                                                  |
|          |         | Potential Occupational Carcinogen |                      |                                                                                         |
|          |         | C                                 | 0.1 ppm              | USA. NIOSH Recommended Exposure Limits                                                  |
|          |         | Potential Occupational Carcinogen |                      |                                                                                         |
| Methanol | 67-56-1 | TWA                               | 200 ppm              | USA. ACGIH Threshold Limit Values (TLV)                                                 |
|          |         | Danger of cutaneous absorption    |                      |                                                                                         |
|          |         | STEL                              | 250 ppm              | USA. ACGIH Threshold Limit Values (TLV)                                                 |
|          |         | Danger of cutaneous absorption    |                      |                                                                                         |
|          |         | ST                                | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended Exposure Limits                                                  |
|          |         | Potential for dermal absorption   |                      |                                                                                         |
|          |         | TWA                               | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended Exposure Limits                                                  |
|          |         | Potential for dermal absorption   |                      |                                                                                         |
|          |         | TWA                               | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|          |         | PEL                               | 200 ppm<br>260 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|          |         | Skin                              |                      |                                                                                         |
|          |         | C                                 | 1,000 ppm            | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|          |         | Skin                              |                      |                                                                                         |
|          |         | STEL                              | 250 ppm<br>325 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|          |         | Skin                              |                      |                                                                                         |

#### Biological occupational exposure limits

| Component | CAS-No. | Parameters | Value | Biological specimen | Basis |
|-----------|---------|------------|-------|---------------------|-------|
|-----------|---------|------------|-------|---------------------|-------|

|          |         |                                                          |         |       |                                                    |
|----------|---------|----------------------------------------------------------|---------|-------|----------------------------------------------------|
| Methanol | 67-56-1 | Methanol                                                 | 15 mg/l | Urine | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|          | Remarks | End of shift (As soon as possible after exposure ceases) |         |       |                                                    |

## 8.2 Exposure controls

### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 60 min

Material tested: Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Flame retardant antistatic protective clothing.

#### Respiratory protection

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

---

## **SECTION 9: Physical and chemical properties**

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

|                                                 |                                                                 |
|-------------------------------------------------|-----------------------------------------------------------------|
| a) Appearance                                   | Form: liquid<br>Color: clear                                    |
| b) Odor                                         | No data available                                               |
| c) Odor Threshold                               | No data available                                               |
| 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                                  | 56.11 °C (133.00 °F) - closed cup                               |
| h) Evaporation rate                             | No data available                                               |
| i) Flammability (solid, gas)                    | No data available                                               |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 73 %(V)<br>Lower explosion limit: 7 %(V) |
| k) Vapor pressure                               | 69 hPa at 37 °C (99 °F)                                         |
| l) Vapor density                                | 1.04 - (Air = 1.0)                                              |
| m) Density                                      | 1.09 g/cm <sup>3</sup> at 20 °C (68 °F)                         |
| Relative density                                | 1.0920 °C                                                       |
| n) Water solubility                             | soluble                                                         |
| o) Partition coefficient: n-octanol/water       | No data available                                               |
| p) Autoignition temperature                     | No data available                                               |
| q) Decomposition temperature                    | No data available                                               |
| r) Viscosity                                    | No data available                                               |
| s) Explosive properties                         | Not classified as explosive.                                    |
| t) Oxidizing properties                         | none                                                            |

## 9.2 Other safety information

Relative vapor density 1.04 - (Air = 1.0)

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heating.

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

#### Acute toxicity

Oral: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Inhalation: No data available

Dermal: No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive after 3 minutes to 1 hour of exposure - 20 h  
(OECD Test Guideline 404)

Remarks: Mixture causes burns.

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive - 7 d  
(OECD Test Guideline 405)

Remarks: Mixture causes serious eye damage.  
Risk of blindness!

#### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: Causes sensitization.  
May cause allergic skin reaction.  
(OECD Test Guideline 406)  
Mixture may cause an allergic skin reaction.

**Germ cell mutagenicity**

Evidence of genetic defects.

**Carcinogenicity**

Possible carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (formaldehyde)

NTP: Known - Known to be human carcinogen (formaldehyde)

OSHA: OSHA specifically regulated carcinogen (formaldehyde)

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Mixture causes damage to organs. - Eyes, Central nervous system

Mixture may cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

**Components**

**formaldehyde**

**Acute toxicity**

LD50 Oral - Rat - 100 mg/kg

Remarks: (Lit.)

Acute toxicity estimate Inhalation - 4 h - 0.51 mg/l - vapor

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Inhalation: Corrosive to respiratory system.

LD50 Dermal - Rabbit - 270 mg/kg

Remarks: (RTECS)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Causes burns. - 20 h

(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Remarks: Causes serious eye damage.

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: positive

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Suspected of causing genetic defects.

**Carcinogenicity**

Presumed to have carcinogenic potential for humans

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

**Aspiration hazard**

No data available

**Methanol**

**Acute toxicity**

Acute toxicity estimate Oral - 100.1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Nausea, Vomiting

Acute toxicity estimate Inhalation - 4 h - 3.1 mg/l - vapor

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Irritation symptoms in the respiratory tract.

Acute toxicity estimate Dermal - 300.1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation

Remarks: (ECHA)

Remarks: Drying-out effect resulting in rough and chapped skin.

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

**Respiratory or skin sensitization**

Sensitisation test: - Guinea pig

Result: negative

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Based on available data the classification criteria are not met.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

**Carcinogenicity**

Did not show carcinogenic effects in animal experiments.

**Reproductive toxicity**

Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

Causes damage to organs. - Eyes, Central nervous system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute oral toxicity - Nausea, Vomiting

Acute inhalation toxicity - Irritation symptoms in the respiratory tract.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

---

**SECTION 12: Ecological information****12.1 Toxicity****Mixture**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

Sigma - F8775

Page 13 of 16

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Endocrine disrupting properties

No data available

## 12.7 Other adverse effects

No data available

### Components

#### formaldehyde

|                                                                       |                                                                                                                  |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                                      | static test LC50 - <i>Morone saxatilis</i> - 6.7 mg/l - 96 h<br>Remarks: (ECHA)                                  |
| Toxicity to daphnia and other aquatic invertebrates                   | static test EC50 - <i>Daphnia pulex</i> (Water flea) - 5.8 mg/l - 48 h<br>(OECD Test Guideline 202)              |
| Toxicity to algae                                                     | static test ErC50 - <i>Desmodesmus subspicatus</i> (green algae) - 4.89 mg/l - 72 h<br>(OECD Test Guideline 201) |
| Toxicity to bacteria                                                  | static test EC50 - activated sludge - 19 mg/l - 3 h<br>(OECD Test Guideline 209)                                 |
| Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) | semi-static test NOEC - <i>Daphnia magna</i> (Water flea) - $\geq 6.4$ mg/l - 21 d<br>(OECD Test Guideline 211)  |

#### Methanol

|                                                     |                                                                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | flow-through test LC50 - <i>Lepomis macrochirus</i> (Bluegill) - 15,400.0 mg/l - 96 h<br>(US-EPA)                                |
| Toxicity to daphnia and other aquatic invertebrates | semi-static test EC50 - <i>Daphnia magna</i> (Water flea) - 18,260 mg/l - 96 h<br>(OECD Test Guideline 202)                      |
| Toxicity to algae                                   | static test ErC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - ca. 22,000.0 mg/l - 96 h<br>(OECD Test Guideline 201) |
| Toxicity to bacteria                                | static test IC50 - activated sludge - $> 1,000$ mg/l - 3 h<br>(OECD Test Guideline 209)                                          |
| Toxicity to fish(Chronic toxicity)                  | NOEC - <i>Oryzias latipes</i> (Orange-red killifish) - 7,900 mg/l - 200 h<br>Remarks: (External MSDS)                            |

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

---

## SECTION 14: Transport information

#### DOT (US)

UN number: 1198    Class: 3 (8)    Packing group: III  
Proper shipping name: Formaldehyde solutions, flammable  
Reportable Quantity (RQ): 259 lbs  
Poison Inhalation Hazard: No

#### IMDG

UN number: 1198    Class: 3 (8)    Packing group: III    EMS-No: F-E, S-C  
Proper shipping name: FORMALDEHYDE SOLUTION, FLAMMABLE

#### IATA

UN number: 1198    Class: 3 (8)    Packing group: III  
Proper shipping name: Formaldehyde solution, flammable

---

## SECTION 15: Regulatory information

#### SARA 302 Components

|              |                    |                             |
|--------------|--------------------|-----------------------------|
| formaldehyde | CAS-No.<br>50-00-0 | Revision Date<br>2008-11-03 |
|--------------|--------------------|-----------------------------|

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|              |                    |                             |
|--------------|--------------------|-----------------------------|
| formaldehyde | CAS-No.<br>50-00-0 | Revision Date<br>2008-11-03 |
| Methanol     | 67-56-1            | 2007-07-01                  |

#### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

#### Massachusetts Right To Know Components

|         |               |
|---------|---------------|
| CAS-No. | Revision Date |
|---------|---------------|

|                                                                                                                                                                                                             |                    |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------|
| water                                                                                                                                                                                                       | 7732-18-5          |                             |
| formaldehyde                                                                                                                                                                                                | 50-00-0            | 2008-11-03                  |
| Methanol                                                                                                                                                                                                    | 67-56-1            | 2007-07-01                  |
| <b>Pennsylvania Right To Know Components</b>                                                                                                                                                                |                    |                             |
| formaldehyde                                                                                                                                                                                                | CAS-No.<br>50-00-0 | Revision Date<br>2008-11-03 |
| Methanol                                                                                                                                                                                                    | 67-56-1            | 2007-07-01                  |
| <b>California Prop. 65 Components</b>                                                                                                                                                                       |                    |                             |
| , which is/are known to the State of California to cause cancer, and formaldehyde                                                                                                                           | CAS-No.<br>50-00-0 | Revision Date<br>2007-09-28 |
| , which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> . Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

---

## SECTION 16: Other information

### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

Version: 6.13

Revision Date: 03/02/2024

Print Date: 06/15/2024