

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Formaldehyde, 10% v/v, Unbuffered
Product code : LC14660

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

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Dam. 1 H318
Skin Sens. 1 H317
Carc. 1B H350
Aquatic Acute 3 H402

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



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
P261 - Avoid breathing gas, mist, vapours, spray
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 - Take off contaminated clothing and wash before reuse
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

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2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

| Name | Product identifier | % | GHS-US classification |
|-----------------------|--------------------|-------|---|
| Water | (CAS No) 7732-18-5 | 95.05 | Not classified |
| Formaldehyde, 37% w/w | (CAS No) 50-00-0 | 3.7 | Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Carc. 1B, H350 Aquatic Acute 2, H401 |
| Methanol | (CAS No) 67-56-1 | 1.25 | Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370 |

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 : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Wash with plenty of soap and 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, both acute and delayed

Symptoms/injuries : May cause cancer (Inhalation).

Symptoms/injuries after inhalation : May cause an allergic skin reaction.

Symptoms/injuries after skin contact : Causes skin irritation.

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

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

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

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.

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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 vapour. Avoid breathing mist, vapours, 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 container closed when not in use.
Incompatible products : Strong bases. Strong acids. Strong oxidizers.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Formaldehyde, 37% w/w (50-00-0) | | |
|---------------------------------|------------------------------------|------------------------|
| USA ACGIH | ACGIH Ceiling (mg/m ³) | 0.37 mg/m ³ |
| USA ACGIH | ACGIH Ceiling (ppm) | 0.3 ppm |
| USA OSHA | OSHA PEL (TWA) (ppm) | 0.75 ppm |
| USA OSHA | OSHA PEL (STEL) (ppm) | 2 ppm |

| Methanol (67-56-1) | | |
|--------------------|-------------------------------------|-----------------------|
| USA ACGIH | ACGIH TWA (ppm) | 200 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 200 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 260 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 200 ppm |

8.2. Exposure 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.
Personal protective equipment : Avoid all unnecessary exposure.
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.

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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
Colour : Colourless.
Odour : characteristic.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Self ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Solubility : Soluble in water.
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available.
Oxidising properties : No data available.
Explosive limits : 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 acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Formaldehyde, 37% w/w (50-00-0)

| | |
|---------------|-----------|
| LD50 oral rat | 500 mg/kg |
|---------------|-----------|

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| Water (7732-18-5) | |
|-------------------|---------------|
| LD50 oral rat | ≥ 90000 mg/kg |

| Methanol (67-56-1) | |
|----------------------------|---|
| LD50 oral rat | > 5000 mg/kg (1187-2769 mg/kg bodyweight; Rat; Rat) |
| LD50 dermal rabbit | 15800 mg/kg (Rabbit) |
| LC50 inhalation rat (mg/l) | 85 mg/l/4h (Rat) |
| LC50 inhalation rat (ppm) | 64000 ppm/4h (Rat) |

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

| Formaldehyde, 37% w/w (50-00-0) | |
|---------------------------------|----------------------------|
| 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/injuries after inhalation | : May cause an allergic skin reaction. |
|------------------------------------|--|

| | |
|--------------------------------------|---------------------------|
| Symptoms/injuries after skin contact | : Causes skin irritation. |
|--------------------------------------|---------------------------|

| | |
|-------------------------------------|------------------------------|
| Symptoms/injuries after eye contact | : Causes serious eye damage. |
|-------------------------------------|------------------------------|

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-----------------|----------------------------|
| Ecology - water | : Harmful to aquatic life. |
|-----------------|----------------------------|

| Formaldehyde, 10% v/v, Unbuffered | |
|-----------------------------------|---------|
| EC50 Daphnia 1 | 54 mg/l |

| Formaldehyde, 37% w/w (50-00-0) | |
|---------------------------------|---|
| LC50 fishes 1 | 41 mg/l (96 h; Brachydanio rerio; Pure substance) |
| EC50 Daphnia 1 | 14.7 mg/l (24 h; Daphnia magna; Pure substance) |
| LC50 fish 2 | 62 - 109 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Pure substance) |
| EC50 Daphnia 2 | 2 mg/l |
| TLM fish 1 | 50 - 200,96 h; Poecilia reticulata; Pure substance |
| TLM fish 2 | 10 - 100,Pisces; Pure substance |
| TLM other aquatic organisms 1 | 10 - 100,96 h |
| Threshold limit algae 1 | 2.5 mg/l (192 h; Scenedesmus quadricauda; Pure substance) |
| Threshold limit algae 2 | 0.39 mg/l (192 h; Microcystis aeruginosa; Solution <50%) |

| Methanol (67-56-1) | |
|---|--|
| LC50 fishes 1 | 15400 mg/l (96 h; Lepomis macrochirus; Lethal) |
| EC50 Daphnia 1 | > 10000 mg/l (48 h; Daphnia magna; Lethal) |
| LC50 fish 2 | 10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss) |
| EC50 Daphnia 2 | 24500 mg/l (48 h; Daphnia magna) |
| Threshold limit other aquatic organisms 1 | 6600 mg/l (16 h; Pseudomonas putida) |
| Threshold limit algae 1 | 530 mg/l (192 h; Microcystis aeruginosa) |
| Threshold limit algae 2 | 8000 mg/l (168 h; Scenedesmus quadricauda) |

12.2. Persistence and degradability

| Formaldehyde, 10% v/v, Unbuffered | |
|-----------------------------------|------------------|
| Persistence and degradability | Not established. |

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| Formaldehyde, 37% w/w (50-00-0) | |
|--|--|
| Persistence and degradability | Readily biodegradable in water. Biodegradability in soil: no data available. No (test) data on mobility of the components of the mixture available. Photodegradation in the air. |
| Biochemical oxygen demand (BOD) | 0.64 g O ² /g substance |
| Chemical oxygen demand (COD) | 1.06 g O ² /g substance |
| ThOD | 1.068 g O ² /g substance |
| BOD (% of ThOD) | (5 day(s)) 0.60 |

| Water (7732-18-5) | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

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

12.3. Bioaccumulative potential

| Formaldehyde, 10% v/v, Unbuffered | |
|--|------------------|
| Bioaccumulative potential | Not established. |

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

| Water (7732-18-5) | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

| Methanol (67-56-1) | |
|---------------------------|--|
| BCF fish 1 | < 10 (Leuciscus idus) |
| Log Pow | -0.77 (Experimental value; Other, Experimental value; Other) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

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) |

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment 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

In accordance with DOT
No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

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Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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| | |
|-------------------------------------|---------------------------------|
| SARA Section 311/312 Hazard Classes | Delayed (chronic) health hazard |
|-------------------------------------|---------------------------------|

Formaldehyde, 37% w/w (50-00-0)

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

| | |
|--|--------|
| 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 % |
|---------------------------------------|-------|

Water (7732-18-5)

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

Methanol (67-56-1)

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

Listed on SARA Section 313 (Specific toxic chemical listings)

| | |
|--|---------|
| 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 |
|-------------------------------------|--|

15.2. International regulations

CANADA

Formaldehyde, 10% v/v, Unbuffered

| | |
|----------------------|---|
| WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|---|

Formaldehyde, 37% w/w (50-00-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

| | |
|----------------------|--|
| WHMIS Classification | Class B Division 3 - Combustible Liquid Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material |
|----------------------|--|

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

| | |
|----------------------|---|
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |
|----------------------|---|

Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

| | |
|----------------------|--|
| WHMIS Classification | Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|--|

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

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15.2.2. National regulations

Formaldehyde, 37% w/w (50-00-0)

Listed on the Canadian Ingredient Disclosure List

Water (7732-18-5)

Not listed on the Canadian Ingredient Disclosure List

Methanol (67-56-1)

Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

Formaldehyde, 37% w/w (50-00-0)

| | | | | |
|---|---|---|---|-----------------------------------|
| 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 significance risk level (NSRL) |
| Yes | Yes | | | |

Methanol (67-56-1)

| | | | | |
|---|---|---|---|-----------------------------------|
| 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 significance risk level (NSRL) |
| | Yes | | | |

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

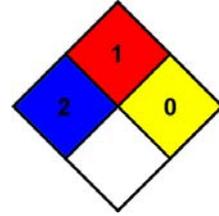
| | |
|---------------------------|--|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 (Inhalation) | Acute toxicity (inhal.), Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 2 | Hazardous to the aquatic environment — AcuteHazard, Category 2 |
| Aquatic Acute 3 | Hazardous to the aquatic environment — AcuteHazard, Category 3 |
| Carc. 1B | Carcinogenicity, Category 1B |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Sensitisation — Skin, category 1 |
| Skin Sens. 1A | Sensitisation — Skin, category 1A |
| STOT SE 1 | Specific target organ toxicity — single exposure, Category 1 |
| H225 | Highly flammable liquid and vapour |
| H226 | Flammable liquid and vapour |
| H301 | Toxic if swallowed |
| H302 | Harmful if swallowed |
| H311 | Toxic 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 |
| H331 | Toxic if inhaled |
| H350 | May cause cancer |
| H370 | Causes damage to organs |
| H401 | Toxic to aquatic life |
| H402 | Harmful to aquatic life |

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- NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 1 - Must be preheated before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 1 Slight Hazard
- Physical : 0 Minimal Hazard
- Personal Protection : H

SDS US (GHS HazCom 2012)

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