Safety Data Sheet

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


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

Product identifier

<table>
<thead>
<tr>
<th>Trade name/designation:</th>
<th>Formalin 10% v/v</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product No.:</td>
<td>41916</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>no data available</td>
</tr>
<tr>
<td>CAS No.:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Other means of identification:</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Recommended Use:</th>
<th>For Further Manufacturing Use Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses advised against:</td>
<td>Not for Human or Animal Drug Use</td>
</tr>
</tbody>
</table>

Details of the supplier of the safety data sheet

Canada

Supplier

**VWR International LLC**

<table>
<thead>
<tr>
<th>Street</th>
<th>100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postal code/city</td>
<td>Radnor, PA 19087</td>
</tr>
<tr>
<td>Telephone</td>
<td>+1-800-932-5000 toll-free within US/CA</td>
</tr>
<tr>
<td>Telefax</td>
<td>+1-610-386-1700</td>
</tr>
<tr>
<td></td>
<td>+1-610-728-2103</td>
</tr>
</tbody>
</table>
**SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

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

<table>
<thead>
<tr>
<th>Hazard classes and hazard categories</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity, category 1B</td>
<td>H350</td>
</tr>
<tr>
<td>Germ cell mutagenicity, category 2</td>
<td>H341</td>
</tr>
<tr>
<td>Acute toxicity, category 4, oral and inhalation</td>
<td>H302+H332</td>
</tr>
<tr>
<td>Eye irritation, category 2</td>
<td>H319</td>
</tr>
<tr>
<td>Skin irritation, category 2</td>
<td>H315</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure), category 3, vascular</td>
<td>H335</td>
</tr>
<tr>
<td>Skin sensitization, category 1</td>
<td>H317</td>
</tr>
</tbody>
</table>

### 2.2 Label elements

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

**Signal word:** Danger

**Hazard pictograms**

<table>
<thead>
<tr>
<th>Hazard statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H350</td>
<td>May cause cancer.</td>
</tr>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects.</td>
</tr>
<tr>
<td>H302+H332</td>
<td>Harmful if swallowed or if inhaled.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
</tbody>
</table>
Precautionary statements

<table>
<thead>
<tr>
<th>P201</th>
<th>Obtain special instructions before use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P280</td>
<td>Wear protective gloves/protective clothing/eye protection/face protection.</td>
</tr>
<tr>
<td>P302+P352</td>
<td>IF ON SKIN: Wash with plenty of water/...</td>
</tr>
<tr>
<td>P304+P340</td>
<td>IF INHALED: Remove person to fresh air and keep comfortable for breathing.</td>
</tr>
<tr>
<td>P305+P351+P338</td>
<td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td>P308+P313</td>
<td>IF exposed or concerned: Get medical advice/attention.</td>
</tr>
</tbody>
</table>

Other hazards

Hazards not otherwise classified (HNOC)
no data available

SECTION 3: Composition / information on ingredients

3.1 Substances
not applicable

3.2 Mixtures

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Concentration</th>
<th>Product identifier</th>
<th>Hazard classes and hazard categories</th>
</tr>
</thead>
</table>
| Formaldehyde   | 3 - 5 %       | CAS No.: 50-00-0   | Carc. 2 - H351
Acute Tox. 3 - H301+H311+H331
Skin Corr. 1B - H314
Skin Sens. 1 - H317 |
| Methanol       | 1 - 2 %       | CAS No.: 67-56-1   | Flam. Liq. 2 - H225
Acute Tox. 3 - H301+H311+H331
STOT SE 1 - H370 |

SECTION 4: First aid measures

4.1 General information
no data available

After inhalation
no data available

In case of skin contact
no data available

After eye contact
no data available

In case of ingestion
no data available

4.2 Most important symptoms/effects, acute and delayed
no data available
4.3 Indication of any immediate medical attention and special treatment needed
   no data available

4.4 Self-protection of the first aider
   no data available

4.5 Information to physician
   no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
   Suitable extinguishing media
   no data available

   Extinguishing media which must not be used for safety reasons
   no data available

5.2 Specific hazards arising from the chemical
   no data available

5.3 Advice for firefighters
   no data available

5.4 Additional information
   no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
   no data available

6.2 Environmental precautions
   no data available

6.3 Methods and material for containment and cleaning up
   no data available

6.4 Additional information
   no data available

SECTION 7: Handling and storage

7.1 Precautions for safe handling
   no data available

7.2 Conditions for safe storage, including any incompatibilities
   storage temperature: no data available
   Storage class: no data available
   no data available
7.3 Specific end use(s)
no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredient (Designation)</th>
<th>Regulatory information</th>
<th>Country</th>
<th>Limit value type (country of origin)</th>
<th>Limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Gestis</td>
<td>CA</td>
<td>LTV</td>
<td>262 mg/m³ - 200 ppm</td>
</tr>
<tr>
<td>Methanol</td>
<td>Gestis</td>
<td>CA</td>
<td>STV</td>
<td>328 mg/m³ - 250 ppm</td>
</tr>
</tbody>
</table>

8.2 Engineering controls

Appropriate engineering controls
no data available

Personal protection equipment (PPE)
no data available

Eye/face protection
no data available

Skin protection
no data available

By short-term hand contact
Suitable material: no data available
Thickness of the glove material: no data available
Breakthrough time (maximum wearing time): no data available

By long-term hand contact
Suitable material: no data available
Thickness of the glove material: no data available
Breakthrough time (maximum wearing time): no data available

Respiratory protection
no data available

Additional information
no data available

Environmental exposure controls
no data available
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
   (a) Appearance
      Physical state: liquid
      Color: colorless
   (b) Odour: no data available
   (c) Odour threshold: no data available

Safety relevant basic data

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

9.2 Other information
   Bulk density: not applicable
   Refraction index: no data available
   Dissociation constant: no data available
   Surface tension: no data available
   Henry constant: no data available

SECTION 10: Stability and reactivity

10.1 Reactivity
   no data available
10.2 Chemical stability
no data available

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
no data available

10.6 Hazardous decomposition products
no data available

10.7 Additional information
no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects
Acute oral toxicity:
Formaldehyde - LD50: > 100 mg/kg - Rat - (CHP)
Methanol - LD50: > 5628 mg/kg - Rat - (IUCLID)
Methanol - LDLo: > 143 mg/kg - Human - (RTECS)

Acute dermal toxicity:
Formaldehyde - LD50: > 270 mg/kg - Rabbit - (CHP)
Methanol - LD50: > 15800 mg/kg - Rabbit

Acute inhalation toxicity:
Formaldehyde - LC50: > 0.578 mg/l (4h) - Rat - (CHP)
Methanol - TClO: > 160 ppm (4h) - Human

Irritant and corrosive effects
Primary irritation to the skin:
Causes skin irritation.

Irritation to eyes:
Causes serious eye irritation.

Irritation to respiratory tract:
May cause respiratory irritation.
Respiratory or skin sensitization
In case of skin contact: Sensitising
After inhalation: not sensitising

STOT-single exposure
May cause respiratory irritation.

STOT-repeated exposure
not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>no data available</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Germ cell mutagenicity
Suspected of causing genetic defects.

Reproductive toxicity
No indications of human reproductive toxicity exist.

Aspiration hazard
not applicable

Other adverse effects
no data available

Additional information
no data available

SECTION 12: Ecological information

12.1 Ecotoxicity

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


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

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


Algae toxicity:
no data available

Bacteria toxicity:
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil:
no data available

12.5 Results of PBT/vPvB assessment
no data available

12.6 Other adverse effects
no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product
no data available

Waste code product: no data available

Appropriate disposal / Package
no data available

Additional information
no data available

SECTION 14: Transport information

Land transport (DOT)

No dangerous good in sense of these transport regulations.
Sea transport (IMDG)

No dangerous good in sense of these transport regulations.
Air transport (ICAO-TI / IATA-DGR)

UN-No.: 3334
Proper Shipping Name: (FORMALDEHYDE)
Class(es): 9
Classification code:
Hazard label(s): 9
Packing group: III
Special precautions for user:

SECTION 15: Regulatory information

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

Domestic Substance List:

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)
Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)
RID - Regulation concerning the International Carriage of Dangerous Goods by Rail

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