

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

1 Identification

- **Product identifier**
- **Trade name:** Formaldehyde 10% v/v
Buffered Solution
- **Article number:** F6060
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Germ Cell Mutagenicity 2 H341 Suspected of causing genetic defects.
Carcinogenicity 1A H350 May cause cancer.



GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
Formaldehyde
- **Hazard statements**
Flammable liquid and vapor.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 1)

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use CO₂, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 3

Fire = 2

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 3

Fire = 2

Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 50-00-0	Formaldehyde	3.7%
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· Table of Nonhazardous Ingredients

CAS: 7732-18-5	Water	95.232%
CAS: 7558-79-4	Sodium Phosphate Dibasic Anhydrous	0.661%

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 2)

CAS: 10049-21-5 Sodium Phosphate Monobasic Monohydrate

0.407%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

CAS: 50-00-0 Formaldehyde

0.90 ppm

- **PAC-2:**

CAS: 50-00-0 Formaldehyde

14 ppm

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 3)

· PAC-3:	
CAS: 50-00-0 Formaldehyde	56 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.*
- **Information about protection against explosions and fires:**
*Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
 Keep respiratory protective device available.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *Keep receptacle tightly sealed.*
- **Specific end use(s)** *No further relevant information available.*

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see section 7.*
- **Control parameters**

· Components with limit values that require monitoring at the workplace:	
CAS: 50-00-0 Formaldehyde	
PEL	<i>Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)</i>
REL	<i>Long-term value: 0.016 ppm Ceiling limit value: 0.1* ppm *15-min; See Pocket Guide App. A</i>
TLV	<i>Short-term value: 0.3 ppm Long-term value: 0.1 ppm DSEN; RSEN, AI</i>

- **Additional information:** *The lists that were valid during the creation were used as basis.*

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
*Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.*
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 4)

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Clear
Odor:	Strong
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	-3 °C (26.6 °F)

· **Flash point:** 56 °C (132.8 °F)

· **Flammability (solid, gaseous):** Flammable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

(Contd. on page 6)

Safety Data Sheet

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Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 5)

· Density at 20 °C (68 °F):	0.98304 g/cm ³ (8.20347 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with Water:	Fully miscible.
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· Partition coefficient (n-octanol/water):	Not determined.
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· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:	
Organic solvents:	3.7 %
Water:	95.2 %
VOC content:	3.70 %
	36.4 g/l / 0.30 lb/gal

Solids content:	1.1 %
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· Other information	No further relevant information available.
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10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	>5,405 mg/kg (rat)
Dermal	LD50	8,108 mg/kg
Inhalative	LC50/4h	81.1 mg/l

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 6)

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

CAS: 50-00-0 Formaldehyde	I
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· **NTP (National Toxicology Program)**

CAS: 50-00-0 Formaldehyde	K
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· **OSHA-Ca (Occupational Safety & Health Administration)**

CAS: 50-00-0 Formaldehyde	
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12 Ecological information

· **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, ADN, IMDG, IATA** Not regulated

· **UN proper shipping name**

· **DOT, ADN, IMDG, IATA** Not regulated

· **Transport hazard class(es)**

· **DOT, ADN, IMDG, IATA** Not regulated
· **Class**

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 7)

- | | |
|--|-----------------|
| · Packing group
· DOT, IMDG, IATA | Not regulated |
| · Environmental hazards:
· Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Not regulated |

15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

CAS: 50-00-0	Formaldehyde
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- **Section 313 (Specific toxic chemical listings):**

CAS: 50-00-0	Formaldehyde
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- **TSCA (Toxic Substances Control Act):**

Water	ACTIVE
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Formaldehyde	ACTIVE
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Sodium Phosphate Dibasic Anhydrous	ACTIVE
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- **Hazardous Air Pollutants**

CAS: 50-00-0	Formaldehyde
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- **Proposition 65**

- **Chemicals known to cause cancer:**

CAS: 50-00-0	Formaldehyde
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- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

CAS: 50-00-0	Formaldehyde		B1
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- **TLV (Threshold Limit Value)**

CAS: 50-00-0	Formaldehyde		A2
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- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

CAS: 50-00-0	Formaldehyde
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- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 8)

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Formaldehyde

· **Hazard statements**

Flammable liquid and vapor.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

* **16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *Environment protection department.*

· **Contact:**

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/07/2023

Reviewed on 08/07/2023

**Trade name: Formaldehyde 10% v/v
Buffered Solution**

(Contd. of page 9)

· **Date of preparation / last revision**

Revision 1.0, 08/07/2023: Reviewed SDS for Accuracy.. STN

Revision 0.1, 07-18-2019: reviewed SDS. STN

08/07/2023

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Liquids 3: Flammable liquids – Category 3

Sensitization - Skin 1: Skin sensitisation – Category 1

Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2

Carcinogenicity 1A: Carcinogenicity – Category 1A

· *** Data compared to the previous version altered.**

US