

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/19/2021

Reviewed on 05/20/2021

1 Identification

- **Product identifier**
- **Trade name:** Acetaldehyde
- **Article number:** 221485
- **CAS Number:**
75-07-0
- **EC number:**
200-836-8
- **Index number:**
605-003-00-6
- **Application of the substance / the mixture** Laboratory chemicals for research and development
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BeanTown Chemical
9 Sagamore Park Road
Hudson, NH 03051
USA
- Phone: (603) 402-2234
Fax: (603) 402-9713
Email: technical@beantownchem.com
www.beantownchem.com
- **Information department:** Technical Support Department
- **Emergency telephone number:**
During normal operating hours, please call (603) 402-2234
After hours, please call Chemtrec at (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 1 H224 Extremely flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 1 H330 Fatal if inhaled.



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

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STOT SE 3 H335 May cause respiratory irritation.

- Label elements

- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms



GHS02



GHS06



GHS07



GHS08

- Signal word Danger

- Hazard-determining components of labeling:

acetaldehyde

- Hazard statements

Extremely flammable liquid and vapor.

Harmful if swallowed.

Fatal if inhaled.

Causes serious eye irritation.

Suspected of causing genetic defects.

Suspected of causing cancer.

May cause respiratory irritation.

- Precautionary statements

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

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.

Specific treatment is urgent (see on this label).

Store locked up.

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

- Other hazards

- Results of PBT and vPvB assessment

- PBT: Not applicable.

- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances

- CAS No. Description

75-07-0 acetaldehyde

- Identification number(s)

- EC number: 200-836-8

- Index number: 605-003-00-6

4 First-aid measures

- Description of first aid measures

- General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

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- In case of irregular breathing or respiratory arrest provide artificial respiration.*
- **After inhalation:**
Supply fresh air or oxygen; call for 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. If symptoms persist, consult a doctor.
 - **After swallowing:** Immediately call a 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, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** 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 item 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:	45 ppm
· PAC-2:	270 ppm
· PAC-3:	840 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.

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- Open and handle receptacle with care.
- Only handle and refill product in closed systems.
- 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:** Store in a cool location.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Do not gas tight seal receptacle.
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
 - Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

75-07-0 acetaldehyde

PEL	Long-term value: 360 mg/m ³ , 200 ppm
REL	See Pocket Guide Apps. A and C
TLV	Ceiling limit value: 45 mg/m ³ , 25 ppm

- **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.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- **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.
- **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

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- 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.

- 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

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Unpleasant
Odor threshold:	Not determined.

- pH-value:

Not determined.

- Change in condition

Melting point/Melting range:	-125 °C (-193 °F)
Boiling point/Boiling range:	21 °C (69.8 °F)

- Flash point:

-39 °C (-38.2 °F)

- Flammability (solid, gaseous):

Not applicable.

- Ignition temperature:

140 °C (284 °F)

- Decomposition temperature:

Not determined.

- Auto igniting:

Not determined.

- Danger of explosion:

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- Explosion limits:

Lower:	4 Vol %
Upper:	57 Vol %

- Vapor pressure at 20 °C (68 °F):

1,007 hPa (0.807 mm Hg)

- Density at 20 °C (68 °F):

0.785 g/cm³ (6.55083 lbs/gal)

- Relative density

Not determined.

- Vapor density

Not determined.

- Evaporation rate

Not determined.

- Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

- Partition coefficient (n-octanol/water):

Not determined.

- Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

VOC content: 0.00 %

0.0 g/l / 0.00 lb/gal

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Solids content: 0.0 %

· Other information No further relevant information available.

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:**

75-07-0 acetaldehyde

Oral LD50 661 mg/kg (rat)

Inhalative LC50/4 h 37 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

- **Carcinogenic categories**

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

2B

· **NTP (National Toxicology Program)**

R

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

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 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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- 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.

14 Transport information

- | | |
|---------------------------------------------------------------------------|----------------------------|
| · UN-Number | UN1089 |
| · DOT, IMDG, IATA | |
| · UN proper shipping name | Acetaldehyde |
| · DOT | ACETALDEHYDE |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT, IMDG, IATA | 3 Flammable liquids |
| · Class | 3 |
| · Label | |
| · Packing group | I |
| · DOT, IMDG, IATA | |
| · Environmental hazards: | No |
| · Marine pollutant: | |
| · Special precautions for user | Warning: Flammable liquids |
| · Stowage Category | E |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | UN 1089 ACETALDEHYDE, 3, I |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.
- Sara

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is listed.

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· **TSCA (Toxic Substances Control Act):**

ACTIVE

· **Hazardous Air Pollutants**

Substance is listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

Substance is listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

B2

· **TLV (Threshold Limit Value)**

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is listed.

· **RTECS**

Substance is not listed.

· **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.

· **NFPA ratings (scale 0-4)**

Health = 2

Fire = 4

Reactivity = 0

· **HMIS ratings (scale 0-4)**

Health = *2

Fire = 4

Reactivity = 0

· **Department issuing SDS:** Technical Support Department· **Contact:** Technical Support Department· **Date of preparation / last revision** 06/19/2021 / -· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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

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

VOC: Volatile Organic Compounds (USA, EU)

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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
Flam. Liq. 1: Flammable liquids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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