



Safety Data Sheet (SDS) Formaldehyde, 37% Solution

Effective Date: 03/28/2025

PRODUCT CODE: 17

Section 1. Identification of substance

Product / Trade Name: Formaldehyde, Aqueous; Methylene oxide solution
Methyl aldehyde solution

Synonyms: Formalin

Chemical Family: Aldehyde

Molecular Formula: CH₂O

Supplier: Centaur Animal Health

1351 W Old 56 Hwy

Olathe, Kansas 66061 – USA

Phone: (913) 390-6184

Emergency Phone (24 hours): CHEMTREC 1-800-424-9300

Section 2. Hazard Information Classification of the substance or Mixture

GHS-US Classification

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

Label Elements

GHS-US labelling

Hazard pictograms (GHS-US)



Signal word (GHS-US)**Danger****Hazard Statements (GHS-US)**

H226 – Flammable liquid and vapor
 H302 – Harmful if swallowed
 H314 – Causes severe skin burns and eye damage
 H317 – May cause an allergic skin reaction
 H318 – Causes serious eye damage
 H331 – Toxic if inhaled
 H350 – May cause cancer (Inhalation)
 H401 – Toxic 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
 P210 – Keep away from heat, sparks, open flames, hot surfaces. – No smoking
 P233 – Keep container tightly closed
 P240 – Ground/bond container and receiving equipment
 P242 – Use only non-sparking tools
 P243 – Take precautionary measures against static discharge
 P264 – Wash exposed 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 should not be allowed out of the workplace
 P273 – Avoid release to the environment
 P280 – Wear protective clothing, protective gloves, eye protection, face protection
 P303+P361+P353 – IF ON SKIN (or hair): remove/take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 – IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.
 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
 P363 – Wash contaminated clothing before reuse
 P37 +P378 – In case of fire: use carbon dioxide (CO₂), powder, alcohol-resistant foam for extinction.
 P403+P233 – store in a well-ventilated place. Keep container tightly closed.
 P235 – Keep cool.
 P405 – Store locked up
 P501 – dispose of contents/container to comply with local, state and federal regulations.

Section 3. Composition and Information on Ingredients

Hazardous Components	CAS No.	% by Weight	NIOSH No.	STCC Code	ACGIH TLV	OSHA PEL
Formaldehyde (EC no 200-001-8) (EC index no 605-001-00-5)	50-00-0	35 to 38	LP8925000	496 6365	CEIL: 0.3 ppm	TWA: 0.75 ppm
Methanol	67-56-1	10-29	PC1400000	490 9230 490 9237 490 9377 490 9378 490 9379 490 9380 490 9381 491 0499	TWA: 200 ppm	TWA: 200 ppm

[skin] This notation indicates that absorption through skin can contribute significantly to overall exposure. TWA's are 8 hour exposures unless otherwise noted. STEL's are 15 minute exposures unless otherwise noted.

Section 4. First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove any contact lenses. Hold eyelids apart and flush eyes with water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water for at least 15 minutes. Get medical attention if irritation persists. Launder contaminated clothing and shoes before reuse.

Inhalation: Remove to fresh air immediately. Keep affected person warm and at rest in a half-upright position. Get medical attention if necessary. If not breathing, give artificial respiration, by forced air. If breathing is difficult, oxygen should be administered by trained personnel. Get medical attention.

Ingestion: If conscious, immediately rinse mouth and induce vomiting, drink a tablespoon of salt in a glass of warm water and repeat until vomit fluid is clear. Immediately contact poison control center or hospital emergency room. Never give anything by mouth to an unconscious person.

Potential Health Effects

Eye contact: Contact with liquid or mist can cause severe eye irritation or injury. Symptoms may include redness, watering, itching, swelling, or a burning sensation in the eyes

Skin Contact: A prolonged single exposure can produce severe skin irritation or injury. Symptoms may include itching, scaling, cracking, reddening, or blistering at the site of contact. Exposure to this product may cause an allergic skin reaction. This product may be absorbed through the skin in harmful amounts.

Inhalation: This product may be toxic by inhalation. Inhalation of vapors or mist can cause severe respiratory irritation. Vapors released from product may be irritating to the nose, mouth, mucous membranes, throat, and lungs. Symptoms may include a burning sensation, coughing, shortness of breath, nausea, chest pain, or headaches. Can cause central nervous system depression. Severe over-exposure may produce lung damage, choking, unconsciousness, or death. Exposure may cause an allergic respiratory reaction in some individuals.

Ingestion: This product is orally toxic and may be harmful or fatal if swallowed. However, in normal industrial use, ingestion is not considered a probable route of exposure. May cause irritation or burns to mucous membranes, esophagus or GI tract characterized by nausea, vomiting, abdominal pain and/or diarrhea. Ingestion of this product may cause irreversible visual impairment or blindness.

Chronic: Formaldehyde may cause cancer based on animal data. Repeated or prolonged exposure to formaldehyde may cause skin sensitization, dermatitis, or other allergic reactions. The degree of sensitivity varies with individuals. This substance is known to the State of California to cause cancer. This product contains ingredients which may affect the following target organs: **respiratory system, eyes, skin, and nasopharyngeal cavity**. Obtain medical assistance if there is indication of special treatment needed.

Section 5. Fire-fighting measures

Extinguisher Media

Suitable extinguishing media: Dry chemical, CO₂, water spray (fog) or foam

Special hazards arising from the substance or mixture

Fire hazard: When heated to decomposition, carbon monoxide and carbon dioxide formed

Explosion hazard: Indirect explosion hazard

Reactivity: Upon decomposition the following may be released:

Carbon dioxide

Carbon monoxide

Irritating fumes and toxic fumes and gases

Aldehydes

Advice for firefighters: Cool tanks/drums remove to safety. Do not move a load if exposed to heat. If possible collect and contain water used.

Section 6. Accidental Release Measures

Personal precautions, Protective equipment and emergency procedures

Non-emergency Personnel	Evacuate spill area.
	Turn off all sources of heat or ignition. Empty containers may contain explosive vapors. DO NOT cut, puncture or weld on or nearby.
Emergency Responders	Stop leak if you can do so without risk.
	Ventilate area with explosion-proof equipment ONLY.
	Use PPE appropriate to spill size and risk of exposure.
	Use PPE appropriate to spill size and risk of exposure (<i>see Section 8</i>)
Environmental	Retain all contaminated liquid for removal and treatment. Absorb residue and discard according to Considerations for Federal, State and Local Regulations.
	Avoid runoff or material and contain if possible

Method and material of containment and cleaning up

For Spills	Stop leak if you can do so without risk.
	Confine spillage and absorb on earth, sand, or other non-combustible absorbent material. Uncontaminated spilled material may be reused.

Section 7. Handling and Storage

Precautions for Safe Handling	Combustible liquid. Avoid contact with eyes, skin, and clothing. Use proper protective equipment. (<i>see Section 8</i>)
	Avoid breathing mist or vapor. Use only in a well-ventilated area.
	Unvented containers may develop pressure. Open with caution.
	Wash thoroughly after handling.
	Eye wash stations and safety showers should be easily accessible to areas where product is used.
	Persons with history of skin problems, or respiratory problems should avoid exposure.
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks, open flame, or other sources of ignition.
	See section 10 for compatibility
	Do not store portable containers in direct sunlight.
	Keep containers closed when not in use.
	Protect from freezing.
	Small containers should be protected from physical damage.
	Store away from incompatible materials. (<i>see Section 10</i>)

Section 8. Exposure controls/personal protection

Formaldehyde (50-00-0)	ACGIH Ceiling (mg/m3)	0.37
	ACGIH Ceiling (ppm)	0.3
	OSHA PEL (TWA)	0.75 ppm
	OSHA PEL (STEL)	2 ppm
Methanol (67-56-1)	ACGIH Ceiling (mg/m3)	200
	ACGIH Ceiling (ppm)	200
	OSHA PEL (TWA)	260 mg/m3
	OSHA PEL (STEL)	200 ppm

Exposure controls

Appropriate Engineering Controls	<p>Use ventilation as necessary to keep exposure to airborne contaminants below the exposure limits (TLV's and PEL's). Refer to Section 2.</p> <p>Use explosion-proof ventilation equipment.</p> <p>Detached storage is preferred.</p> <p>Indoor storage areas should be sloped toward a drain or retention area.</p>
Personal Protective Equipment (PPE)	<p>Use ventilation as necessary to keep exposure to airborne contaminants below the exposure limits (TLV's and PEL's). Refer to <u>Section 2</u>.</p> <p>Use explosion-proof ventilation equipment. Detached storage is preferred.</p> <p><u>Indoor storage areas should be sloped toward a drain or retention area.</u></p> <p>Eyes and face: Face shield with safety glasses or chemical safety goggles as cited in <u>29CFR 1910.1048</u>.</p> <p>Skin: Butyl rubber or neoprene gloves. Wear additional protective clothing as appropriate to protect skin. Chemical resistant apron or other impervious clothing, full protective suit (rain-suit), Butyl rubber boots.</p> <p>Respiratory: If feasible engineering controls do not prevent overexposure, a full-face respirator with cartridges approved by NIOSH/MSHA for formaldehyde may be used only when exposure levels are known to be within the unit's capability. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any situation where air purifying respirators may not provide adequate protection.</p> <p>Observe the OSHA respirator regulations cited in <u>29 CFR 1910.134</u>.</p>

Section 9. Physical and chemical properties

Physical State	Liquid							
Appearance/ color	Clear to Slight Hazy							
Odor	Pungent/irritating							
Odor threshold	NA							
pH	2-4.8							
Freezing point	Lower temperatures increase the rate of paraformaldehyde formation							
Boiling Point	100°C							
Flash point (ASTM D56)	Product	F37E00	F37E01	F37E02	F37E03	F37F00	F37F01	F37A00
	Flash Point F(C)	133 (56)	133 (56)	133 (56)	133 (56)	131 (55)	131 (55)	180 (82)
	Product	F37F02	F37G00	F37H00	F38A00	F41A00		
	Flash Point F(C)	131 (55)	152 (67)	131 (55)	120 (49)	125 (52)		
	No sustained burn D4206 on any product							
Lower Explosion Limit	See section 5							
Upper Explosion Limit	See Section 5							
Specific Gravity	1.08 – 1.165							
Solubility in water	Miscible							
Vapor Density	1 to 1.03							
This SDS should not be used as a product specification sheet								

Section 10. Stability and Reactivity Data
Reactivity: When heated to decomposition, oxygen from the air can oxidize
Chemical Stability: This product is stable under the recommended storage conditions.
Possibility to Hazardous Reactions: Will not occur under normal conditions
Conditions to Avoid: Avoid pressure, heat, welding, sparks, other sources of ignition.
Incompatible materials: Hazardous polymerization will not occur. Avoid contact or contamination with strong oxidizers, phenol, diamines, caustics, isocyanates and inorganic acids, alkalis. (Reaction with hydrochloric acid may form bis- chloromethyl ether, an OSHA regulated carcinogen.)
Hazardous Decomposition Products: When heated to decomposition, oxygen from the air can oxidize formaldehyde to formic acid. Formic Acid is corrosive! Carbon dioxide, and carbon monoxide also form.
Special Remarks: Prolonged storage or cooling may cause a non-hazardous self-polymerization to form paraformaldehyde which precipitates out of solution. (Methanol content is added as a stabilizer.) The contact of formaldehyde with strong bases such as caustic soda may cause a violent exothermic reaction and splattering. This product is sensitive to static discharge

Section 11. Toxicological Information on toxicological effects				
Acute Toxicity				
Formaldehyde	LD50 Oral	Rat	800mg/kg	
	LC50 Inhalation	Rat 2hour	0.578mg/l	
	LD50 Dermal	Rabbit	270mg/kg	
Methanol	LD50 Oral	Rat	>5000 mg/kg	
	LD50 dermal	Rabbit	15800 mg/kg	
	LC50 Inhalation	Rat 4hour	85 mg/l	
Irritation/Corrosion				
	Formaldehyde	Species	Score	Time
	skin	Rabbit	2.5	20 hours
	eyes	mouse	>3	
Skin/eye corrosion/irritation:		Causes severe skin burns and eye damage		
Respiratory or skin sensitization:		May cause allergic skin reaction		
Carcinogenicity - Formaldehyde				
IARC Group:		1- Carcinogenic to humans		
National Toxicity Program (NTP):		2- Known Human Carcinogens		
Reproductive Toxicity:		Not Available		
Teratogenicity		Not Available		
Aspiration Hazard		Not Available		
Symptoms related to physical, chemical and toxicological characteristics				
Inhalation		Runny nose, tearing, coughing, irritation to respiratory tract, difficulty breathing, asthma, reduced fetal weight, increased fetal deaths, skeletal malformation, risk of lung edema.		
Skin Contact		Burns or corrosion of skin, reduced fetal weights, increased fetal deaths, skeletal malformations.		
Eye Contact		Pain, redness, corrosion of eye tissues, watering.		

Ingestion	Stomach pain, nausea, vomiting, diarrhea, reduced fetal weight, increased fetal deaths, skeletal malformation.		
Chronic Health Effects			
Symptoms:	Dry skin, red skin, rash irritation, coughing, respiratory difficulties, allergic reaction, and risk of cancer. May affect unborn child, may damage fertility.		
Section 12. Ecological Information			
Toxicity			
Ecology-water			
Formaldehyde (50-00-0)			
	LC50 fishes 1	41 mg/l (96 hr; Brachydanio rerio)	
	EC50 Daphnia 1	14.7 mg/l (24 hr; Daphnia magna)	
	LC50 fishes 2	62-109mg/l (96hr; Salmo gairdneri)	
	EC50 Daphnia 2	2 mg/l	
	TLM fish 1	50-200, (96 hr; Poecilia Reticulata)	
	TLM fish 2	10-100, Pisces	
	TLM other aquatic organisms 1	10-100, (96 hr)	
	Threshold limit algae 1	2.5 mg/l (192 hr; Scenedesmus quadricauda)	
	Threshold limit algae 2	0.39 mg/l (192 hr; Microcystic aeruginosa)	
Methanol (67-56-1)			
	LC50 fishes 1	15400 mg/l (96hr; Lepomis macrochirus)	
	EC50 Daphnia 1	>10,000 mg/l (48hr; Daphnia magna)	
	LC50 fishes 2	108000 mg/l (96hr; Salmo gairdneri)	
	EC50 Daphnia 2	24500 mg/l (48hr; Dahpnia magna)	
	TLM other aquatic organisms 1	6600 mg/l (16hr; Pseudomonas putida)	
	Threshold limit algae 1	530 mg/l (192 hr; Microcystic aeruginosa)	
	Threshold limit algae 2	8000 mg/l (192 hr; Scenedesmus quadricauda)	
Persistence and degradability			
Formaldehyde (50-00-0)			
	Persistence and degradability	Readily biodegradable in water, and soil	
	BOD	0.64g Oxygen/g	
	COD	1.06g Oxygen/g	
	ThOD	1.068 g Oxygen/g	
Methanol (67-56-1)			
	Persistence and degradability	Readily biodegradable in water, and soil	
	BOD	0.6 - 1.12g Oxygen/g	
	COD	1.42g Oxygen/g	
	ThOD	1.5 g Oxygen/g	
	Bioaccumulative Potential	LogPow	BCF
	Formaldehyde	-0.78	<1
	Methanol	0.3Mo5	
			Potential
			Low
			Low

Mobility in Soil: Not Available

Section 13. Disposal Considerations

Waste Disposal: RECOVER FREE LIQUID. ABSORB RESIDUE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. SARA 313: YES-FORMALDEHYDE, 36-37.5%, CAS# 50-00-0; METHANOL, 10-15%, CAS# 67-56-1.

Additional Note: Formaldehyde (U122) is considered a hazardous waste if and when it is discarded.
Methanol (U154) is considered a hazardous waste if and when it is discarded.

Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

Section 14. Transportation Information

DOT Regulated

Regulatory Information	CFR, IMO/IMDG/ IATA	TDG
Proper Shipping Name	Formaldehyde solutions,	Formaldehyde solutions,
Hazard Class	8	8
UN Number (per 49CFR173.120)	UN 2209	UN 2209
Packing Group	III	III
Reportable Quantities	RQ (Formaldehyde)	
Placards / Labels	Placards: Corrosive	Labels: Corrosive

Section 15. Regulatory Information

Federal Regulations:	The following regulations may have reporting requirements for the components listed. See “Key to Abbreviations and Acronyms” under Section 16 for definitions.									
CERCLA / SARA:	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355).									
Emergency Reporting:	State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. Formaldehyde, Methanol									
SARA Title III Section 302/Section 313 Supplier Notification:	<p>This product is known to contain the following chemicals which are listed in 40 CFR 372.65 as toxic chemicals requiring notification. This information must be included in all MSDS’s that are copied and distributed for this product.</p> <table><tr><td><u>Components</u></td><td><u>CAS #</u></td><td><u>% by Weight</u></td></tr><tr><td>Formaldehyde</td><td>50-00-0</td><td>35.0 - 39</td></tr><tr><td>Methanol</td><td>67-56-1</td><td>10.0 - 29</td></tr></table>	<u>Components</u>	<u>CAS #</u>	<u>% by Weight</u>	Formaldehyde	50-00-0	35.0 - 39	Methanol	67-56-1	10.0 - 29
<u>Components</u>	<u>CAS #</u>	<u>% by Weight</u>								
Formaldehyde	50-00-0	35.0 - 39								
Methanol	67-56-1	10.0 - 29								
CWA Section 311:	<p>The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA.</p> <p>Formaldehyde</p>									
TSCA:	<p>All components of this product are listed on the Toxic Substances Control Act Inventory or are excluded from listing requirements.</p> <p>Formaldehyde 100lbs Methanol 5000lbs</p>									
RCRA Federal hazardous waste regulation:	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.									

Other Regulations:	<p>See the OSHA Formaldehyde Standard <u>29 CFR 1910.1048</u> for worker training, workplace monitoring, and medical surveillance requirements.</p> <p><u>California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):</u> This Product contains the following substance(s) known to the State of California to cause cancer: Formaldehyde, Methanol</p> <p>Clean Air Act (CAA) 112 accidental release prevention - Methanol</p>
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Section 16. Other Information

Other Special Considerations:	CAUTION!: Empty containers may contain product residue. Continue to observe recommended safety precautions when handling empty containers.
Supersedes Date:	1/29/19
Section(s) Changed Since Last Revision:	Updated Description

Key to Abbreviations and Acronyms

ACGIH	- American Conference of Governmental Industrial Hygienists
ANSI	- American Standards Institute
CEIL	- Ceiling Value
CERCLA	- Comprehensive Environmental Response, Compensation, and Liability Act
CFR	- Code of Federal Regulations
CWA	- Clean Water Act
DOT	- Department of Transportation
FDA	- Food and Drug Administration
HCS	- Hazard Communication Standard
HMIS	- Hazardous Materials Information System
IARC	- International Agency for Research on Cancer
IDLH	- Immediately Dangerous to Life and Health
LC50	- The concentration of a material expected to kill 50% of an animal test group.
LCLO	- Lowest lethal concentration of a substance
LD50	- The dose of a material expected to kill 50% of an animal test group.
LDLO	- Lowest lethal dose of a material
MSHA	- Mine Safety and Health Administration
N.O.S.	- Not Otherwise Specified
NFPA	- National Fire Protection Association
NIOSH	- National Institute for Occupational Safety and Health
NTP	- National Toxicology Program
OSHA	- Occupational Safety and Health Administration
PEL	- Permissible Exposure Limit (OSHA)
PP	- Personal Protective Equipment
RCRA	- Resource Conservation and Recovery Act
RQ	- Reportable Quantity
SARA	- Superfund Amendments and Reauthorization Act
SCBA	- Self-Contained Breathing Apparatus
STEL	- Short Term Exposure Limit
TLV	- Threshold Limit Value (recommended by ACGIH)
TSCA	- Toxic Substances Control Act
TWA	- Time weight Average

DISCLAIMER: This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.