



Safety Data Sheet

Classified according to WHMIS 2015

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Formaldehyde, 37%, ACS Reagent Grade

Product Number: RSOF0010

Other Identifying Product Numbers: RSOF0010-10F, RSOF0010-1A, RSOF0010-20F, RSOF0010-250A, RSOF0010-4A, RSOF0010-500A, RSOF0010-55E

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements:	Precautionary Statements:
Acute Toxicity - Oral	Category 4	H302	P264, P270, P301+P312, P330, P501
Acute Toxicity - Dermal	Category 3	H311	P280, P302+P352, P312, P321, P361, P405, P501
Acute Toxicity - Inhalation	Category 2	H330	P260, P271, P285, P304+P340, P310, P320, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Germ Cell Mutagenicity	Category 2	H341	P201, P202, P280, P308+P313, P405, P501
Carcinogenicity	Category 1	H350	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 2	H371	P260, P264, P270, P308+P311, P405, P501
Flammable Liquids	Category 3	H226	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

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Hazard Statements:

Hazard Number	Hazard Statement
H226	Flammable liquid and vapor.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H371	May cause damage to organs.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
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 and open flame. No smoking.
P233	Keep container tightly closed.
P234	Keep only in original container.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face 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 must not be allowed out of the workplace.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep 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+P311	IF exposed or concerned: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P312	Call a POISON CENTER or physician if you feel unwell.
P320	Specific treatment is urgent (Wash areas of contact with water).
P321	Specific treatment (Wash areas of contact with water).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P361	Take off immediately all contaminated clothing and wash it before reuse.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P390	Absorb spillage to prevent material damage.

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P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H ₂ O	18.01 g/mol	7732-18-5	48.00
Formaldehyde	HCHO	30.02 g/mol	50-00-0	37.00
Methyl Alcohol	CH ₃ OH	32.04 g/mol	67-56-1	15.00

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness and pain. Contact may cause irreversible eye damage. Symptoms may include stinging, tearing, redness, swelling, corneal damage and blindness.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

Ingestion: IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Dilute immediately with water or milk. Induce vomiting. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed. Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs. Formaldehyde is a known carcinogen. Flammable liquid. May be fatal if ingested. Cannot be made non-poisonous. If ingested, give large quantity of water and induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. Causes irritation to the eyes and respiratory system. Wash areas of contact with water. **EYE CONTACT:** May cause irritation, redness and pain. Contact may cause irreversible eye damage. Symptoms may include stinging, tearing, redness, swelling, corneal damage and blindness. **SKIN CONTACT:** Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

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4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water). Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Water spray, dry chemical, alcohol foam, polymer foam, carbon dioxide.

5.2. Specific Hazards Arising from the Substance or Mixture

Flammable liquid and vapor. Solutions of formaldehyde in water are considered combustible as the flammable vapors escape and form explosive mixtures with air over a wide range.

5.3. Special Protective Equipment for Firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus. Butyl rubber, nitrile rubber, or Viton barrier recommended.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Approach release from upwind. Use water spray to cool and disperse vapors, protect personnel, and dilute spills to form nonflammable mixtures. Stop or control the leak, if this can be done without undue risk. Control runoff and isolate discharged material for proper disposal.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits

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Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

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Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	TWA	USA	0.75 ppm TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	TLV-TWA	USA	0.1 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	TLV-STEL	USA	0.3 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	PEL-STEL	USA	2 ppm STEL (see 29 CFR 1910.1048)	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	PEL	USA	0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs

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Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formaldehyde (50-00-0)	PEL	USA	"0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA; 2 ppm STEL (15 min)" As Formaldehyde [50-00-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Formaldehyde (50-00-0)	PEL-STEL	USA	"2 ppm STEL (see 29 CFR 1910.1048)" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Short Term Exposure Limits
Formaldehyde (50-00-0)	TLV-STEL	USA	"0.3 ppm STEL" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Formaldehyde (50-00-0)	TLV-TWA	USA	"0.1 ppm TWA" As Formaldehyde [50-00-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Formaldehyde (50-00-0)	TWA	USA	"0.75 ppm TWA" As Formaldehyde [50-00-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Methyl Alcohol (67-56-1)	TLV-STEL	USA	"250 ppm STEL" As Methanol [67-56-1]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

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Methyl Alcohol (67-56-1)	TWA	USA	"200 ppm TWA; 260 mg/m ³ TWA" As Methyl alcohol [67-56-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Methyl Alcohol (67-56-1)	TLV-TWA	USA	"200 ppm TWA" As Methanol [67-56-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Methyl Alcohol (67-56-1)	TWA	USA	"200 ppm TWA; 260 mg/m ³ TWA" As Methyl alcohol [67-56-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Methyl Alcohol (67-56-1)	TLV-TWA	USA	"200 ppm TWA" As Methanol [67-56-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Methyl Alcohol (67-56-1)	TLV-STEL	USA	"250 ppm STEL" As Methanol [67-56-1]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Methyl Alcohol (67-56-1)	TWA	USA	200 ppm TWA; 260 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Methyl Alcohol (67-56-1)	TLV-TWA	USA	200 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Methyl Alcohol (67-56-1)	TLV-STEL	USA	250 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Methyl Alcohol (67-56-1)	TLV-TWA	USA	"200 ppm TWA" As Methanol [67-56-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Methyl Alcohol (67-56-1)	TLV-STEL	USA	"250 ppm STEL" As Methanol [67-56-1]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Methyl Alcohol (67-56-1)	TWA	USA	"200 ppm TWA; 260 mg/m ³ TWA" As Methyl alcohol [67-56-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. If the exposure limit is exceeded, a full facepiece respirator equipped with organic vapor cartridge should be worn.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. If the exposure limit is exceeded, a full facepiece respirator equipped with organic vapor cartridge should be worn. Chemical resistant gloves. Safety glasses or goggles.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: 2.8-4.0

Melting/Freezing Point: Data not available.

Initial Boiling Point/Range: Approximately 96°C - Approximately 96°C

Flash Point: 140°F

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.07

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Keep only in original container. Strong oxidizing agents, alkalis, acids, phenols, urea, and heat. Reacts with Hydrochloric Acid to form bischloromethyl ether, a known carcinogen.

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10.4. Hazardous Decomposition Products

May occur when heated to decomposition.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Toxic in contact with skin. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Specific treatment (Wash areas of contact with water). Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Inhalation Exposure:

Fatal if inhaled. Do not breathe fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Other Information:

LD50, Oral, Rat: (Methanol) 5628 mg/kg, (Formaldehyde) 100 mg/kg. Details of toxic effects not reported other than lethal dose value. LC50, Inhalation, Rat: (Formaldehyde) 203 mg/m³, peripheral nerve and behavioral effects noted. Formaldehyde is investigated as a tumorigen.

Skin Corrosion and Irritation:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. 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 or physician.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

Suspected of causing genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.



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Carcinogenicity:

May cause cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.



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SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 1 L, 4 L, 10 L, 20 L, 250 mL, 500 mL

UN Number: UN1198

Proper Shipping Name: Formaldehyde, solutions, flammable

Hazard Class: 3 (8)

Packing Group: III

Hazard Label(s):



Sizes: 55 Gal

UN Number: UN1198

Proper Shipping Name: RQ, Formaldehyde, Solutions, Flammable

Hazard Class: 3 (8)

Packing Group: III

Hazard Label(s):



14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L, 4 L, 10 L, 20 L, 250 mL, 500 mL

UN Number: UN1198

Proper Shipping Name: Formaldehyde solution, flammable

Hazard Class: 3 (8)

Packing Group: III

Hazard Label(s):



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14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 4 L, 10 L, 20 L, 250 mL, 500 mL

UN Number: UN1198

Proper Shipping Name: FORMALDEHYDE, SOLUTIONS, FLAMMABLE

Hazard Class: 3 (8)

Packing Group: III

Hazard Label(s):



Sizes: 55 Gal

UN Number: UN1198

Proper Shipping Name: FORMALDEHYDE, SOLUTIONS, FLAMMABLE

Hazard Class: 3 (8)

Packing Group: III

Hazard Label(s):



SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Formaldehyde (CAS # 50-00-0): "2 ppm STEL (See 29 CFR 1910.1048, 15 min)

Formaldehyde (CAS # 50-00-0): 0.5 ppm Action Level (See 29 CFR 1910.1048)

Formaldehyde (CAS # 50-00-0): 0.75 ppm TWA (See 29 CFR 1910.1048)

Formaldehyde (CAS # 50-00-0): 0.75 ppm TWA (See 29 CFR 1910.1048)" As Formaldehyde [50-00-0]

Formaldehyde (CAS # 50-00-0): 2 ppm STEL (See 29 CFR 1910.1048, 15 min)

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Formaldehyde (CAS # 50-00-0): "100 lb EPCRA RQ" As Formaldehyde [50-00-0]

Formaldehyde (CAS # 50-00-0): "500 lb TPQ" As Formaldehyde [50-00-0]

Formaldehyde (CAS # 50-00-0): 100 lb EPCRA RQ

Formaldehyde (CAS # 50-00-0): 500 lb TPQ

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15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Formaldehyde (CAS # 50-00-0): "100 lb final RQ"
Formaldehyde (CAS # 50-00-0): 100 lb final RQ
Formaldehyde (CAS # 50-00-0): 45.4 kg final RQ
Formaldehyde (CAS # 50-00-0): 45.4 kg final RQ" As Formaldehyde [50-00-0]
Methyl Alcohol (CAS # 67-56-1): "5000 lb final RQ"
Methyl Alcohol (CAS # 67-56-1): 2270 kg final RQ
Methyl Alcohol (CAS # 67-56-1): 2270 kg final RQ" As Methanol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Formaldehyde (CAS # 50-00-0): "0.1 % de minimis concentration" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): 0.1 % de minimis concentration
Methyl Alcohol (CAS # 67-56-1): "1.0 % de minimis concentration" As Methanol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration

15.5. Massachusetts Right-to-Know Substance List

Formaldehyde (CAS # 50-00-0): "Carcinogen"
Formaldehyde (CAS # 50-00-0): Carcinogen
Formaldehyde (CAS # 50-00-0): Extraordinarily hazardous
Formaldehyde (CAS # 50-00-0): Extraordinarily hazardous" As Formaldehyde [50-00-0]
Methyl Alcohol (CAS # 67-56-1): "Present" As Methanol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Formaldehyde (CAS # 50-00-0): "Environmental hazard"
Formaldehyde (CAS # 50-00-0): "Environmental hazard" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): "Special hazardous substance" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): Environmental hazard
Formaldehyde (CAS # 50-00-0): Special hazardous substance
Formaldehyde (CAS # 50-00-0): Special hazardous substance" As Formaldehyde [50-00-0]
Methyl Alcohol (CAS # 67-56-1): "Environmental hazard" As Methanol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): "Present" As Denatured alcohols [RR-00113-8]
Methyl Alcohol (CAS # 67-56-1): Environmental hazard
Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]
Water (CAS # 7732-18-5): Present

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15.7. New Jersey Worker and Community Right-to-Know Components

Formaldehyde (CAS # 50-00-0): "carcinogen"
Formaldehyde (CAS # 50-00-0): "SN 0946 500 lb TPQ" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): "sn 0946" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): carcinogen
Formaldehyde (CAS # 50-00-0): corrosive
Formaldehyde (CAS # 50-00-0): flammable - fourth degree
Formaldehyde (CAS # 50-00-0): mutagen
Formaldehyde (CAS # 50-00-0): mutagen" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): sn 0946
Formaldehyde (CAS # 50-00-0): SN 0946 500 lb TPQ
Methyl Alcohol (CAS # 67-56-1): "flammable - third degree"
Methyl Alcohol (CAS # 67-56-1): "SN 1222 500 lb TPQ" As Methanol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): "sn 1222" As Methyl alcohol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): flammable - third degree
Methyl Alcohol (CAS # 67-56-1): sn 1222
Methyl Alcohol (CAS # 67-56-1): SN 1222 500 lb TPQ
Methyl Alcohol (CAS # 67-56-1): teratogen
Methyl Alcohol (CAS # 67-56-1): teratogen" As Methyl alcohol [67-56-1]

15.8. California Proposition 65

Formaldehyde (CAS # 50-00-0): "40 µg/day NSRL (gas)" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): "carcinogen, 1/1/1988 (gas)" As Formaldehyde [50-00-0]
Formaldehyde (CAS # 50-00-0): 40 µg/day NSRL (gas)
Formaldehyde (CAS # 50-00-0): carcinogen, 1/1/1988 (gas)
Methyl Alcohol (CAS # 67-56-1): "developmental toxicity, 3/16/2012" As Methanol [67-56-1]
Methyl Alcohol (CAS # 67-56-1): developmental toxicity, 3/16/2012

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Formaldehyde (CAS # 50-00-0): "Present" As Formaldehyde [50-00-0] (DSL)
Formaldehyde (CAS # 50-00-0): Present (DSL)
Methyl Alcohol (CAS # 67-56-1): "Present" As Alcohols, C1-3 [68475-56-9] (NDSL)
Methyl Alcohol (CAS # 67-56-1): "Present" As Methyl alcohol [67-56-1] (DSL)
Methyl Alcohol (CAS # 67-56-1): Present (DSL)
Methyl Alcohol (CAS # 67-56-1): Present (NDSL)
Water (CAS # 7732-18-5): "Present" As Water [7732-18-5] (DSL)
Water (CAS # 7732-18-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

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Formaldehyde (CAS # 50-00-0): "Present (ACTIVE)" As Formaldehyde [50-00-0]

Formaldehyde (CAS # 50-00-0): Present (ACTIVE)

Methyl Alcohol (CAS # 67-56-1): "Present (ACTIVE)" As Methanol [67-56-1]

Methyl Alcohol (CAS # 67-56-1): Present (ACTIVE)

Water (CAS # 7732-18-5): "Present [XU] (ACTIVE)" As Water [7732-18-5]

Water (CAS # 7732-18-5): Present [XU] (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Formaldehyde (CAS # 50-00-0): "200-001-8" As Formaldehyde [50-00-0]

Formaldehyde (CAS # 50-00-0): 200-001-8

Methyl Alcohol (CAS # 67-56-1): "200-659-6" As Methanol [67-56-1]

Methyl Alcohol (CAS # 67-56-1): 200-659-6

Methyl Alcohol (CAS # 67-56-1): 270-649-4

Water (CAS # 7732-18-5): "231-791-2" As Water [7732-18-5]

Water (CAS # 7732-18-5): 231-791-2

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Flammable liquid and vapor. May be corrosive to metals. Harmful if swallowed. Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep only in original container. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Absorb spillage to prevent material damage.

Store in a well-ventilated place. Keep container tightly closed.

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16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

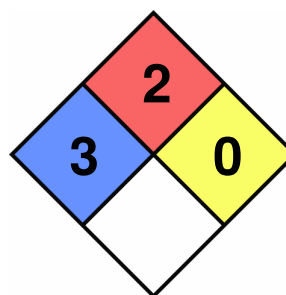
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 3
Flammability: 2
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2025-04-02

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.