

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : CSI-3473W

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Smart Chemical Solutions, LLC
3505 Olsen Blvd
Suite 201
Amarillo, TX 79109
T (806) 367-8031

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3	H226	Flammable liquid and vapor
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Carcinogenicity Category 1A	H350	May cause cancer
Specific target organ toxicity (single exposure) Category 1	H370	Causes damage to organs
Hazardous to the aquatic environment - Acute Hazard Category 1	H400	Very toxic to aquatic life
Full text of H statements : see section 16		

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H319 - Causes serious eye irritation
H350 - May cause cancer
H370 - Causes damage to organs
H400 - Very toxic to aquatic life

Precautionary statements (GHS US) :

P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.

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P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P264 - Wash hands, forearms 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.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P330 - Rinse mouth.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

27.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

27.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Methanol	CAS-No.: 67-56-1	21 – 44.2	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides	CAS-No.: 68424-85-1	8 – 24.6	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400
Ethanol	CAS-No.: 64-17-5	1 – 5	Flam. Liq. 2, H225 Carc. 1A, H350

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Name	Product identifier	%	GHS US classification
Ethanolamine	CAS-No.: 141-43-5	0.99 – 4.95	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1, H314 Eye Dam. 1, H318 Aquatic Acute 2, H401

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a doctor.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after eye contact : Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

- Fire hazard : Flammable liquid and vapor.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

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6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)

USA - ACGIH - Occupational Exposure Limits

Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2022

USA - ACGIH - Biological Exposure Indices

Local name	METHANOL
BEI	15 mg/l Parameter: Methanol - Medium: urine - Sampling time: End of shift - Notations: B, Ns

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Methanol (67-56-1)

Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL TWA [1]	260 mg/m ³
OSHA PEL TWA [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Ethanol (64-17-5)

USA - ACGIH - Occupational Exposure Limits

Local name	Ethanol
ACGIH OEL STEL [ppm]	1000 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2022

USA - OSHA - Occupational Exposure Limits

Local name	Ethyl alcohol (Ethanol)
OSHA PEL TWA [1]	1900 mg/m ³
OSHA PEL TWA [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Ethanolamine (141-43-5)

USA - ACGIH - Occupational Exposure Limits

Local name	Ethanolamine
ACGIH OEL TWA [ppm]	3 ppm
ACGIH OEL STEL [ppm]	6 ppm
Remark (ACGIH)	TLV® Basis: Eye & skin irr
Regulatory reference	ACGIH 2022

USA - OSHA - Occupational Exposure Limits

Local name	Ethanolamine
OSHA PEL TWA [1]	6 mg/m ³
OSHA PEL TWA [2]	3 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

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Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Color	: Yellow
Odor	: Mild
Odor threshold	: No data available
pH	: 5.1 – 6.1
Melting point	: Not applicable
Freezing point	: -20 °F
Boiling point	: No data available
Flash point	: 77 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 7.728 – 8.028
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Toxic if inhaled.

CSI-3473W	
ATE US (oral)	1109.327 mg/kg body weight
ATE US (dermal)	584.498 mg/kg body weight
ATE US (dust, mist)	0.967 mg/l/4h
Unknown acute toxicity (GHS US)	27.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 27.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/kg body weight (BASF test, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LD50 dermal rabbit	300 mg/kg Source: ECHA
LC50 Inhalation - Rat	128 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	1187 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

Ethanol (64-17-5)	
LD50 oral rat	7060 mg/kg Source: ECHA
ATE US (oral)	7060 mg/kg body weight

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)	
LD50 oral rat	426 mg/kg Source: National Library of Medicine

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Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

ATE US (oral) 426 mg/kg body weight

Ethanolamine (141-43-5)

LD50 oral rat 1089 mg/kg Source: OECD SIDS

LD50 dermal rabbit 2504 mg/kg Source: OECD SIDS

LC50 Inhalation - Rat (Vapours) > 1487 mg/l Source: ECHA

ATE US (oral) 1089 mg/kg body weight

ATE US (dermal) 2504 mg/kg body weight

ATE US (gases) 4500 ppmV/4h

ATE US (vapors) 11 mg/l/4h

ATE US (dust, mist) 1.5 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 5.1 – 6.1

Ethanolamine (141-43-5)

pH 12.1 Source: ECHA

Serious eye damage/irritation : Causes serious eye irritation.
pH: 5.1 – 6.1

Methanol (67-56-1)

pH No data available in the literature

Ethanolamine (141-43-5)

pH 12.1 Source: ECHA

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

Ethanol (64-17-5)

IARC group 1 - Carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Causes damage to organs.

Methanol (67-56-1)

STOT-single exposure Causes damage to organs.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Symptoms/effects after eye contact : Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

Methanol (67-56-1)

LC50 - Fish [1] 15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)

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Methanol (67-56-1)

EC50 - Crustacea [1]	18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	22000 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)

Ethanol (64-17-5)

LC50 - Fish [1]	> 100 mg/l Source: SIDS 2005
ErC50 algae	275 mg/l Source: ECHA

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

LC50 - Fish [1]	0.51 mg/l Source: The ECOTOXicology database
EC50 - Crustacea [1]	0.0059 mg/l Source: The ECOTOXicology database
EC50 96h - Algae [1]	4.813 mg/l Source: Ecological Structure Activity Relationships

Ethanolamine (141-43-5)

LC50 - Fish [1]	170 mg/l Source: OECD SIDS
EC50 - Crustacea [1]	32.6 mg/l
ErC50 algae	2.1 mg/l Source: ECHA

12.2. Persistence and degradability

Methanol (67-56-1)

Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 1.12 g O ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance

12.3. Bioaccumulative potential

Methanol (67-56-1)

BCF - Fish [1]	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-0.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Ethanol (64-17-5)

Partition coefficient n-octanol/water (Log Pow)	-0.32 Source: ICSC
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Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

Partition coefficient n-octanol/water (Log Pow)	3.91 Source: Quantitative Structure Activity Relation
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Ethanolamine (141-43-5)

Partition coefficient n-octanol/water (Log Pow)	-1.31 Source: ICSC
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12.4. Mobility in soil

Methanol (67-56-1)

Mobility in soil	2.75 Source: HSDB
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Methanol (67-56-1)

Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-0.89 – -0.21 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

Mobility in soil	1002 Source: EPI Suite
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12.5. Other adverse effects




No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

DOT	IMDG	IATA
14.1. UN number		
1993	1993	1993
14.2. Proper Shipping Name		
Flammable liquids, n.o.s. (Methanol)	FLAMMABLE LIQUID, N.O.S. (Methanol)	Flammable liquid, n.o.s. (Methanol)
14.3. Transport hazard class(es)		
3	3	3
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

DOT
UN-No.(DOT) : UN1993
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

Special provision (IMDG) : 223, 274, 955

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : LP01, P001

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP1, TP29

EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS

EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER

Stowage category (IMDG) : A

IATA

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y344

PCA limited quantity max net quantity (IATA) : 10L

PCA packing instructions (IATA) : 355

PCA max net quantity (IATA) : 60L

CAO packing instructions (IATA) : 366

CAO max net quantity (IATA) : 220L

Special provision (IATA) : A3

ERG code (IATA) : 3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Ethanol	CAS-No. 64-17-5	1 – 5%
Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides	CAS-No. 68424-85-1	8 – 24.6%
Ethanolamine	CAS-No. 141-43-5	0.99 – 4.95%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Methanol	CAS-No. 67-56-1	21 – 44.2%
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Methanol (67-56-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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15.2. International regulations

CANADA

Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Methanol (67-56-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations



WARNING:

This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases

H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H319	Causes serious eye irritation
H350	May cause cancer
H370	Causes damage to organs
H400	Very toxic to aquatic life

Safety Data Sheet (SDS), USA