

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : SI-8422C

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Smart Chemical Solutions, LLC  
2708 NE Main St.  
Ennis, TX 75119  
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 2	H225	Highly flammable liquid and vapor
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (dermal) Category 4	H312	Harmful in contact with skin
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Specific target organ toxicity (single exposure) Category 1	H370	Causes damage to organs
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment - Acute Hazard Category 2	H401	Toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

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) :

H225 - Highly flammable liquid and vapor  
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H370 - Causes damage to organs  
H372 - Causes damage to organs through prolonged or repeated exposure  
H401 - Toxic to aquatic life  
H412 - Harmful to aquatic life with long lasting effects

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Precautionary statements (GHS US) : 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.  
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.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
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.  
P307+P311 - If exposed: Call a poison center/doctor.  
P310 - Immediately call a poison center or doctor.  
P312 - Call a poison center or doctor if you feel unwell.  
P314 - Get medical advice/attention if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P322 - Specific treatment (see supplemental first aid instruction on this label)  
P330 - Rinse mouth.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P363 - Wash contaminated clothing before reuse.  
P370+P378 - In case of fire: Use media other than water to extinguish.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
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)

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Methanol	CAS-No.: 67-56-1	10 – 30	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370

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Name	Product identifier	%	GHS US classification
Citric Acid	CAS-No.: 77-92-9	10 – 30	Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 3, H402
Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution	CAS-No.: 55566-30-8	≤ 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:dust,mist), H331 Eye Dam. 1, H318 Skin Sens. 1A, H317 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Amino Methylene Phosponic Acid Salts	CAS-No.: 7647-01-0	≤ 10	Skin Corr. 1, H314 Eye Dam. 1, H318
Ethanolamine	CAS-No.: 141-43-5	≤ 9.9	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
Polyoxyethylene Nonylphenol	CAS-No.: 127087-87-0	≤ 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Aquatic Chronic 3, H412

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 poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
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 skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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### 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 : Highly 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 : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing.

##### 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".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 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 : 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. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.  
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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.

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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

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No additional information available

##### Polyoxyethylene Nonylphenol (127087-87-0)

No additional information available

##### Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)

###### USA - ACGIH - Occupational Exposure Limits

Local name	Tetrakis (hydroxymethyl) phosphonium sulfate
ACGIH OEL TWA	2 mg/m <sup>3</sup>
Remark (ACGIH)	TLV® Basis: Liver dam. Notations: DSEN; A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2022

##### Amino Methylene Phosponic Acid Salts (7647-01-0)

No additional information available

##### 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
Regulatory reference	ACGIH 2022

###### USA - OSHA - Occupational Exposure Limits

Local name	Methyl alcohol
OSHA PEL TWA [1]	260 mg/m <sup>3</sup>
OSHA PEL TWA [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

##### Citric Acid (77-92-9)

No additional information available

##### Ethanolamine (141-43-5)

###### USA - ACGIH - Occupational Exposure Limits

Local name	Ethanolamine
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<b>Ethanolamine (141-43-5)</b>	
ACGIH OEL TWA [ppm]	3 ppm
ACGIH OEL STEL [ppm]	6 ppm
Remark (ACGIH)	TLV® Basis: Eye & skin irr
Regulatory reference	ACGIH 2022
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Ethanolamine
OSHA PEL TWA [1]	6 mg/m <sup>3</sup>
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

#### 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 : Colorless  
Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.  
Mixture contains one or more component(s) which have the following odour:  
Irritating/pungent odour Characteristic odour Mild odour Pleasant odour Alcohol odour  
Commercial/unpurified substance: irritating/pungent odour Vinegar odour  
Odor threshold : No data available  
pH : 3.12 – 3.62

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Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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	: 9.063 – 9.363
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

Highly flammable liquid and vapor.

### 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)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Harmful if inhaled.

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ATE US (oral)	1957.635 mg/kg body weight
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ATE US (dermal)	1197.374 mg/kg body weight
ATE US (dust, mist)	1.475 mg/l/4h
Unknown acute toxicity (GHS US)	23% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 42% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 42% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
<b>Polyoxyethylene Nonylphenol (127087-87-0)</b>	
LD50 oral rat	1890 mg/kg body weight (Rat, Male / female, Experimental value, Oral)
LD50 oral	657 mg/kg body weight (Rabbit, Male / female, Experimental value, Oral)
ATE US (oral)	657 mg/kg body weight
<b>Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)</b>	
LD50 oral rat	575 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 1500 mg/kg body weight Animal: rat, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity), Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:
LC50 Inhalation - Rat	0.59 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol))
LC50 Inhalation - Rat (Dust/Mist)	0.591 mg/l Source: ECHA
ATE US (oral)	575 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	0.59 mg/l/4h
ATE US (dust, mist)	0.59 mg/l/4h
<b>Methanol (67-56-1)</b>	
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
<b>Citric Acid (77-92-9)</b>	
LD50 oral rat	3000 mg/kg Source: OECD Screening Information Data Set
ATE US (oral)	3000 mg/kg body weight
<b>Ethanolamine (141-43-5)</b>	
LD50 oral rat	1089 mg/kg Source: OECD SIDS



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<b>Ethanolamine (141-43-5)</b>	
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: 3.12 – 3.62

<b>Polyoxyethylene Nonylphenol (127087-87-0)</b>	
pH	6.3 (1 %)

<b>Amino Methylene Phosponic Acid Salts (7647-01-0)</b>	
pH	0.1 (3.65 %)

<b>Methanol (67-56-1)</b>	
pH	No data available in the literature

<b>Ethanolamine (141-43-5)</b>	
pH	12.1 Source: ECHA

Serious eye damage/irritation : Causes serious eye damage.  
pH: 3.12 – 3.62

<b>Polyoxyethylene Nonylphenol (127087-87-0)</b>	
pH	6.3 (1 %)

<b>Amino Methylene Phosponic Acid Salts (7647-01-0)</b>	
pH	0.1 (3.65 %)

<b>Methanol (67-56-1)</b>	
pH	No data available in the literature

<b>Ethanolamine (141-43-5)</b>	
pH	12.1 Source: ECHA

Respiratory or skin sensitization : May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

<b>Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified  
STOT-single exposure : Causes damage to organs.

<b>Methanol (67-56-1)</b>	
STOT-single exposure	Causes damage to organs.

<b>Citric Acid (77-92-9)</b>	
STOT-single exposure	May cause respiratory irritation.

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STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

### Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)

LOAEL (oral,rat,90 days) 22.65 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

NOAEL (oral,rat,90 days) 4.53 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

STOT-repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

### Citric Acid (77-92-9)

Viscosity, kinematic Not applicable

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### Polyoxyethylene Nonylphenol (127087-87-0)

LC50 - Fish [1] 11.6 mg/l (48 h, Oryzias latipes, Static system, Fresh water, Experimental value)

EC50 - Crustacea [1] 14 mg/l (48 h, Daphnia magna, Static renewal, Fresh water, Experimental value)

EC50 96h - Algae [1] 12 mg/l (Selenastrum capricornutum, Static system, Fresh water, Experimental value, Nominal concentration)

### Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)

LC50 - Fish [1] 0.45 mg/l Source: ECHA

EC50 - Crustacea [1] 18 mg/l Source: ECOTOX

LC50 - Fish [2] 71 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

EC50 - Crustacea [2] 11.3 mg/l Test organisms (species): Daphnia magna

EC50 96h - Algae [1] 0.652 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

EC50 96h - Algae [2] 0.492 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

ErC50 algae 0.652 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

### 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)

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)

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<b>Citric Acid (77-92-9)</b>	
LC50 - Fish [1]	48 mg/l Source: ECOTOX

<b>Ethanolamine (141-43-5)</b>	
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

<b>Polyoxyethylene Nonylphenol (127087-87-0)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in water.

<b>Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)</b>	
Persistence and degradability	Not readily biodegradable in water.

<b>Amino Methylene Phosponic Acid Salts (7647-01-0)</b>	
Persistence and degradability	Biodegradability: not applicable.

<b>Methanol (67-56-1)</b>	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>Polyoxyethylene Nonylphenol (127087-87-0)</b>	
BCF - Fish [1]	7.6 – 12.4 l/kg (6 week(s), Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	5.67 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Low potential for bioaccumulation (molecular mass >=700 g/mol).

<b>Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)</b>	
Partition coefficient n-octanol/water (Log Pow)	-9.8 (QSAR, KOWWIN)
Bioaccumulative potential	Not bioaccumulative.

<b>Amino Methylene Phosponic Acid Salts (7647-01-0)</b>	
Bioaccumulative potential	Not bioaccumulative.

<b>Methanol (67-56-1)</b>	
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).

<b>Citric Acid (77-92-9)</b>	
Partition coefficient n-octanol/water (Log Pow)	-1.7 Source: ICSC

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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

### Polyoxyethylene Nonylphenol (127087-87-0)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.631 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
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Ecology - soil	No (test)data on mobility of the substance available. Low potential for adsorption in soil.
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### Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (55566-30-8)

Mobility in soil	0 Source: EPISUITE
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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.18 (log Koc, Calculated value)
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Ecology - soil	Low potential for adsorption in soil.
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### Amino Methylene Phosponic Acid Salts (7647-01-0)

Ecology - soil	No (test)data on mobility of the component(s) available. May be harmful to plant growth, blooming and fruit formation.
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### Methanol (67-56-1)

Mobility in soil	2.75 Source: HSDB
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Surface tension	No data available in the literature
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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-0.89 – -0.21 (log Koc, Calculated value)
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Ecology - soil	Highly mobile in soil.
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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
<b>14.1. UN number</b>		
1993	1993	1993
<b>14.2. Proper Shipping Name</b>		
Flammable liquids, n.o.s. (Methanol)	FLAMMABLE LIQUID, N.O.S. (Methanol)	Flammable liquid, n.o.s. (Methanol)
<b>14.3. Transport hazard class(es)</b>		
3	3	3

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DOT	IMDG	IATA
		
<b>14.4. Packing group</b>		
III	III	III
<b>14.5. Environmental hazards</b>		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

### 14.6. Special precautions for user

<b>DOT</b>	
UN-No.(DOT)	: UN1993
DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
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
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.
<b>IMDG</b>	
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

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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:

Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution	CAS-No. 55566-30-8	≤ 10%
Amino Methylene Phosponic Acid Salts	CAS-No. 7647-01-0	≤ 10%
Citric Acid	CAS-No. 77-92-9	10 – 30%
Ethanolamine	CAS-No. 141-43-5	≤ 9.9%

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.

Polyoxyethylene Nonylphenol	CAS-No. 127087-87-0	≤ 5%
Methanol	CAS-No. 67-56-1	10 – 30%

#### Methanol (67-56-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ 5000 lb

### 15.2. International regulations

#### CANADA

#### Polyoxyethylene Nonylphenol (127087-87-0)

Listed on the Canadian DSL (Domestic Substances List)

#### Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

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### 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](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

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### Full text of H-phrases

H225	Highly flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA