

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : SCW-1794C

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 (inhalation:dust,mist) Category 4 | H332 | Harmful if inhaled |
| Skin corrosion/irritation Category 1 | H314 | Causes severe skin burns and eye damage |
| 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 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) :

H225 - Highly flammable liquid and vapor
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H370 - Causes damage to organs
H372 - Causes damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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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+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
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).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P391 - Collect spillage.
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)

18.2% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
31.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
31.4% 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 | 1.15 – 13.4 | 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 |
|---|---------------------|------------|--|
| Amino Methylene Phosponic Acid Salts | CAS-No.: 7647-01-0 | 1 – 10 | Skin Corr. 1, H314 Eye Dam. 1, H318 |
| Citric Acid | CAS-No.: 77-92-9 | 1 – 10 | Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 3, H402 |
| Ethanolamine | CAS-No.: 141-43-5 | 0.99 – 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 |
| Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides | CAS-No.: 68424-85-1 | 0.8 – 8.2 | Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 |
| Benzyl Alkyl Pyrdine | CAS-No.: 68909-18-2 | 0.8 – 8 | Flam. Liq. 3, H226 Aquatic Acute 1, H400 |
| Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution | CAS-No.: 55566-30-8 | ≤ 1 | 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 |

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 | : Call a physician immediately. |
| 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. Call a physician immediately. |
| 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. Do not induce vomiting. Call a physician immediately. |

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

| | |
|-------------------------------------|---|
| Symptoms/effects after skin contact | : Burns. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |
| Symptoms/effects after ingestion | : Burns. |

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 and eyes.

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. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
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

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 ³ |
| 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

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

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 ³ |
| 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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Ethanolamine (141-43-5)

| | |
|----------------------|----------------------------|
| 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 |

Benzyl Alkyl Pyrdine (68909-18-2)

No additional information available

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 : dark brown

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| | |
|---|--|
| 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 | : 3.09 – 3.39 |
| 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 | : 8.929 – 9.229 |
| 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.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

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| | |
|---------------------------------|---|
| ATE US (dust, mist) | 4.393 mg/l/4h |
| Unknown acute toxicity (GHS US) | 18.2% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 31.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 31.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)) |

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

| | |
|-----------------------------------|--|
| 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 |

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

| | |
|---------------|--|
| LD50 oral rat | 426 mg/kg Source: National Library of Medicine |
| ATE US (oral) | 426 mg/kg body weight |

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 |

Citric Acid (77-92-9)

| | |
|---------------|--|
| LD50 oral rat | 3000 mg/kg Source: OECD Screening Information Data Set |
| ATE US (oral) | 3000 mg/kg body weight |

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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 : Causes severe skin burns.
pH: 3.09 – 3.39

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

| | |
|----|--------------|
| pH | 0.1 (3.65 %) |
|----|--------------|

Methanol (67-56-1)

| | |
|----|-------------------------------------|
| pH | No data available in the literature |
|----|-------------------------------------|

Ethanolamine (141-43-5)

| | |
|----|-------------------|
| pH | 12.1 Source: ECHA |
|----|-------------------|

Serious eye damage/irritation : Causes serious eye damage.
pH: 3.09 – 3.39

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

| | |
|----|--------------|
| pH | 0.1 (3.65 %) |
|----|--------------|

Methanol (67-56-1)

| | |
|----|-------------------------------------|
| pH | No data available in the literature |
|----|-------------------------------------|

Ethanolamine (141-43-5)

| | |
|----|-------------------|
| pH | 12.1 Source: ECHA |
|----|-------------------|

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

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

| | |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

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

Methanol (67-56-1)

| | |
|----------------------|--------------------------|
| STOT-single exposure | Causes damage to organs. |
|----------------------|--------------------------|

Citric Acid (77-92-9)

| | |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
|----------------------|-----------------------------------|

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) |
|--------------------------|--|

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

| | |
|--------------------------|---|
| 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 |
|----------------------|----------------|

Benzyl Alkyl Pyrdine (68909-18-2)

| | |
|----------------------|--|
| Viscosity, kinematic | ≈ 48 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)' |
|----------------------|--|

| | |
|-------------------------------------|---|
| Symptoms/effects after skin contact | : Burns. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |
| Symptoms/effects after ingestion | : Burns. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|-------------------------------|
| Ecology - general | : Very toxic to aquatic life. |
|-------------------|-------------------------------|

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) |

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 |

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) |

Citric Acid (77-92-9)

| | |
|-----------------|------------------------|
| LC50 - Fish [1] | 48 mg/l Source: ECOTOX |
|-----------------|------------------------|

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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 |

Benzyl Alkyl Pyrdine (68909-18-2)

| | |
|----------------------|---|
| LC50 - Fish [1] | 14.1 mg/l Test organisms (species): Cyprinodon variegatus |
| EC50 - Crustacea [1] | 3.1 mg/l Source: ECHA Chem |
| EC50 72h - Algae [1] | 0.47 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h - Algae [2] | 0.16 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 96h - Algae [1] | 0.16 mg/l Source: ECHA Chem |

12.2. Persistence and degradability

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

| | |
|-------------------------------|-------------------------------------|
| Persistence and degradability | Not readily biodegradable in water. |
|-------------------------------|-------------------------------------|

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

| | |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
|-------------------------------|-----------------------------------|

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

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

| | |
|---|----------------------|
| Partition coefficient n-octanol/water (Log Pow) | -9.8 (QSAR, KOWWIN) |
| Bioaccumulative potential | Not bioaccumulative. |

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

| | |
|---------------------------|----------------------|
| Bioaccumulative potential | Not bioaccumulative. |
|---------------------------|----------------------|

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 |
|---|---|

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). |

Citric Acid (77-92-9)

| | |
|---|-------------------|
| 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

Benzyl Alkyl Pyrdine (68909-18-2)

Partition coefficient n-octanol/water (Log Pow) 0.3 – 3.93 Source: ECHA Chem

12.4. Mobility in soil

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

Mobility in soil 0 Source: EPISUITE

Organic Carbon Normalized Adsorption Coefficient (Log Koc) 2.18 (log Koc, Calculated value)

Ecology - soil Low potential for adsorption in soil.

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.

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

Mobility in soil 1002 Source: EPI Suite

Methanol (67-56-1)

Mobility in soil 2.75 Source: HSDB

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.

Benzyl Alkyl Pyrdine (68909-18-2)

Mobility in soil 17.7827941 – 251188.64315096 Source: ECHA Chem

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) |

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| DOT | IMDG | IATA |
|---|---|---|
| 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 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. |
| IMDG | |
| Special provision (IMDG) | : 223, 274, 955 |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |

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| | |
|---------------------------------|---|
| 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:

| | | |
|---|--------------------|-------------|
| Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution | CAS-No. 55566-30-8 | ≤ 1% |
| Amino Methylene Phosponic Acid Salts | CAS-No. 7647-01-0 | 1 – 10% |
| Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides | CAS-No. 68424-85-1 | 0.8 – 8.2% |
| Citric Acid | CAS-No. 77-92-9 | 1 – 10% |
| Ethanolamine | CAS-No. 141-43-5 | 0.99 – 9.9% |
| Benzyl Alkyl Pyrdine | CAS-No. 68909-18-2 | 0.8 – 8% |

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 | 1.15 – 13.4% |
|----------|-----------------|--------------|

Methanol (67-56-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

| | |
|-----------|---------|
| CERCLA RQ | 5000 lb |
|-----------|---------|

15.2. International regulations

CANADA

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.

SECTION 16: Other information

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Full text of H-phrases

| | |
|------|--|
| H225 | Highly flammable liquid and vapor |
| H226 | 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 |

Safety Data Sheet (SDS), USA

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