

## SAFETY DATA SHEET

## 1. Identification

|   |   |                 |
|---|---|-----------------|
| <b>Product identifier</b>                                     | <b>Volatile Organics High Concentration Mixture #6</b>    |                 |
| <b>Other means of identification</b>                          |   |                 |
| Item  | M-VOHC6M5   |                 |
| <b>Recommended use</b>  | Not available.  |                 |
| <b>Recommended restrictions</b>                               | None known.   |                 |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |                 |
| <b>Manufacturer</b>   |   |                 |
| Company name  | Chem Service, Inc.  |                 |
| Address   | 660 Tower Lane<br>West Chester, PA 19380<br>United States |                 |
| Telephone   | Toll Free   | 800-452-9994    |
|   | Direct  | 610-692-3026    |
| Website   | www.chemservice.com                                       |                 |
| E-mail  | info@chemservice.com                                      |                 |
| <b>Emergency phone number</b>                                 | Chemtrec US   | 800-424-9300    |
|   | Chemtrec outside US                                       | +1 703-527-3887 |

## 2. Hazard(s) identification

|                              |  |             |
|------------------------------|--|-------------|
| <b>Physical hazards</b>      | Flammable liquids                                      | Category 2  |
| <b>Health hazards</b>        | Acute toxicity, oral                                   | Category 3  |
|                              | Acute toxicity, dermal                                 | Category 3  |
|                              | Acute toxicity, inhalation                             | Category 3  |
|                              | Serious eye damage/eye irritation                      | Category 2A |
|                              | Carcinogenicity  | Category 1A |
|                              | Reproductive toxicity                                  | Category 1  |
|                              | Specific target organ toxicity, single exposure        | Category 1  |
|                              | Specific target organ toxicity, repeated exposure      | Category 1  |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard     | Category 1  |
|                              | Hazardous to the aquatic environment, long-term hazard | Category 1  |
|                              | Hazardous to the ozone layer                           | Category 1  |
| <b>OSHA defined hazards</b>  | Not classified.  |             |

## Label elements



Signal word

Danger

Hazard statement

Highly flammable liquid and vapor. Toxic if swallowed. Toxic in contact with skin. Causes serious eye irritation. Toxic if inhaled. May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harms public health and the environment by destroying ozone in the upper atmosphere.

## Precautionary statement

### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

### Response

If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Call a poison center/doctor. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

### Storage

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

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

### Supplemental information

98% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 98% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

## 3. Composition/information on ingredients

### Mixtures

| Chemical name                            | Common name and synonyms | CAS number | %        |
|--|--------------------------|------------|----------|
| Methanol                                 |                          | 67-56-1    | 90 - 100 |
| Chloroethane                             |                          | 75-00-3    | 0.2      |
| Dichlorodifluoromethane                  |                          | 75-71-8    | 0.2      |
| Methyl bromide                           |                          | 74-83-9    | 0.2      |
| Methyl chloride                          |                          | 74-87-3    | 0.2      |
| Trichlorofluoromethane                   |                          | 75-69-4    | 0.2      |
| Vinyl chloride                           |                          | 75-01-4    | 0.2      |
| Other components below reportable levels |                          |            | < 1      |

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.

### Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

### Ingestion

Call a physician or poison control center immediately. Rinse mouth. If swallowed, induce vomiting immediately as directed by medical personnel. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

### Most important symptoms/effects, acute and delayed

Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.

### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

|  |   |
|--|---|
| <b>General information</b>   | Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.  |
| <b>5. Fire-fighting measures</b>   |   |
| <b>Suitable extinguishing media</b>  | Water fog. Alcohol resistant foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.  |
| <b>Unsuitable extinguishing media</b>                                      | Do not use water jet as an extinguisher, as this will spread the fire.  |
| <b>Specific hazards arising from the chemical</b>                          | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.  |
| <b>Special protective equipment and precautions for firefighters</b>       | Self-contained breathing apparatus and full protective clothing must be worn in case of fire.   |
| <b>Fire fighting equipment/instructions</b>                                | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.  |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.  |
| <b>General fire hazards</b>  | Highly flammable liquid and vapor.  |
| <b>6. Accidental release measures</b>                                      |   |
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.  |
| <b>Methods and materials for containment and cleaning up</b>               | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.<br><br>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>   | Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.  |

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

| Components                   | Type | Value |
|------------------------------|------|-------|
| Vinyl chloride (CAS 75-01-4) | STEL | 5 ppm |
|                              | TWA  | 1 ppm |

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                            | Type    | Value                            |
|---------------------------------------|---------|----------------------------------|
| Chloroethane (CAS 75-00-3)            | PEL     | 2600 mg/m3                       |
| Dichlorodifluoromethane (CAS 75-71-8) | PEL     | 1000 ppm<br>4950 mg/m3           |
| Methanol (CAS 67-56-1)                | PEL     | 1000 ppm<br>260 mg/m3<br>200 ppm |
| Methyl bromide (CAS 74-83-9)          | Ceiling | 80 mg/m3                         |
| Trichlorofluoromethane (CAS 75-69-4)  | PEL     | 20 ppm<br>5600 mg/m3             |
|                                       |         | 1000 ppm                         |

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

| Components                    | Type    | Value   |
|-------------------------------|---------|---------|
| Methyl chloride (CAS 74-87-3) | Ceiling | 200 ppm |
|                               | TWA     | 100 ppm |

**US. ACGIH Threshold Limit Values**

| Components                            | Type    | Value    |
|---------------------------------------|---------|----------|
| Chloroethane (CAS 75-00-3)            | TWA     | 100 ppm  |
| Dichlorodifluoromethane (CAS 75-71-8) | TWA     | 1000 ppm |
| Methanol (CAS 67-56-1)                | STEL    | 250 ppm  |
|                                       | TWA     | 200 ppm  |
| Methyl bromide (CAS 74-83-9)          | TWA     | 1 ppm    |
| Methyl chloride (CAS 74-87-3)         | STEL    | 100 ppm  |
|                                       | TWA     | 50 ppm   |
| Trichlorofluoromethane (CAS 75-69-4)  | Ceiling | 1000 ppm |
| Vinyl chloride (CAS 75-01-4)          | TWA     | 1 ppm    |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                            | Type    | Value      |
|---------------------------------------|---------|------------|
| Dichlorodifluoromethane (CAS 75-71-8) | TWA     | 4950 mg/m3 |
|                                       |         | 1000 ppm   |
| Methanol (CAS 67-56-1)                | STEL    | 325 mg/m3  |
|                                       |         | 250 ppm    |
|                                       | TWA     | 260 mg/m3  |
| Trichlorofluoromethane (CAS 75-69-4)  |         | 200 ppm    |
|                                       | Ceiling | 5600 mg/m3 |
|                                       |         | 1000 ppm   |

**Biological limit values****ACGIH Biological Exposure Indices**

| Components             | Value   | Determinant | Specimen | Sampling Time |
|------------------------|---------|-------------|----------|---------------|
| Methanol (CAS 67-56-1) | 15 mg/l | Methanol    | Urine    | *             |

\* - For sampling details, please see the source document.

**Exposure guidelines****US - California OELs: Skin designation**

|                              |                                   |
|------------------------------|-----------------------------------|
| Chloroethane (CAS 75-00-3)   | Can be absorbed through the skin. |
| Methanol (CAS 67-56-1)       | Can be absorbed through the skin. |
| Methyl bromide (CAS 74-83-9) | Can be absorbed through the skin. |
| Vinyl chloride (CAS 75-01-4) | Can be absorbed through the skin. |

**US - Minnesota Haz Subs: Skin designation applies**

|                              |                           |
|------------------------------|---------------------------|
| Methanol (CAS 67-56-1)       | Skin designation applies. |
| Methyl bromide (CAS 74-83-9) | Skin designation applies. |

**US - Tennessee OELs: Skin designation**

|                              |                                   |
|------------------------------|-----------------------------------|
| Methanol (CAS 67-56-1)       | Can be absorbed through the skin. |
| Methyl bromide (CAS 74-83-9) | Can be absorbed through the skin. |

**US ACGIH Threshold Limit Values: Skin designation**

|                               |                                   |
|-------------------------------|-----------------------------------|
| Chloroethane (CAS 75-00-3)    | Can be absorbed through the skin. |
| Methanol (CAS 67-56-1)        | Can be absorbed through the skin. |
| Methyl bromide (CAS 74-83-9)  | Can be absorbed through the skin. |
| Methyl chloride (CAS 74-87-3) | Can be absorbed through the skin. |

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

|                        |                                   |
|------------------------|-----------------------------------|
| Methanol (CAS 67-56-1) | Can be absorbed through the skin. |
|------------------------|-----------------------------------|

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

|                              |                                   |
|------------------------------|-----------------------------------|
| Methyl bromide (CAS 74-83-9) | Can be absorbed through the skin. |
|------------------------------|-----------------------------------|

|  |  |
|--|--|
| <b>Appropriate engineering controls</b>                                      | Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended. |
| <b>Individual protection measures, such as personal protective equipment</b> |  |
| <b>Eye/face protection</b>   | Chemical respirator with organic vapor cartridge and full facepiece.   |
| <b>Skin protection</b>   |  |
| <b>Hand protection</b>   | Wear appropriate chemical resistant gloves.  |
| <b>Other</b>   | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.   |
| <b>Respiratory protection</b>  | Chemical respirator with organic vapor cartridge and full facepiece.   |
| <b>Thermal hazards</b>   | Wear appropriate thermal protective clothing, when necessary.  |
| <b>General hygiene considerations</b>  | Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.   |

## 9. Physical and chemical properties

### Appearance

|   |                                 |
|---|---------------------------------|
| <b>Physical state</b>                               | Liquid.                         |
| <b>Form</b>   | Liquid.                         |
| <b>Color</b>  | Not available.                  |
| <b>Odor</b>   | Not available.                  |
| <b>Odor threshold</b>                               | Not available.                  |
| <b>pH</b>   | Not available.                  |
| <b>Melting point/freezing point</b>                 | -144.04 °F (-97.8 °C) estimated |
| <b>Initial boiling point and boiling range</b>      | 148.46 °F (64.7 °C) estimated   |
| <b>Flash point</b>                                  | 53.6 °F (12.0 °C) estimated     |
| <b>Evaporation rate</b>                             | Not available.                  |
| <b>Flammability (solid, gas)</b>                    | Not applicable.                 |
| <b>Upper/lower flammability or explosive limits</b> |                                 |
| <b>Flammability limit - lower (%)</b>               | 7.3 % estimated                 |
| <b>Flammability limit - upper (%)</b>               | 36 % estimated                  |
| <b>Explosive limit - lower (%)</b>                  | Not available.                  |
| <b>Explosive limit - upper (%)</b>                  | Not available.                  |
| <b>Vapor pressure</b>                               | 169.3 hPa estimated             |
| <b>Vapor density</b>                                | Not available.                  |
| <b>Relative density</b>                             | Not available.                  |
| <b>Solubility(ies)</b>                              |                                 |
| <b>Solubility (water)</b>                           | Not available.                  |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.                  |
| <b>Auto-ignition temperature</b>                    | 867.2 °F (464 °C) estimated     |
| <b>Decomposition temperature</b>                    | Not available.                  |
| <b>Viscosity</b>                                    | Not available.                  |
| <b>Other information</b>                            |                                 |
| <b>Density</b>                                      | 0.79201 g/cm3 estimated         |
| <b>Explosive properties</b>                         | Not explosive.                  |
| <b>Flammability class</b>                           | Flammable IB estimated          |

|                             |                  |
|-----------------------------|------------------|
| <b>Oxidizing properties</b> | Not oxidizing.   |
| <b>Percent volatile</b>     | 98.2 % estimated |
| <b>Specific gravity</b>     | 0.79 estimated   |
| <b>VOC</b>                  | 98.6 % estimated |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.  |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.  |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.   |
| <b>Conditions to avoid</b>                | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| <b>Incompatible materials</b>             | Strong oxidizing agents.   |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.   |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Toxic if inhaled. May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation. |
| <b>Skin contact</b> | Toxic in contact with skin.  |
| <b>Eye contact</b>  | Causes serious eye irritation.   |
| <b>Ingestion</b>    | Toxic if swallowed.  |

**Symptoms related to the physical, chemical and toxicological characteristics**  
Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### Information on toxicological effects

**Acute toxicity** Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.

| <b>Components</b>                     | <b>Species</b> | <b>Test Results</b> |
|---------------------------------------|----------------|---------------------|
| Dichlorodifluoromethane (CAS 75-71-8) |                |                     |
| <b>Acute</b>                          |                |                     |
| <b>Oral</b>                           |                |                     |
| LD50                                  | Rat            | > 1000 mg/kg        |
| Methyl bromide (CAS 74-83-9)          |                |                     |
| <b>Acute</b>                          |                |                     |
| <b>Dermal</b>                         |                |                     |
| LD50                                  | Rat            | 135 mg/kg           |
| <b>Oral</b>                           |                |                     |
| LD50                                  | Rat            | 104 mg/kg           |
| Methyl chloride (CAS 74-87-3)         |                |                     |
| <b>Acute</b>                          |                |                     |
| <b>Inhalation</b>                     |                |                     |
| LC50                                  | Rat            | 5133 ppm, 1 Hours   |
| <b>Oral</b>                           |                |                     |
| LD50                                  | Rat            | 1800 mg/kg          |
| Trichlorofluoromethane (CAS 75-69-4)  |                |                     |
| <b>Acute</b>                          |                |                     |
| <b>Oral</b>                           |                |                     |
| LD50                                  | Rat            | 3725 mg/kg          |

| Components   | Species  | Test Results |
|--|--|--------------|
| Vinyl chloride (CAS 75-01-4)   |  |              |
| <b>Acute</b>   |  |              |
| <b>Oral</b>  |  |              |
| LD50   | Rat  | > 500 mg/kg  |
| * Estimates for product may be based on additional component data not shown. |  |              |
| <b>Skin corrosion/irritation</b>   | Prolonged skin contact may cause temporary irritation.   |              |
| <b>Serious eye damage/eye irritation</b>                                     | Causes serious eye irritation.   |              |
| <b>Respiratory or skin sensitization</b>                                     |  |              |
| <b>Respiratory sensitization</b>   | Not a respiratory sensitizer.  |              |
| <b>Skin sensitization</b>  | This product is not expected to cause skin sensitization.  |              |
| <b>Germ cell mutagenicity</b>  | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.                                   |              |
| <b>Carcinogenicity</b>   | May cause cancer.  |              |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>                |  |              |
| Chloroethane (CAS 75-00-3)   | 3 Not classifiable as to carcinogenicity to humans.  |              |
| Methyl bromide (CAS 74-83-9)   | 3 Not classifiable as to carcinogenicity to humans.  |              |
| Methyl chloride (CAS 74-87-3)  | 3 Not classifiable as to carcinogenicity to humans.  |              |
| Vinyl chloride (CAS 75-01-4)   | 1 Carcinogenic to humans.  |              |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>        |  |              |
| Vinyl chloride (CAS 75-01-4)   | Cancer   |              |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>           |  |              |
| Vinyl chloride (CAS 75-01-4)   | Known To Be Human Carcinogen.  |              |
| <b>Reproductive toxicity</b>   | May damage fertility or the unborn child.  |              |
| <b>Specific target organ toxicity - single exposure</b>                      | Causes damage to organs.   |              |
| <b>Specific target organ toxicity - repeated exposure</b>                    | Causes damage to organs through prolonged or repeated exposure.  |              |
| <b>Aspiration hazard</b>   | Not an aspiration hazard.  |              |
| <b>Chronic effects</b>   | Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. |              |

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects. Harms public health and the environment by destroying ozone in the upper atmosphere.

| Components                    | Species | Test Results  |
|-------------------------------|---------|---|
| Methanol (CAS 67-56-1)        |         |   |
| <b>Aquatic</b>                |         |   |
| Crustacea                     | EC50    | Water flea (Daphnia magna) > 10000 mg/l, 48 hours         |
| Fish                          | LC50    | Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours |
| Methyl bromide (CAS 74-83-9)  |         |   |
| <b>Aquatic</b>                |         |   |
| Crustacea                     | EC50    | Water flea (Daphnia magna) 2 mg/l, 48 hours               |
| Fish                          | LC50    | Guppy (Poecilia reticulata) 0.0008 mg/l, 96 hours         |
| Methyl chloride (CAS 74-87-3) |         |   |
| <b>Aquatic</b>                |         |   |
| Fish                          | LC50    | Inland silverside (Menidia beryllina) 270 mg/l, 96 hours  |

\* Estimates for product may be based on additional component data not shown.

### Persistence and degradability

#### Bioaccumulative potential

##### Partition coefficient n-octanol / water (log Kow)

Chloroethane 1.43



**Partition coefficient n-octanol / water (log Kow)**

|                         |       |
|-------------------------|-------|
| Dichlorodifluoromethane | 2.16  |
| Methanol                | -0.77 |
| Methyl bromide          | 1.19  |
| Methyl chloride         | 0.91  |
| Trichlorofluoromethane  | 2.53  |

**Mobility in soil** No data available.

**Other adverse effects** Dangerous for the environment: May damage the ozone layer. The product contains volatile organic compounds which have a photochemical ozone creation potential.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****DOT**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1230  |
| <b>UN proper shipping name</b>      | Methanol, solution (Methanol RQ = 5102 LBS), MARINE POLLUTANT           |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 3   |
| <b>Subsidiary risk</b>              | -   |
| <b>Label(s)</b>                     | 3   |
| <b>Packing group</b>                | II  |
| <b>Environmental hazards</b>        |   |
| <b>Marine pollutant</b>             | Yes   |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Special provisions</b>           | IB2, T7, TP2  |
| <b>Packaging exceptions</b>         | 150   |
| <b>Packaging non bulk</b>           | 202   |
| <b>Packaging bulk</b>               | 242   |

**IATA**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1230  |
| <b>UN proper shipping name</b>      | Methanol solution (Methanol)  |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 3   |
| <b>Subsidiary risk</b>              | 6.1(PGI, II)  |
| <b>Packing group</b>                | II  |
| <b>Environmental hazards</b>        | Yes   |
| <b>ERG Code</b>                     | 3L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Other information</b>            |   |
| <b>Passenger and cargo aircraft</b> | Allowed with restrictions.  |
| <b>Cargo aircraft only</b>          | Allowed with restrictions.  |

**IMDG**

|                                   |  |
|-----------------------------------|--|
| <b>UN number</b>                  | UN1230   |
| <b>UN proper shipping name</b>    | METHANOL SOLUTION (Methanol), MARINE POLLUTANT |
| <b>Transport hazard class(es)</b> |  |
| <b>Class</b>                      | 3  |
| <b>Subsidiary risk</b>            | 6.1(PGI, II)                                   |

**Packing group** II

**Environmental hazards**

**Marine pollutant** Yes

**EmS** F-E, S-D

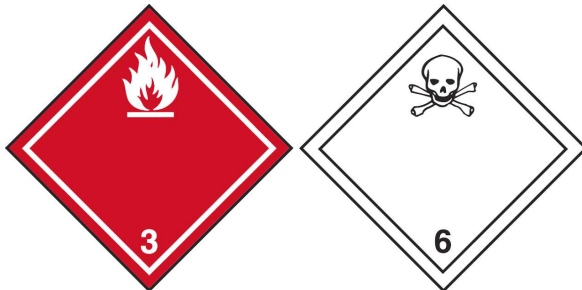
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

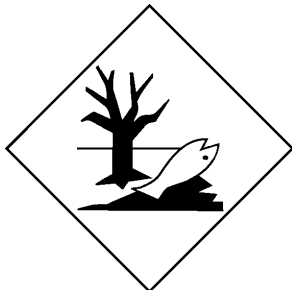
**DOT**



**IATA; IMDG**



**Marine pollutant**



**General information**

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

## 15. Regulatory information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

|                                       |         |
|---------------------------------------|---------|
| Chloroethane (CAS 75-00-3)            | Listed. |
| Dichlorodifluoromethane (CAS 75-71-8) | Listed. |
| Methanol (CAS 67-56-1)                | Listed. |
| Methyl bromide (CAS 74-83-9)          | Listed. |
| Methyl chloride (CAS 74-87-3)         | Listed. |
| Trichlorofluoromethane (CAS 75-69-4)  | Listed. |
| Vinyl chloride (CAS 75-01-4)          | Listed. |

### SARA 304 Emergency release notification

|                              |          |
|------------------------------|----------|
| Methyl bromide (CAS 74-83-9) | 1000 LBS |
|------------------------------|----------|

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

|                              |        |
|------------------------------|--------|
| Vinyl chloride (CAS 75-01-4) | Cancer |
|------------------------------|--------|

Central nervous system  
Liver  
Blood  
Flammability

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories**  
Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

| Chemical name | CAS number | Reportable quantity (pounds) | Threshold planning quantity (pounds) | Threshold planning quantity, lower value (pounds) | Threshold planning quantity, upper value (pounds) |
|---------------|------------|------------------------------|--------------------------------------|---|---|
|---------------|------------|------------------------------|--------------------------------------|---|---|

|                |         |      |      |  |  |
|----------------|---------|------|------|--|--|
| Methyl bromide | 74-83-9 | 1000 | 1000 |  |  |
|----------------|---------|------|------|--|--|

**SARA 311/312 Hazardous chemical** No

#### SARA 313 (TRI reporting)

| Chemical name  | CAS number | % by wt. |
|----------------|------------|----------|
| Methanol       | 67-56-1    | 90 - 100 |
| Vinyl chloride | 75-01-4    | 0.2      |

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Chloroethane (CAS 75-00-3)  
Methanol (CAS 67-56-1)  
Methyl bromide (CAS 74-83-9)  
Methyl chloride (CAS 74-87-3)  
Vinyl chloride (CAS 75-01-4)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Chloroethane (CAS 75-00-3)  
Methyl chloride (CAS 74-87-3)  
Vinyl chloride (CAS 75-01-4)

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

#### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Chloroethane (CAS 75-00-3) Listed: July 1, 1990  
Vinyl chloride (CAS 75-01-4) Listed: February 27, 1987

#### US - California Proposition 65 - CRT: Listed date/Developmental toxin

Methanol (CAS 67-56-1) Listed: March 16, 2012  
Methyl bromide (CAS 74-83-9) Listed: January 1, 1993  
Methyl chloride (CAS 74-87-3) Listed: March 10, 2000

#### US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Methyl chloride (CAS 74-87-3) Listed: August 7, 2009

#### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Chloroethane (CAS 75-00-3)  
Dichlorodifluoromethane (CAS 75-71-8)  
Methanol (CAS 67-56-1)  
Methyl chloride (CAS 74-87-3)  
Trichlorofluoromethane (CAS 75-69-4)  
Vinyl chloride (CAS 75-01-4)

### International Inventories

| Country(s) or region | Inventory name                                     | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia            | Australian Inventory of Chemical Substances (AICS) | Yes                    |
| Canada               | Domestic Substances List (DSL)                     | Yes                    |
| Canada               | Non-Domestic Substances List (NDSL)                | No                     |

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                    |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

|                      |  |
|----------------------|--|
| <b>Issue date</b>    | 08-30-2014                                     |
| <b>Revision date</b> | 08-26-2019                                     |
| <b>Version #</b>     | 03   |
| <b>NFPA ratings</b>  | Health: 4<br>Flammability: 3<br>Instability: 0 |

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