

## SAFETY DATA SHEET

## 1. Identification

|   |   |                 |
|---|---|-----------------|
| <b>Product identifier</b>                                     | <b>Chlorinated Hydrocarbons Mixture-8121</b>              |                 |
| <b>Other means of identification</b>                          |   |                 |
| <b>Item</b>   | M-CH8121AF4   |                 |
| <b>Recommended use</b>  | Not available.  |                 |
| <b>Recommended restrictions</b>                               | None known.   |                 |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |                 |
| <b>Manufacturer</b>   |   |                 |
| <b>Company name</b>   | Chem Service, Inc.  |                 |
| <b>Address</b>  | 660 Tower Lane<br>West Chester, PA 19380<br>United States |                 |
| <b>Telephone</b>  | Toll Free   | 800-452-9994    |
|   | Direct  | 610-692-3026    |
| <b>Website</b>  | www.chemservice.com                                       |                 |
| <b>E-mail</b>   | 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 4                  |
|                              | Acute toxicity, dermal                                 | Category 3                  |
|                              | Acute toxicity, inhalation                             | Category 4                  |
|                              | Skin corrosion/irritation                              | Category 2                  |
|                              | Serious eye damage/eye irritation                      | Category 2A                 |
|                              | Sensitization, skin                                    | Category 1A                 |
|                              | Carcinogenicity  | Category 1                  |
|                              | Reproductive toxicity                                  | Category 1B                 |
|                              | Reproductive toxicity                                  | Effects on or via lactation |
|                              | Specific target organ toxicity, single exposure        | Category 3 narcotic effects |
|                              | Specific target organ toxicity, repeated exposure      | Category 1                  |
|                              | Aspiration hazard                                      | 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                  |
| <b>OSHA defined hazards</b>  | Not classified.  |                             |

## Label elements



Signal word

Danger

**Hazard statement**

Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause drowsiness or dizziness. May cause cancer. May damage fertility or the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**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. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. 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. Do NOT induce vomiting. 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. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. 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**

10% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 10% 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 | %       |
|----------------------------|--------------------------|------------|---------|
| n-Hexane                   |                          | 110-54-3   | 88 - 89 |
| Acetone                    |                          | 67-64-1    | 9 - 10  |
| 1,2,3,4-Tetrachlorobenzene |                          | 634-66-2   | 0.1     |
| 1,2,3,5-Tetrachlorobenzene |                          | 634-90-2   | 0.1     |
| 1,2,3-Trichlorobenzene     |                          | 87-61-6    | 0.1     |
| 1,2,4,5-Tetrachlorobenzene |                          | 95-94-3    | 0.1     |
| 1,2,4-Trichlorobenzene     |                          | 120-82-1   | 0.1     |
| 1,2-Dichlorobenzene        |                          | 95-50-1    | 0.1     |
| 1,3,5-Trichlorobenzene     |                          | 108-70-3   | 0.1     |
| 1,3-Dichlorobenzene        |                          | 541-73-1   | 0.1     |
| 1,4-Dichlorobenzene        |                          | 106-46-7   | 0.1     |
| 2-Chloronaphthalene        |                          | 91-58-7    | 0.1     |
| a,a,a-Trichlorotoluene     |                          | 98-07-7    | 0.1     |
| a,a-Dichlorotoluene        |                          | 98-87-3    | 0.1     |
| Benzyl chloride            |                          | 100-44-7   | 0.1     |
| BHC (alpha isomer)         |                          | 319-84-6   | 0.1     |
| BHC (beta isomer)          |                          | 319-85-7   | 0.1     |
| BHC (delta isomer)         |                          | 319-86-8   | 0.1     |
| Hexachloro-1,3-butadiene   |                          | 87-68-3    | 0.1     |
| Hexachlorobenzene          |                          | 118-74-1   | 0.1     |
| Hexachlorocyclopentadiene  |                          | 77-47-4    | 0.1     |
| Hexachloroethane           |                          | 67-72-1    | 0.1     |
| Lindane (BHC gamma isomer) |                          | 58-89-9    | 0.1     |

| Chemical name      | Common name and synonyms | CAS number | %   |
|--------------------|--------------------------|------------|-----|
| Pentachlorobenzene |                          | 608-93-5   | 0.1 |

#### 4. First-aid measures

|   |  |
|---|--|
| <b>Inhalation</b>   | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.  |
| <b>Skin contact</b>   | Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.   |
| <b>Eye contact</b>  | 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.  |
| <b>Ingestion</b>  | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.  |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.                      |
| <b>Indication of immediate medical attention and special treatment needed</b> | 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. |

#### 5. Fire-fighting measures

|  |  |
|--|--|
| <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.   |

#### 6. Accidental release measures

|  |  |
|--|--|
| <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. |
|--|--|

## Methods and materials for containment and cleaning up

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.

**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.

**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.

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.

## Environmental precautions

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 Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                         | Type    | Value                            |
|------------------------------------|---------|----------------------------------|
| 1,2-Dichlorobenzene (CAS 95-50-1)  | Ceiling | 300 mg/m3                        |
| 1,4-Dichlorobenzene (CAS 106-46-7) | PEL     | 50 ppm<br>450 mg/m3              |
| Acetone (CAS 67-64-1)              | PEL     | 75 ppm<br>2400 mg/m3<br>1000 ppm |

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

| Components                               | Type | Value      |
|--|------|------------|
| Benzyl chloride (CAS 100-44-7)           | PEL  | 5 mg/m3    |
|  |      | 1 ppm      |
| Hexachloroethane (CAS 67-72-1)           | PEL  | 10 mg/m3   |
|  |      | 1 ppm      |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | PEL  | 0.5 mg/m3  |
| n-Hexane (CAS 110-54-3)                  | PEL  | 1800 mg/m3 |
|  |      | 500 ppm    |

**US. ACGIH Threshold Limit Values**

| Components                               | Type    | Value       |
|--|---------|-------------|
| 1,2,4-Trichlorobenzene (CAS 120-82-1)    | Ceiling | 5 ppm       |
| 1,2-Dichlorobenzene (CAS 95-50-1)        | STEL    | 50 ppm      |
|  | TWA     | 25 ppm      |
| 1,4-Dichlorobenzene (CAS 106-46-7)       | TWA     | 10 ppm      |
| a,a,a-Trichlorotoluene (CAS 98-07-7)     | Ceiling | 0.1 ppm     |
| Acetone (CAS 67-64-1)                    | STEL    | 500 ppm     |
|  | TWA     | 250 ppm     |
| Benzyl chloride (CAS 100-44-7)           | TWA     | 1 ppm       |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | TWA     | 0.02 ppm    |
| Hexachlorobenzene (CAS 118-74-1)         | TWA     | 0.002 mg/m3 |
| Hexachlorocyclopentadiene (CAS 77-47-4)  | TWA     | 0.01 ppm    |
| Hexachloroethane (CAS 67-72-1)           | TWA     | 1 ppm       |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | TWA     | 0.5 mg/m3   |
| n-Hexane (CAS 110-54-3)                  | TWA     | 50 ppm      |

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

| Components                               | Type    | Value      |
|--|---------|------------|
| 1,2,4-Trichlorobenzene (CAS 120-82-1)    | Ceiling | 40 mg/m3   |
|  |         | 5 ppm      |
| 1,2-Dichlorobenzene (CAS 95-50-1)        | Ceiling | 300 mg/m3  |
|  |         | 50 ppm     |
| Acetone (CAS 67-64-1)                    | TWA     | 590 mg/m3  |
|  |         | 250 ppm    |
| Benzyl chloride (CAS 100-44-7)           | Ceiling | 5 mg/m3    |
|  |         | 1 ppm      |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | TWA     | 0.24 mg/m3 |
|  |         | 0.02 ppm   |
| Hexachlorocyclopentadiene (CAS 77-47-4)  | TWA     | 0.1 mg/m3  |
|  |         | 0.01 ppm   |
| Hexachloroethane (CAS 67-72-1)           | TWA     | 10 mg/m3   |
|  |         | 1 ppm      |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | TWA     | 0.5 mg/m3  |
| n-Hexane (CAS 110-54-3)                  | TWA     | 180 mg/m3  |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Components              | Value    | Determinant                               | Specimen | Sampling Time |
|-------------------------|----------|---|----------|---------------|
| Acetone (CAS 67-64-1)   | 25 mg/l  | Acetone                                   | Urine    | *             |
| n-Hexane (CAS 110-54-3) | 0.4 mg/l | 2,5-Hexanedio<br>n, without<br>hydrolysis | Urine    | *             |

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

**Exposure guidelines**

**US - California OELs: Skin designation**

|  |                                   |
|--|-----------------------------------|
| 1,2-Dichlorobenzene (CAS 95-50-1)        | Can be absorbed through the skin. |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | Can be absorbed through the skin. |
| Hexachlorobenzene (CAS 118-74-1)         | Can be absorbed through the skin. |
| Hexachloroethane (CAS 67-72-1)           | Can be absorbed through the skin. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3)                  | Can be absorbed through the skin. |

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

|  |                           |
|--|---------------------------|
| Hexachlorobenzene (CAS 118-74-1)         | Skin designation applies. |
| Hexachloroethane (CAS 67-72-1)           | Skin designation applies. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Skin designation applies. |

**US - Tennessee OELs: Skin designation**

|  |                                   |
|--|-----------------------------------|
| Hexachloroethane (CAS 67-72-1)           | Can be absorbed through the skin. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Can be absorbed through the skin. |

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

|  |                                   |
|--|-----------------------------------|
| a,a,a-Trichlorotoluene (CAS 98-07-7)     | Can be absorbed through the skin. |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | Can be absorbed through the skin. |
| Hexachlorobenzene (CAS 118-74-1)         | Can be absorbed through the skin. |
| Hexachloroethane (CAS 67-72-1)           | Can be absorbed through the skin. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Can be absorbed through the skin. |
| n-Hexane (CAS 110-54-3)                  | Can be absorbed through the skin. |

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

|  |                                   |
|--|-----------------------------------|
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | Can be absorbed through the skin. |
| Hexachloroethane (CAS 67-72-1)           | Can be absorbed through the skin. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Can be absorbed through the skin. |

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

|  |                                   |
|--|-----------------------------------|
| Hexachloroethane (CAS 67-72-1)           | Can be absorbed through the skin. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Can be absorbed through the skin. |

**Appropriate engineering controls**

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.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. When using, do not eat, drink or smoke. 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. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Liquid.

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** -138.46 °F (-94.7 °C) estimated

**Initial boiling point and boiling range** 132.89 °F (56.05 °C) estimated

**Flash point** -7.0 °F (-21.7 °C) estimated

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** 1.1 % estimated

**Flammability limit - upper (%)** 12.8 % estimated

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** 212.21 hPa estimated

**Vapor density** Not available.

**Relative density** Not available.

### Solubility(ies)

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** 437 °F (225 °C) estimated

**Decomposition temperature** Not available.

**Viscosity** Not available.

### Other information

**Density** 0.91926 g/cm<sup>3</sup> estimated

**Explosive properties** Not explosive.

**Flammability class** Flammable IB estimated

**Oxidizing properties** Not oxidizing.

**Percent volatile** 10.7 % estimated

**Specific gravity** 0.92 estimated

**VOC** 10.95 % estimated

## 10. Stability and reactivity

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

**Incompatible materials** Acids. Strong oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. |
| <b>Skin contact</b> | Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction.   |
| <b>Eye contact</b>  | Causes serious eye irritation.   |
| <b>Ingestion</b>    | Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.                         |

|   |   |
|---|---|
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. |
|---|---|

### Information on toxicological effects

|                       |   |
|-----------------------|---|
| <b>Acute toxicity</b> | May be fatal if swallowed and enters airways. Toxic in contact with skin. Harmful if inhaled. |
|-----------------------|---|

| <b>Components</b>                         | <b>Species</b> | <b>Test Results</b>    |
|---|----------------|------------------------|
| 1,2,3,5-Tetrachlorobenzene (CAS 634-90-2) |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 1727 mg/kg             |
| 1,2,3-Trichlorobenzene (CAS 87-61-6)      |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 756 mg/kg              |
| 1,2,4-Trichlorobenzene (CAS 120-82-1)     |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 756 mg/kg              |
| 1,2-Dichlorobenzene (CAS 95-50-1)         |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 1516 mg/kg             |
| 1,3,5-Trichlorobenzene (CAS 108-70-3)     |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 800 mg/kg              |
| 1,3-Dichlorobenzene (CAS 541-73-1)        |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 580 mg/kg              |
| 1,4-Dichlorobenzene (CAS 106-46-7)        |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Dermal</b>                             |                |                        |
| LD50                                      | Rat            | > 2000 mg/kg, 24 Hours |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 500 mg/kg              |
| 2-Chloronaphthalene (CAS 91-58-7)         |                |                        |
| <b>Acute</b>                              |                |                        |
| <b>Oral</b>                               |                |                        |
| LD50                                      | Rat            | 2078 mg/kg             |



| Components                               | Species | Test Results           |
|--|---------|------------------------|
| a,a,a-Trichlorotoluene (CAS 98-07-7)     |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rabbit  | > 3300 mg/kg, 5 Hours  |
| a,a-Dichlorotoluene (CAS 98-87-3)        |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rat     | > 2000 mg/kg, 24 Hours |
| Benzyl chloride (CAS 100-44-7)           |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rabbit  | > 2000 mg/kg           |
| <b>Oral</b>                              |         |                        |
| LD50                                     | Rat     | 2.05 mg/kg             |
| BHC (alpha isomer) (CAS 319-84-6)        |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rat     | 0.9 mg/kg              |
| <b>Oral</b>                              |         |                        |
| LD50                                     | Rat     | 177 mg/kg              |
| BHC (beta isomer) (CAS 319-85-7)         |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rat     | 0.9 mg/kg              |
| BHC (delta isomer) (CAS 319-86-8)        |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rat     | 0.9 mg/kg              |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Oral</b>                              |         |                        |
| LD50                                     | Rat     | 90 mg/kg               |
| Hexachlorobenzene (CAS 118-74-1)         |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Oral</b>                              |         |                        |
| LD50                                     | Rat     | 3500 mg/kg             |
| Hexachlorocyclopentadiene (CAS 77-47-4)  |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Inhalation</b>                        |         |                        |
| LC50                                     | Rat     | 0.0181 mg/l, 4 Hours   |
| Hexachloroethane (CAS 67-72-1)           |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Oral</b>                              |         |                        |
| LD50                                     | Rat     | 4460 mg/kg             |
| Lindane (BHC gamma isomer) (CAS 58-89-9) |         |                        |
| <b>Acute</b>                             |         |                        |
| <b>Dermal</b>                            |         |                        |
| LD50                                     | Rabbit  | 50 mg/kg               |
| <b>Inhalation</b>                        |         |                        |
| LC50                                     | Rat     | 1.56 mg/l              |

| Components                        | Species | Test Results          |
|-----------------------------------|---------|-----------------------|
| <b>Oral</b>                       |         |                       |
| LD50                              | Rat     | 76 mg/kg              |
| n-Hexane (CAS 110-54-3)           |         |                       |
| <b>Acute</b>                      |         |                       |
| <b>Dermal</b>                     |         |                       |
| LD50                              | Rabbit  | > 2000 mg/kg, 4 Hours |
| Pentachlorobenzene (CAS 608-93-5) |         |                       |
| <b>Acute</b>                      |         |                       |
| <b>Oral</b>                       |         |                       |
| LD50                              | Rat     | 940 mg/kg             |

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

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | Causes skin 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>                | May cause an allergic skin reaction.   |
| <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.  |

#### IARC Monographs. Overall Evaluation of Carcinogenicity

|  |   |
|--|---|
| 1,2-Dichlorobenzene (CAS 95-50-1)        | 3 Not classifiable as to carcinogenicity to humans. |
| 1,3-Dichlorobenzene (CAS 541-73-1)       | 3 Not classifiable as to carcinogenicity to humans. |
| 1,4-Dichlorobenzene (CAS 106-46-7)       | 2B Possibly carcinogenic to humans.                 |
| a,a,a-Trichlorotoluene (CAS 98-07-7)     | 2A Probably carcinogenic to humans.                 |
| a,a-Dichlorotoluene (CAS 98-87-3)        | 2A Probably carcinogenic to humans.                 |
| Benzyl chloride (CAS 100-44-7)           | 2A Probably carcinogenic to humans.                 |
| BHC (alpha isomer) (CAS 319-84-6)        | 2B Possibly carcinogenic to humans.                 |
| BHC (beta isomer) (CAS 319-85-7)         | 2B Possibly carcinogenic to humans.                 |
| BHC (delta isomer) (CAS 319-86-8)        | 2B Possibly carcinogenic to humans.                 |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | 3 Not classifiable as to carcinogenicity to humans. |
| Hexachlorobenzene (CAS 118-74-1)         | 2B Possibly carcinogenic to humans.                 |
| Hexachloroethane (CAS 67-72-1)           | 2B Possibly carcinogenic to humans.                 |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | 1 Carcinogenic to humans.                           |

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

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

|  |  |
|--|--|
| 1,4-Dichlorobenzene (CAS 106-46-7)       | Reasonably Anticipated to be a Human Carcinogen. |
| a,a,a-Trichlorotoluene (CAS 98-07-7)     | Reasonably Anticipated to be a Human Carcinogen. |
| BHC (alpha isomer) (CAS 319-84-6)        | Reasonably Anticipated to be a Human Carcinogen. |
| BHC (beta isomer) (CAS 319-85-7)         | Reasonably Anticipated to be a Human Carcinogen. |
| BHC (delta isomer) (CAS 319-86-8)        | Reasonably Anticipated to be a Human Carcinogen. |
| Hexachlorobenzene (CAS 118-74-1)         | Reasonably Anticipated to be a Human Carcinogen. |
| Hexachloroethane (CAS 67-72-1)           | Reasonably Anticipated to be a Human Carcinogen. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Reasonably Anticipated to be a Human Carcinogen. |

|   |  |
|---|--|
| <b>Reproductive toxicity</b>                              | May cause harm to breastfed babies. May damage fertility or the unborn child.                        |
| <b>Specific target organ toxicity - single exposure</b>   | May cause drowsiness and dizziness.  |
| <b>Specific target organ toxicity - repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure.                                      |
| <b>Aspiration hazard</b>                                  | May be fatal if swallowed and enters airways.  |
| <b>Chronic effects</b>                                    | Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. |

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic life with long lasting effects.

| Components                                |      | Species  | Test Results                 |
|---|------|--|------------------------------|
| 1,2,3,4-Tetrachlorobenzene (CAS 634-66-2) |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Fish                                      | LC50 | Fathead minnow ( <i>Pimephales promelas</i> )                | 1.1 mg/l, 96 hours           |
| 1,2,3,5-Tetrachlorobenzene (CAS 634-90-2) |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Fish                                      | LC50 | Bluegill ( <i>Lepomis macrochirus</i> )                      | 1.3 - 1.8 mg/l, 96 hours     |
| 1,2,4,5-Tetrachlorobenzene (CAS 95-94-3)  |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Fish                                      | LC50 | Fathead minnow ( <i>Pimephales promelas</i> )                | 0.32 mg/l, 96 hours          |
| 1,2,4-Trichlorobenzene (CAS 120-82-1)     |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia magna</i> )                          | 3.1 - 3.69 mg/l, 48 hours    |
| Fish                                      | LC50 | Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) | 1.35 - 1.73 mg/l, 96 hours   |
| 1,2-Dichlorobenzene (CAS 95-50-1)         |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia magna</i> )                          | 0.74 mg/l, 48 hours          |
| Fish                                      | LC50 | Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) | 1.58 mg/l, 96 hours          |
| 1,3-Dichlorobenzene (CAS 541-73-1)        |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia magna</i> )                          | 1.2 mg/l, 48 hours           |
| Fish                                      | LC50 | Bluegill ( <i>Lepomis macrochirus</i> )                      | 3.9 - 6.2 mg/l, 96 hours     |
| 1,4-Dichlorobenzene (CAS 106-46-7)        |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia magna</i> )                          | 0.0007 mg/l, 48 hours        |
| Fish                                      | LC50 | Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) | 1.12 mg/l, 96 hours          |
| Acetone (CAS 67-64-1)                     |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia magna</i> )                          | 10294 - 17704 mg/l, 48 hours |
| Fish                                      | LC50 | Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) | 4740 - 6330 mg/l, 96 hours   |
| Benzyl chloride (CAS 100-44-7)            |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Fish                                      | LC50 | Zebra danio ( <i>Danio rerio</i> )                           | 4 mg/l, 96 hours             |
| BHC (alpha isomer) (CAS 319-84-6)         |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia magna</i> )                          | 0.6 - 1 mg/l, 48 hours       |
| Fish                                      | LC50 | Zebra danio ( <i>Danio rerio</i> )                           | 0.82 - 1.51 mg/l, 96 hours   |
| BHC (beta isomer) (CAS 319-85-7)          |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia pulex</i> )                          | 0.68 mg/l, 48 hours          |
| Fish                                      | LC50 | Guppy ( <i>Poecilia reticulata</i> )                         | 1 - 3.55 mg/l, 96 hours      |
| BHC (delta isomer) (CAS 319-86-8)         |      |  |                              |
| <b>Aquatic</b>                            |      |  |                              |
| Crustacea                                 | EC50 | Water flea ( <i>Daphnia pulex</i> )                          | 0.68 mg/l, 48 hours          |

| Components                               |      | Species   | Test Results                 |
|--|------|---|------------------------------|
| Fish                                     | LC50 | Zebra danio (Danio rerio)                               | 1.15 - 2.17 mg/l, 96 hours   |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Fish                                     | LC50 | Fathead minnow (Pimephales promelas)                    | 0.09 - 0.11 mg/l, 96 hours   |
| Hexachlorobenzene (CAS 118-74-1)         |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Fish                                     | LC50 | Bluegill (Lepomis macrochirus)                          | > 1 mg/l, 96 hours           |
| Hexachlorocyclopentadiene (CAS 77-47-4)  |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Fish                                     | LC50 | Fathead minnow (Pimephales promelas)                    | 0.007 mg/l, 96 hours         |
| Hexachloroethane (CAS 67-72-1)           |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Crustacea                                | EC50 | Water flea (Daphnia magna)                              | 1.6 - 2.1 mg/l, 48 hours     |
| Fish                                     | LC50 | Bluegill (Lepomis macrochirus)                          | 0.73 - 1.28 mg/l, 96 hours   |
| Lindane (BHC gamma isomer) (CAS 58-89-9) |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Crustacea                                | EC50 | Water flea (Daphnia pulex)                              | 0.386 - 0.547 mg/l, 48 hours |
| Fish                                     | LC50 | Rainbow trout, donaldson trout<br>(Oncorhynchus mykiss) | 0.02 - 0.027 mg/l, 96 hours  |
| n-Hexane (CAS 110-54-3)                  |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Fish                                     | LC50 | Fathead minnow (Pimephales promelas)                    | 2.101 - 2.981 mg/l, 96 hours |
| Pentachlorobenzene (CAS 608-93-5)        |      |   |                              |
| <b>Aquatic</b>                           |      |   |                              |
| Fish                                     | LC50 | Bluegill (Lepomis macrochirus)                          | 0.18 - 0.32 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)

|                            |       |
|----------------------------|-------|
| 1,2,3,4-Tetrachlorobenzene | 4.64  |
| 1,2,3,5-Tetrachlorobenzene | 4.66  |
| 1,2,3-Trichlorobenzene     | 4.05  |
| 1,2,4,5-Tetrachlorobenzene | 4.6   |
| 1,2,4-Trichlorobenzene     | 4.02  |
| 1,2-Dichlorobenzene        | 3.43  |
| 1,3,5-Trichlorobenzene     | 4.19  |
| 1,3-Dichlorobenzene        | 3.53  |
| 1,4-Dichlorobenzene        | 3.44  |
| 2-Chloronaphthalene        | 3.9   |
| a,a,a-Trichlorotoluene     | 2.92  |
| a,a-Dichlorotoluene        | 3.217 |
| Acetone                    | -0.24 |
| Benzyl chloride            | 2.3   |
| BHC (alpha isomer)         | 3.8   |
| BHC (beta isomer)          | 3.78  |
| BHC (delta isomer)         | 4.14  |
| Hexachloro-1,3-butadiene   | 4.78  |
| Hexachlorobenzene          | 5.73  |
| Hexachlorocyclopentadiene  | 3.99  |
| Hexachloroethane           | 4.14  |
| Lindane (BHC gamma isomer) | 3.72  |
| n-Hexane                   | 3.9   |
| Pentachlorobenzene         | 5.18  |

**Mobility in soil** No data available.

**Other adverse effects** 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.

#### US RCRA Hazardous Waste P List: Reference

Benzyl chloride (CAS 100-44-7)

P028

**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

**UN number** UN1993

**UN proper shipping name** Flammable liquids, n.o.s. (n-Hexane RQ = 5618 LBS, Acetone RQ = 50000 LBS), MARINE POLLUTANT (1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene)

#### Transport hazard class(es)

**Class** 3

**Subsidiary risk** -

**Label(s)** 3

**Packing group** II

#### Environmental hazards

**Marine pollutant** Yes

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

**Special provisions** IB2, T7, TP1, TP8, TP28

**Packaging exceptions** 150

**Packaging non bulk** 202

**Packaging bulk** 242

#### IATA

**UN number** UN1993

**UN proper shipping name** Flammable liquid, n.o.s. (n-Hexane, Acetone)

#### Transport hazard class(es)

**Class** 3

**Subsidiary risk** -

**Packing group** II

**Environmental hazards** Yes

**ERG Code** 3H

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

#### Other information

**Passenger and cargo aircraft** Allowed with restrictions.

**Cargo aircraft only** Allowed with restrictions.

#### IMDG

**UN number** UN1993

**UN proper shipping name** FLAMMABLE LIQUID, N.O.S. (n-Hexane, Acetone), MARINE POLLUTANT (1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene)

#### Transport hazard class(es)

**Class** 3

**Subsidiary risk** -

**Packing group** II

#### Environmental hazards

**Marine pollutant** Yes

EmS F-E, S-E

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

1,2,3-Trichlorobenzene

1,2,4-Trichlorobenzene

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

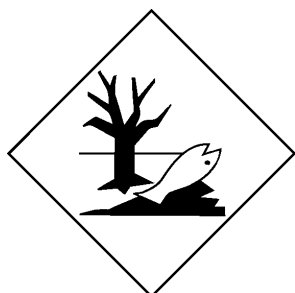
DOT



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)

|  |  |
|--|--|
| 1,2,4,5-Tetrachlorobenzene (CAS 95-94-3) | 1.0 % One-Time Export Notification only. |
| Pentachlorobenzene (CAS 608-93-5)        | 1.0 % One-Time Export Notification only. |

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

|   |         |
|---|---------|
| 1,2,3,4-Tetrachlorobenzene (CAS 634-66-2) | Listed. |
| 1,2,3,5-Tetrachlorobenzene (CAS 634-90-2) | Listed. |
| 1,2,3-Trichlorobenzene (CAS 87-61-6)      | Listed. |
| 1,2,4,5-Tetrachlorobenzene (CAS 95-94-3)  | Listed. |
| 1,2,4-Trichlorobenzene (CAS 120-82-1)     | Listed. |
| 1,2-Dichlorobenzene (CAS 95-50-1)         | Listed. |
| 1,3,5-Trichlorobenzene (CAS 108-70-3)     | Listed. |
| 1,3-Dichlorobenzene (CAS 541-73-1)        | Listed. |
| 1,4-Dichlorobenzene (CAS 106-46-7)        | Listed. |
| 2-Chloronaphthalene (CAS 91-58-7)         | Listed. |
| a,a,a-Trichlorotoluene (CAS 98-07-7)      | Listed. |
| a,a-Dichlorotoluene (CAS 98-87-3)         | Listed. |

|  |         |
|--|---------|
| Acetone (CAS 67-64-1)                    | Listed. |
| Benzyl chloride (CAS 100-44-7)           | Listed. |
| BHC (alpha isomer) (CAS 319-84-6)        | Listed. |
| BHC (beta isomer) (CAS 319-85-7)         | Listed. |
| BHC (delta isomer) (CAS 319-86-8)        | Listed. |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | Listed. |
| Hexachlorobenzene (CAS 118-74-1)         | Listed. |
| Hexachlorocyclopentadiene (CAS 77-47-4)  | Listed. |
| Hexachloroethane (CAS 67-72-1)           | Listed. |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Listed. |
| n-Hexane (CAS 110-54-3)                  | Listed. |
| Pentachlorobenzene (CAS 608-93-5)        | Listed. |

**SARA 304 Emergency release notification**

|  |          |
|--|----------|
| a,a,a-Trichlorotoluene (CAS 98-07-7)     | 10 LBS   |
| a,a-Dichlorotoluene (CAS 98-87-3)        | 5000 LBS |
| Benzyl chloride (CAS 100-44-7)           | 100 LBS  |
| Hexachlorocyclopentadiene (CAS 77-47-4)  | 10 LBS   |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | 1 LBS    |

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

Not regulated.

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

|                          |                        |
|--------------------------|------------------------|
| <b>Hazard categories</b> | 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) |
|----------------------------|------------|------------------------------|--------------------------------------|---|---|
| a,a,a-Trichlorotoluene     | 98-07-7    | 10                           | 100                                  |   |   |
| a,a-Dichlorotoluene        | 98-87-3    | 5000                         | 500                                  |   |   |
| Benzyl chloride            | 100-44-7   | 100                          | 500                                  |   |   |
| Hexachlorocyclopentadiene  | 77-47-4    | 10                           | 100                                  |   |   |
| Lindane (BHC gamma isomer) | 58-89-9    | 1                            |                                      | 1000  | 10000   |

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

| Chemical name              | CAS number | % by wt. |
|----------------------------|------------|----------|
| 1,4-Dichlorobenzene        | 106-46-7   | 0.1      |
| a,a,a-Trichlorotoluene     | 98-07-7    | 0.1      |
| BHC (alpha isomer)         | 319-84-6   | 0.1      |
| Hexachlorobenzene          | 118-74-1   | 0.1      |
| Hexachloroethane           | 67-72-1    | 0.1      |
| Lindane (BHC gamma isomer) | 58-89-9    | 0.1      |
| n-Hexane                   | 110-54-3   | 88 - 89  |

**Other federal regulations**

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

- 1,2,4-Trichlorobenzene (CAS 120-82-1)
- 1,4-Dichlorobenzene (CAS 106-46-7)
- a,a,a-Trichlorotoluene (CAS 98-07-7)
- Benzyl chloride (CAS 100-44-7)
- Hexachloro-1,3-butadiene (CAS 87-68-3)
- Hexachlorobenzene (CAS 118-74-1)
- Hexachlorocyclopentadiene (CAS 77-47-4)
- Hexachloroethane (CAS 67-72-1)
- Lindane (BHC gamma isomer) (CAS 58-89-9)
- n-Hexane (CAS 110-54-3)

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

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

|                                |      |
|--------------------------------|------|
| Acetone (CAS 67-64-1)          | 6532 |
| Benzyl chloride (CAS 100-44-7) | 8570 |

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

|                                |        |
|--------------------------------|--------|
| Acetone (CAS 67-64-1)          | 35 %WV |
| Benzyl chloride (CAS 100-44-7) | 20 %WV |

**DEA Exempt Chemical Mixtures Code Number**

|                                |      |
|--------------------------------|------|
| Acetone (CAS 67-64-1)          | 6532 |
| Benzyl chloride (CAS 100-44-7) | 8568 |

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

|                       |              |
|-----------------------|--------------|
| Acetone (CAS 67-64-1) | Low priority |
|-----------------------|--------------|

**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**

|  |                         |
|--|-------------------------|
| 1,4-Dichlorobenzene (CAS 106-46-7)       | Listed: January 1, 1989 |
| a,a,a-Trichlorotoluene (CAS 98-07-7)     | Listed: July 1, 1987    |
| Benzyl chloride (CAS 100-44-7)           | Listed: January 1, 1990 |
| BHC (alpha isomer) (CAS 319-84-6)        | Listed: October 1, 1989 |
| BHC (beta isomer) (CAS 319-85-7)         | Listed: October 1, 1989 |
| BHC (delta isomer) (CAS 319-86-8)        | Listed: October 1, 1987 |
| Hexachloro-1,3-butadiene (CAS 87-68-3)   | Listed: May 3, 2011     |
| Hexachlorobenzene (CAS 118-74-1)         | Listed: October 1, 1987 |
| Hexachloroethane (CAS 67-72-1)           | Listed: July 1, 1990    |
| Lindane (BHC gamma isomer) (CAS 58-89-9) | Listed: October 1, 1989 |

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

|                                  |                         |
|----------------------------------|-------------------------|
| Hexachlorobenzene (CAS 118-74-1) | Listed: January 1, 1989 |
|----------------------------------|-------------------------|

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

|   |
|---|
| 1,2,3,4-Tetrachlorobenzene (CAS 634-66-2) |
| 1,2,3,5-Tetrachlorobenzene (CAS 634-90-2) |
| 1,2,3-Trichlorobenzene (CAS 87-61-6)      |
| 1,2,4,5-Tetrachlorobenzene (CAS 95-94-3)  |
| 1,2,4-Trichlorobenzene (CAS 120-82-1)     |
| 1,2-Dichlorobenzene (CAS 95-50-1)         |
| 1,3,5-Trichlorobenzene (CAS 108-70-3)     |
| 1,3-Dichlorobenzene (CAS 541-73-1)        |
| 1,4-Dichlorobenzene (CAS 106-46-7)        |
| 2-Chloronaphthalene (CAS 91-58-7)         |
| a,a,a-Trichlorotoluene (CAS 98-07-7)      |
| Acetone (CAS 67-64-1)                     |
| Benzyl chloride (CAS 100-44-7)            |
| Hexachloro-1,3-butadiene (CAS 87-68-3)    |
| Hexachloroethane (CAS 67-72-1)            |
| n-Hexane (CAS 110-54-3)                   |
| Pentachlorobenzene (CAS 608-93-5)         |

**International Inventories**

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



| Country(s) or region        | Inventory name  | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Korea                       | Existing Chemicals List (ECL)                                     | No                     |
| New Zealand                 | New Zealand Inventory   | No                     |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No                     |
| 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

**Issue date** 09-25-2014

**Revision date** 08-18-2021

**Version #** 05

**NFPA ratings**  
 Health: 3  
 Flammability: 3  
 Instability: 0

### Disclaimer

Chem Service, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

Copyright © 2000-2014 Chem Service, Inc. All rights reserved except that this SDS may be printed for the use of a customer or prospective customer of Chem Service, Inc provided the entire SDS is printed. The SDS may not be placed in any database or otherwise stored or distributed in electronic or any other form.

This product is furnished FOR LABORATORY USE ONLY.