

# SAFETY DATA SHEET

## Trichloroethylene

### Section 1. Identification

|                                      |   |
|--------------------------------------|---|
| <b>GHS product identifier</b>        | : Trichloroethylene   |
| <b>Chemical name</b>                 | : trichloroethylene   |
| <b>Other means of identification</b> | : trichloroethene; Ethene, 1,1,2-trichloro-; Ethene, trichloro-; Trichlorethylene; Ethylene, trichloro-                       |
| <b>Product use</b>                   | : Synthetic/Analytical chemistry.   |
| <b>Synonym</b>                       | : trichloroethene; Ethene, 1,1,2-trichloro-; Ethene, trichloro-; Trichlorethylene; Ethylene, trichloro-                       |
| <b>SDS #</b>                         | : 001206  |
| <b>Supplier's details</b>            | : Airgas USA, LLC and its affiliates<br>259 North Radnor-Chester Road<br>Suite 100<br>Radnor, PA 19087-5283<br>1-610-687-5253 |
| <b>24-hour telephone</b>             | : 1-866-734-3438  |

### Section 2. Hazards identification

|   |  |
|---|--|
| <b>OSHA/HCS status</b>                            | : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  |
| <b>Classification of the substance or mixture</b> | : SKIN CORROSION/IRRITATION - Category 2<br>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A<br>GERM CELL MUTAGENICITY - Category 2<br>CARCINOGENICITY - Category 1<br>AQUATIC HAZARD (LONG-TERM) - Category 3 |

#### GHS label elements

##### Hazard pictograms



**Signal word** : Danger

**Hazard statements** : Causes serious eye irritation.  
Causes skin irritation.  
May cause cancer.  
Suspected of causing genetic defects.  
Harmful to aquatic life with long lasting effects.

#### Precautionary statements

|                   |  |
|-------------------|--|
| <b>General</b>    | : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.  |
| <b>Prevention</b> | : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Wash hands thoroughly after handling.   |
| <b>Response</b>   | : IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. |
| <b>Storage</b>    | : Store locked up.   |
| <b>Disposal</b>   | : Dispose of contents and container in accordance with all local, regional, national and international regulations.  |

## Section 2. Hazards identification

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Substance  
**Chemical name** : trichloroethylene  
**Other means of identification** : trichloroethene; Ethene, 1,1,2-trichloro-; Ethene, trichloro-; Trichlorethylene; Ethylene, trichloro-

### CAS number/other identifiers

**CAS number** : 79-01-6  
**Product code** : 001206

| Ingredient name   | %   | CAS number |
|-------------------|-----|------------|
| trichloroethylene | 100 | 79-01-6    |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
- Ingestion** : No known significant effects or critical hazards.

## Section 4. First aid measures

### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain or irritation, watering, redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following: irritation, redness
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
halogenated compounds  
carbonyl halides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## Section 6. Accidental release measures

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

trichloroethylene

#### ACGIH TLV (United States, 3/2016).

STEL: 25 ppm 15 minutes.

TWA: 10 ppm 8 hours.

#### OSHA PEL 1989 (United States, 3/1989).

STEL: 1080 mg/m<sup>3</sup> 15 minutes.

STEL: 200 ppm 15 minutes.

TWA: 270 mg/m<sup>3</sup> 8 hours.

TWA: 50 ppm 8 hours.

#### OSHA PEL Z2 (United States, 2/2013).

AMP: 300 ppm 5 minutes.

CEIL: 200 ppm

TWA: 100 ppm 8 hours.

## Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid. [Watery liquid.]
- Color** : Colorless.
- Molecular weight** : 131.38 g/mole
- Molecular formula** : C<sub>2</sub>H-Cl<sub>3</sub>
- Boiling/condensation point** : 86.7°C (188.1°F)
- Melting/freezing point** : -84.8°C (-120.6°F)
- Critical temperature** : Not available.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Flash point** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : 6.39 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.

## Section 9. Physical and chemical properties

|   |  |
|---|--|
| <b>Lower and upper explosive (flammable) limits</b> | : Lower: 8%<br>Upper: 10.5%                        |
| <b>Vapor pressure</b>                               | : 9.9 kPa (74.256033302 mm Hg) [room temperature]  |
| <b>Vapor density</b>                                | : 4.5 (Air = 1)                                    |
| <b>Specific Volume (ft<sup>3</sup>/lb)</b>          | : 0.6849   |
| <b>Gas Density (lb/ft<sup>3</sup>)</b>              | : 1.46   |
| <b>Relative density</b>                             | : 1.5  |
| <b>Solubility</b>                                   | : Not available.                                   |
| <b>Solubility in water</b>                          | : 1.1 g/l  |
| <b>Partition coefficient: n-octanol/water</b>       | : 2.53   |
| <b>Auto-ignition temperature</b>                    | : 410°C (770°F)                                    |
| <b>Decomposition temperature</b>                    | : Not available.                                   |
| <b>SADT</b>   | : Not available.                                   |
| <b>Viscosity</b>                                    | : Dynamic (room temperature): 0.58 mPa·s (0.58 cP) |

## Section 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | : No specific test data related to reactivity available for this product or its ingredients.           |
| <b>Chemical stability</b>                 | : The product is stable.   |
| <b>Possibility of hazardous reactions</b> | : Under normal conditions of storage and use, hazardous reactions will not occur.                      |
| <b>Conditions to avoid</b>                | : No specific data.  |
| <b>Incompatible materials</b>             | : No specific data.  |
| <b>Hazardous decomposition products</b>   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| <b>Hazardous polymerization</b>           | : Under normal conditions of storage and use, hazardous polymerization will not occur.                 |

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name | Result                | Species | Dose                     | Exposure |
|-------------------------|-----------------------|---------|--------------------------|----------|
| trichloroethylene       | LC50 Inhalation Vapor | Rat     | 140700 mg/m <sup>3</sup> | 1 hours  |
|                         | LD50 Dermal           | Rabbit  | >20 g/kg                 | -        |
|                         | LD50 Oral             | Rat     | 4920 mg/kg               | -        |

**IDLH** : 1000 ppm

#### Irritation/Corrosion

| Product/ingredient name | Result                   | Species | Score | Exposure               | Observation |
|-------------------------|--------------------------|---------|-------|------------------------|-------------|
| trichloroethylene       | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 20 milligrams | -           |
|                         | Skin - Severe irritant   | Rabbit  | -     | 24 hours 2 milligrams  | -           |

#### Sensitization

Not available.

## Section 11. Toxicological information

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

| Product/ingredient name | OSHA | IARC | NTP  |
|-------------------------|------|------|--|
| trichloroethylene       | -    | 1    | Reasonably anticipated to be a human carcinogen. |

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following: , pain or irritation, watering, redness  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following: , irritation, redness  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.  
**Mutagenicity** : Suspected of causing genetic defects.



## Section 11. Toxicological information

- Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

| Product/ingredient name          | Result                             | Species  | Exposure |
|----------------------------------|------------------------------------|--|----------|
| trichloroethylene                | Acute EC50 95000 µg/l Marine water | Algae - Skeletonema costatum   | 96 hours |
|                                  | Acute EC50 36.5 mg/l Fresh water   | Algae - Chlamydomonas reinhardtii - Exponential growth phase           | 72 hours |
|                                  | Acute LC50 20 mg/l Marine water    | Crustaceans - Elminius modestus  | 48 hours |
|                                  | Acute LC50 18 mg/l Fresh water     | Daphnia - Daphnia magna  | 48 hours |
|                                  | Acute LC50 3100 µg/l Fresh water   | Fish - Jordanella floridae - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
|                                  | Chronic EC10 12.3 mg/l Fresh water | Algae - Chlamydomonas reinhardtii - Exponential growth phase           | 72 hours |
| Chronic NOEC 10 mg/l Fresh water | Daphnia - Daphnia magna            | 21 days  |          |

### Persistence and degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| trichloroethylene       | 2.53               | 17  | low       |

### Mobility in soil

- Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

- Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.








## Section 13. Disposal considerations

### United States - RCRA Toxic hazardous waste "U" List

| Ingredient                            | CAS #   | Status | Reference number |
|---------------------------------------|---------|--------|------------------|
| Trichloroethylene; Ethene, trichloro- | 79-01-6 | Listed | U228             |

## Section 14. Transport information

|                                   | DOT   | TDG   | Mexico   | IMDG   | IATA   |
|-----------------------------------|---|---|--|--|--|
| <b>UN number</b>                  | UN1710  | UN1710  | UN1710   | UN1710   | UN1710   |
| <b>UN proper shipping name</b>    | TRICHLOROETHYLENE   | TRICHLOROETHYLENE   | TRICHLOROETHYLENE  | TRICHLOROETHYLENE  | TRICHLOROETHYLENE  |
| <b>Transport hazard class(es)</b> | 6.1<br>  | 6.1<br>  | 6.1<br> | 6.1<br> | 6.1<br>   |
| <b>Packing group</b>              | III   | III   | III  | III  | III  |
| <b>Environment</b>                | No.   | No.   | No.  | No.  | No.  |
| <b>Additional information</b>     | <p><b>Reportable quantity</b><br/>100 lbs / 45.4 kg [8.2147 gal / 31.096 L]<br/>Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p><b>Limited quantity</b><br/>Yes.</p> <p><b>Packaging instruction</b><br/><b>Passenger aircraft</b><br/>Quantity limitation: 60 L</p> <p><b>Cargo aircraft</b><br/>Quantity limitation: 220 L</p> <p><b>Special provisions</b><br/>IB3, N36, T4, TP1, T1</p> | <p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.26-2.36 (Class 6).</p> <p><b>Explosive Limit and Limited Quantity Index</b><br/>5</p> | -  | -  | <p><b>Passenger and Cargo Aircraft</b> Quantity limitation: 60 L</p> <p><b>Cargo Aircraft Only</b> Quantity limitation: 220 L</p> <p><b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 2 L</p> |

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

**Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

## Section 15. Regulatory information

- U.S. Federal regulations**
- TSCA 5(a)2 final significant new use rules:** trichloroethylene
  - TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
  - TSCA 12(b) one-time export:** trichloroethylene
  - United States inventory (TSCA 8b):** This material is listed or exempted.
  - Clean Water Act (CWA) 307:** trichloroethylene
  - Clean Water Act (CWA) 311:** trichloroethylene

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

#### Composition/information on ingredients

| Name              | %   | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|-------------------|-----|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| trichloroethylene | 100 | No.         | No.                        | No.      | Yes.                            | Yes.                            |

### SARA 313

|  | Product name      | CAS number | %   |
|--|-------------------|------------|-----|
| <b>Form R - Reporting requirements</b> | trichloroethylene | 79-01-6    | 100 |
| <b>Supplier notification</b>           | trichloroethylene | 79-01-6    | 100 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

**Massachusetts** : This material is listed.

**New York** : This material is listed.

**New Jersey** : This material is listed.

**Pennsylvania** : This material is listed.

### California Prop. 65

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

## Section 15. Regulatory information

| Ingredient name   | Cancer | Reproductive | No significant risk level                       | Maximum acceptable dosage level |
|-------------------|--------|--------------|---|---------------------------------|
| trichloroethylene | Yes.   | Yes.         | 14 µg/day (ingestion)<br>50 µg/day (inhalation) | No.                             |

### International regulations

#### International lists

#### National inventory

|                          |  |
|--------------------------|--|
| <b>Australia</b>         | : This material is listed or exempted. |
| <b>Canada</b>            | : This material is listed or exempted. |
| <b>China</b>             | : This material is listed or exempted. |
| <b>Europe</b>            | : This material is listed or exempted. |
| <b>Japan</b>             | : This material is listed or exempted. |
| <b>Malaysia</b>          | : This material is listed or exempted. |
| <b>New Zealand</b>       | : This material is listed or exempted. |
| <b>Philippines</b>       | : This material is listed or exempted. |
| <b>Republic of Korea</b> | : This material is listed or exempted. |
| <b>Taiwan</b>            | : This material is listed or exempted. |

#### Canada

|                       |   |
|-----------------------|---|
| <b>WHMIS (Canada)</b> | : Class D-1B: Material causing immediate and serious toxic effects (Toxic).<br>Class D-2A: Material causing other toxic effects (Very toxic).<br>Class D-2B: Material causing other toxic effects (Toxic).<br><b>CEPA Toxic substances:</b> This material is listed.<br><b>Canadian ARET:</b> This material is not listed.<br><b>Canadian NPRI:</b> This material is listed.<br><b>Alberta Designated Substances:</b> This material is not listed.<br><b>Ontario Designated Substances:</b> This material is not listed.<br><b>Quebec Designated Substances:</b> This material is not listed. |
|-----------------------|---|

## Section 16. Other information

|                                  |  |
|----------------------------------|--|
| <b>Canada Label requirements</b> | : Class D-1B: Material causing immediate and serious toxic effects (Toxic).<br>Class D-2A: Material causing other toxic effects (Very toxic).<br>Class D-2B: Material causing other toxic effects (Toxic). |
|----------------------------------|--|

### Hazardous Material Information System (U.S.A.)

|                  |   |   |
|------------------|---|---|
| Health           | * | 2 |
| Flammability     |   | 0 |
| Physical hazards |   | 0 |
|                  |   |   |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

### National Fire Protection Association (U.S.A.)



## Section 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

| Classification          | Justification   |
|-------------------------|-----------------|
| Skin Irrit. 2, H315     | Expert judgment |
| Eye Irrit. 2A, H319     | Expert judgment |
| Muta. 2, H341           | Expert judgment |
| Carc. 1, H350           | Expert judgment |
| Aquatic Chronic 3, H412 | Expert judgment |

### History

**Date of printing** : 11/21/2016  
**Date of issue/Date of revision** : 11/21/2016  
**Date of previous issue** : No previous validation  
**Version** : 0.01

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations

**References** : Not available.

☑ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.