# Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

# RED HOT BLUE GLUE

Version number: 1.0 Date of compilation: 2022-08-09

## SECTION 1: Identification

### 1.1 Product identifier

Trade name **RED HOT BLUE GLUE**

Product category/ies ULVOC Solvent Cement for PVC Plastic Pipe

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses PVC solvent cement
adhesive

### 1.3 Details of the supplier of the safety data sheet

T Christy Enterprises, Inc.
655 East Ball Road
Anaheim CA 92805
United States

Telephone: 714-507-3300
Website: tchristy.com

### 1.4 Emergency telephone number

Emergency information service 24 Hours - CHEMTEL: (800) 255-3924; International (813) 248-0585

## SECTION 2: Hazard(s) identification

### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

| Hazard class | Category |
|---|---|
| acute toxicity (oral) | 4 |
| skin corrosion/irritation | 2 |
| serious eye damage/eye irritation | 2 |
| carcinogenicity | 2 |
| specific target organ toxicity - single exposure (respiratory tract irritation) | 3 |
| specific target organ toxicity - single exposure (narcotic effects, drowsiness) | 3 |
| flammable liquid | 2 |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

### 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS02, GHS07, GHS08 

- Hazard statements

| | |
|---|---|
| H225 | Highly flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |

- Precautionary statements

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P201 | Obtain special instructions before use. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting equipment. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P301+P312 | If swallowed: Call a poison center/doctor if you feel unwell. |
| P302+P352 | If on skin: Wash with plenty of water. |
| P303+P361+P353 | If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304+P340 | If inhaled: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a poison center/doctor if you feel unwell. |
| P321 | Specific treatment (see on this label). |
| P330 | Rinse mouth. |
| P362 | Take off contaminated clothing and wash it before reuse. |
| P370+P378 | In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to industrial combustion plant. |

- Hazardous ingredients for labelling tetrahydrofuran, acetone, cyclohexanone

## 2.3 Other hazards

Hazards not otherwise classified

May form explosive peroxides.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS |
|---|---|---|---|
| tetrahydrofuran | CAS No<br>109-99-9 | 25 – < 50 | Acute Tox. 4 / H302<br>Eye Irrit. 2 / H319<br>Carc. 2 / H351<br>STOT SE 3 / H335<br>Flam. Liq. 2 / H225 |
| acetone | CAS No<br>67-64-1 | 10 – < 25 | Eye Irrit. 2 / H319<br>STOT SE 3 / H336<br>Flam. Liq. 2 / H225 |
| cyclohexanone | CAS No<br>108-94-1 | 10 – < 25 | Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 3 / H331<br>Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319<br>STOT SE 3 / H335<br>Flam. Liq. 3 / H226 |

For full text of abbreviations: see SECTION 16.

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

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

none

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

### 5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

| | |
|---|---|
| Flash point | -6.16 °F at 101.3 kPa |

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Ceiling-C [ppm] | Ceiling-C [mg/m³] | Notation | Source |
|---|---|---|---|---|---|---|---|---|---|---|---|
| US | cyclohexanone | 108-94-1 | PEL (CA) | 25 | 100 | | | | | | Cal/OSHA PEL |
| US | cyclohexanone | 108-94-1 | REL | 25 (10 h) | 100 (10 h) | | | | | | NIOSH REL |
| US | cyclohexanone | 108-94-1 | PEL | 50 | 200 | | | | | | 29 CFR 1910.1000 |
| US | cyclohexanone | 108-94-1 | TLV® | 20 | | 50 | | | | H | ACGIH® 2022 |
| US | tetrahydrofuran | 109-99-9 | REL | 200 (10 h) | 590 (10 h) | 250 | 735 | | | | NIOSH REL |
| US | tetrahydrofuran | 109-99-9 | PEL | 200 | 590 | | | | | | 29 CFR 1910.1000 |
| US | tetrahydrofuran | 109-99-9 | TLV® | 50 | | 100 | | | | H | ACGIH® 2022 |
| US | tetrahydrofuran (THF) | 109-99-9 | PEL (CA) | 200 | 590 | 250 | 735 | | | | Cal/OSHA PEL |
| US | silica, amorphous - precipitated and gel | 112926-00-8 | PEL | 706 | | | | | | partml | 29 CFR 1910.1000 |
| US | silica, amorphous - precipitated and gel | 112926-00-8 | PEL (CA) | | 3 | | | | | r | Cal/OSHA PEL |
| US | acetone | 67-64-1 | PEL (CA) | 500 | 1,200 | 750 | 1,780 | 3,000 | | | Cal/OSHA PEL |
| US | acetone | 67-64-1 | REL | 250 (10 h) | 590 (10 h) | | | | | | NIOSH REL |
| US | acetone | 67-64-1 | TLV® | 250 | | 500 | | | | | ACGIH® 2022 |
| US | acetone | 67-64-1 | PEL | 1,000 | 2,400 | | | | | | 29 CFR 1910.1000 |
| US | silica, amorphous | 112945-52-5 | REL | | 6 (10 h) | | | | | | NIOSH REL |
| US | polyvinyl chloride | 9002-86-2 | TLV® | | 1 | | | | | r | ACGIH® 2022 |

Notation

| | |
|---|---|
| Ceiling-C | ceiling value is a limit value above which exposure should not occur |
| H | absorbed through the skin |
| partml | particles/ml |
| r | respirable fraction |
| STEL | short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) |
| TWA | time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified |

Biological limit values

| Country | Name of agent | Parameter | Notation | Identifier | Value | Source |
|---|---|---|---|---|---|---|
| US | cyclohexanone | 1,2-cyclohexanediol | hydr | BEI® | 80 mg/l | ACGIH® 2022 |
| US | cyclohexanone | cyclohexanol | hydr | BEI® | 8 mg/l | ACGIH® 2022 |
| US | tetrahydrofuran | tetrahydrofuran | | BEI® | 2 mg/l | ACGIH® 2022 |
| US | acetone | acetone | | BEI® | 25 mg/l | ACGIH® 2022 |

Notation

| | |
|---|---|
| hydr | hydrolysis |

Relevant DNELs of components of the mixture

| Name of substance | CAS No | Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|---|---|---|---|---|---|---|
| tetrahydrofuran | 109-99-9 | DNEL | 72.4 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| tetrahydrofuran | 109-99-9 | DNEL | 96 mg/m³ | human, inhalatory | worker (industry) | acute - systemic effects |
| tetrahydrofuran | 109-99-9 | DNEL | 150 mg/m³ | human, inhalatory | worker (industry) | chronic - local effects |
| tetrahydrofuran | 109-99-9 | DNEL | 300 mg/m³ | human, inhalatory | worker (industry) | acute - local effects |
| tetrahydrofuran | 109-99-9 | DNEL | 12.6 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| acetone | 67-64-1 | DNEL | 1,210 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| acetone | 67-64-1 | DNEL | 2,420 mg/m³ | human, inhalatory | worker (industry) | acute - local effects |
| acetone | 67-64-1 | DNEL | 186 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| cyclohexanone | 108-94-1 | DNEL | 10 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| cyclohexanone | 108-94-1 | DNEL | 20 mg/m³ | human, inhalatory | worker (industry) | acute - systemic effects |
| cyclohexanone | 108-94-1 | DNEL | 10 mg/m³ | human, inhalatory | worker (industry) | chronic - local effects |
| cyclohexanone | 108-94-1 | DNEL | 20 mg/m³ | human, inhalatory | worker (industry) | acute - local effects |

Relevant DNELs of components of the mixture

| Name of substance | CAS No | Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|---|---|---|---|---|---|---|
| cyclohexanone | 108-94-1 | DNEL | 4 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| cyclohexanone | 108-94-1 | DNEL | 4 mg/kg bw/day | human, dermal | worker (industry) | acute - systemic effects |

Relevant PNECs of components of the mixture

| Name of substance | CAS No | Endpoint | Threshold level | Organism | Environmental compartment | Exposure time |
|---|---|---|---|---|---|---|
| tetrahydrofuran | 109-99-9 | PNEC | 4.32 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| tetrahydrofuran | 109-99-9 | PNEC | 0.432 mg/l | aquatic organisms | marine water | short-term (single instance) |
| tetrahydrofuran | 109-99-9 | PNEC | 4.6 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| tetrahydrofuran | 109-99-9 | PNEC | 23.3 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| tetrahydrofuran | 109-99-9 | PNEC | 2.33 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| tetrahydrofuran | 109-99-9 | PNEC | 2.13 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| acetone | 67-64-1 | PNEC | 10.6 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| acetone | 67-64-1 | PNEC | 1.06 mg/l | aquatic organisms | marine water | short-term (single instance) |
| acetone | 67-64-1 | PNEC | 100 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| acetone | 67-64-1 | PNEC | 30.4 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| acetone | 67-64-1 | PNEC | 3.04 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| acetone | 67-64-1 | PNEC | 29.5 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| cyclohexanone | 108-94-1 | PNEC | 0.356 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| cyclohexanone | 108-94-1 | PNEC | 0.036 mg/l | aquatic organisms | marine water | short-term (single instance) |
| cyclohexanone | 108-94-1 | PNEC | 10 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |

Relevant PNECs of components of the mixture

| Name of substance | CAS No | Endpoint | Threshold level | Organism | Environmental compartment | Exposure time |
|---|---|---|---|---|---|---|
| cyclohexanone | 108-94-1 | PNEC | 2.69 $^{mg}/_{kg}$ | aquatic organisms | freshwater sediment | short-term (single instance) |
| cyclohexanone | 108-94-1 | PNEC | 0.269 $^{mg}/_{kg}$ | aquatic organisms | marine sediment | short-term (single instance) |
| cyclohexanone | 108-94-1 | PNEC | 0.328 $^{mg}/_{kg}$ | terrestrial organisms | soil | short-term (single instance) |

### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance**

| | |
|---|---|
| Physical state | liquid |
| Color | blue |
| Particle | not relevant (liquid) |
| Odor | characteristic |

**Other safety parameters**

| | |
|---|---|
| pH (value) | not determined |
| Melting point/freezing point | not determined |
| Initial boiling point and boiling range | 56.05 °C |
| Flash point | -21.2 °C at 101.3 kPa |
| Flash point | -6.16 °F at 101.3 kPa |
| Evaporation rate | not determined |
| Flammability (solid, gas) | not relevant, (fluid) |
| Vapor pressure | 240 hPa at 20 °C |
| Density | 0.948 $^{g}/_{cm^3}$ at 73 °F |
| Vapor density | this information is not available |
| Solubility(ies) | not determined |

Partition coefficient

| | |
|---|---|
| - n-octanol/water (log KOW) | this information is not available |

| | |
|---|---|
| Auto-ignition temperature | 215 °C (auto-ignition temperature (liquids and gases)) |

Viscosity

| | |
|---|---|
| - Dynamic viscosity | 500 – 800 cP at 73 °F |

| | |
|---|---|
| Explosive properties | explosive |
| Oxidizing properties | none |

## 9.2 Other information

| | |
|---|---|
| VOC content | When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: <= 425 g/L. |
| Temperature class (USA, acc. to NEC 500) | T3 (maximum permissible surface temperature on the equipment: 200°C) |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

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

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

### 10.5 Incompatible materials

Oxidizers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4: May be harmful in contact with skin or if inhaled.

- Acute toxicity estimate (ATE)

Oral 917.1 $^{mg}/_{kg}$

Acute toxicity estimate (ATE) of components of the mixture

| Name of substance | CAS No | Exposure route | ATE |
|---|---|---|---|
| tetrahydrofuran | 109-99-9 | oral | 500 $^{mg}/_{kg}$ |
| cyclohexanone | 108-94-1 | oral | 500 $^{mg}/_{kg}$ |

| Acute toxicity estimate (ATE) of components of the mixture | | | |
|---|---|---|---|
| **Name of substance** | **CAS No** | **Exposure route** | **ATE** |
| cyclohexanone | 108-94-1 | dermal | 1,100 $^{mg}/_{kg}$ |
| cyclohexanone | 108-94-1 | inhalation: vapor | >6.2 $^{mg}/_{l}$/4h |

### Skin corrosion/irritation

Causes skin irritation.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Suspected of causing cancer.

| IARC Monographs on the Evaluation of Carcinogenic Risks to Humans | | | |
|---|---|---|---|
| **Name of substance** | **CAS No** | **Classification** | **Number** |
| tetrahydrofuran | 109-99-9 | 2B | |
| cyclohexanone | 108-94-1 | 3 | |

Legend

| | |
|---|---|
| 2B | Possibly carcinogenic to humans |
| 3 | Not classifiable as to carcinogenicity in humans |

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Information on this property is not available.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

### 14.1 UN number

| | |
|---|---|
| DOT | UN 1133 |
| IMDG-Code | UN 1133 |
| ICAO-TI | UN 1133 |

### 14.2 UN proper shipping name

| | |
|---|---|
| DOT | Adhesives |

| | |
|---|---|
| IMDG-Code | ADHESIVES |
| ICAO-TI | Adhesives |

**14.3 Transport hazard class(es)**

| | |
|---|---|
| DOT | 3 |
| IMDG-Code | 3 |
| ICAO-TI | 3 |

**14.4 Packing group**

| | |
|---|---|
| DOT | II |
| IMDG-Code | II |
| ICAO-TI | II |

**14.5 Environmental hazards** non-environmentally hazardous acc. to the dangerous goods regulations

**14.6 Special precautions for user**

There is no additional information.

**14.7 Transport in bulk according to IMO instruments**

The cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations**

**Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information**

| | |
|---|---|
| Particulars in the shipper's declaration | UN1133, Adhesives, 3, II |
| Reportable quantity (RQ) | 2,545 lbs (1,155 kg) (tetrahydrofuran) (cyclohexanone) |
| Danger label(s) | 3 |



| | |
|---|---|
| Special provisions (SP) | 149, B52, IB2, T4, TP1, TP8 |
| ERG No | 128 |

**International Maritime Dangerous Goods Code (IMDG) - Additional information**

| | |
|---|---|
| Marine pollutant | - |
| Danger label(s) | 3 |



| | |
|---|---|
| Special provisions (SP) | - |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 5 L |
| EmS | F-E, S-D |

| | |
|---|---|
| Stowage category | B |

**International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information**

| | |
|---|---|
| Danger label(s) | 3 |



| | |
|---|---|
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

**National regulations (United States)**

**Toxic Substance Control Act (TSCA)** all ingredients are listed

**Superfund Amendment and Reauthorization Act (SARA TITLE III )**

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

| Name of substance | CAS No | Remarks | Statutory code | Final RQ pounds (Kg) |
|---|---|---|---|---|
| tetrahydrofuran | 109-99-9 | | 4 | 1000 (454) |
| cyclohexanone | 108-94-1 | | 4 | 5000 (2270) |
| acetone | 67-64-1 | | 4 | 5000 (2270) |

Legend
4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

**Right to Know Hazardous Substance List**

- Cleaning Product Right to Know Act Substance List (CA-RTK)

| Name of substance | CAS No | Functionality | Authoritative Lists |
|---|---|---|---|
| tetrahydrofuran | 109-99-9 | | CDC 4th National Exposure Report<br>CWA 303(d)<br>IARC Carcinogens - 2B<br>IRIS Neurotoxicants |
| acetone | 67-64-1 | | ATSDR Neurotoxicants |

- Toxic or Hazardous Substance List (MA-TURA)

| Name of substance | CAS No | DEP CODE | PBT / HHS / LHS | PBT / HHS Threshold | De Minimis Concentration Threshold |
|---|---|---|---|---|---|
| tetrahydrofuran | 109-99-9 | | | | 1.0 % |
| cyclohexanone | 108-94-1 | | | | 1.0 % |
| acetone | 67-64-1 | | | | 1.0 % |

- Hazardous Substances List (MN-ERTK)

| Name of substance | CAS No | References | Remarks |
|---|---|---|---|
| tetrahydrofuran | 109-99-9 | A, O | |
| cyclohexanone | 108-94-1 | A, N, O | skin |
| acetone | 67-64-1 | A, N, O | |

Legend

| | |
|---|---|
| A | American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH |
| N | National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer |
| O | Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division |
| skin | If a potential for absorption from skin contact merits special consideration, the word "skin" follows the substance name. |

- Hazardous Substance List (NJ-RTK)

| Name of substance | CAS No | Remarks | Classifications |
|---|---|---|---|
| tetrahydrofuran | 109-99-9 | | F3<br>R1 |
| cyclohexanone | 108-94-1 | | F2 |
| acetone | 67-64-1 | | F3 |

Legend

| | |
|---|---|
| F2 | Flammable - Second Degree |
| F3 | Flammable - Third Degree |
| R1 | Reactive - First Degree |

- Hazardous Substance List (Chapter 323) (PA-RTK)

| Name acc. to inventory | CAS No | Classification |
|---|---|---|
| FURAN, TETRAHYDRO- | 109-99-9 | E |
| CYCLOHEXANONE | 108-94-1 | E |
| 2-PROPANONE | 67-64-1 | E |

Legend

| | |
|---|---|
| E | Environmental hazard |

- Hazardous Substance List (RI-RTK)

| Name of substance | CAS No | References |
|---|---|---|
| tetrahydrofuran | 109-99-9 | T, F |
| cyclohexanone | 108-94-1 | T, F |
| acetone | 67-64-1 | T, F |

Legend
F Flammability (NFPA®)
T Toxicity (ACGIH®)

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals

| Name acc. to inventory | CAS No | Remarks | Type of the toxicity |
|---|---|---|---|
| tetrahydrofuran | 109-99-9 | | cancer |

### Industry or sector specific available guidance(s)

#### NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

| Category | Rating | Description |
|---|---|---|
| Chronic | * | chronic (long-term) health effects may result from repeated overexposure |
| Health | 2 | temporary or minor injury may occur |
| Flammability | 3 | material that can be ignited under almost all ambient temperature conditions |
| Physical hazard | 0 | material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive |
| Personal protection | - | |

#### NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

| Category | Degree of hazard | Description |
|---|---|---|
| Flammability | 3 | material that can be ignited under almost all ambient temperature conditions |
| Health | 2 | material that, under emergency conditions, can cause temporary incapacitation or residual injury |
| Instability | 0 | material that is normally stable, even under fire conditions |
| Special hazard | | |

### National inventories

| Country | Inventory | Status |
|---|---|---|
| AU | AIIC | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | not all ingredients are listed |
| JP | CSCL-ENCS | not all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | not all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| PH | PICCS | all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | all ingredients are listed |
| EU | REACH Reg. | not all ingredients are listed |
| TR | CICR | not all ingredients are listed |

Legend

| | |
|---|---|
| AIIC | Australian Inventory of Industrial Chemicals |
| CICR | Chemical Inventory and Control Regulation |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

### 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

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

### Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|---|---|
| 29 CFR 1910.1000 | 29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits) |
| 49 CFR US DOT | 49 CFR U.S. Department of Transportation |
| ACGIH® | American Conference of Governmental Industrial Hygienists |

| Abbr. | Descriptions of used abbreviations |
|---|---|
| ACGIH® 2022 | From ACGIH®, 2022 TLVs® and BEIs® Book. Copyright 2022. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement |
| Acute Tox. | Acute toxicity |
| ATE | Acute Toxicity Estimate |
| Cal/OSHA PEL | California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs) |
| Carc. | Carcinogenicity |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| DEP CODE | Department of Environmental Protection Code |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| DOT | Department of Transportation (USA) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ERG No | Emergency Response Guidebook - Number |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| Flam. Liq. | Flammable liquid |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| HHS | Higher hazard substance |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| LHS | Lower hazard substance |
| NFPA® | National Fire Protection Association (United States) |
| NIOSH REL | National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs) |

| Abbr. | Descriptions of used abbreviations |
|---|---|
| NLP | No-Longer Polymer |
| NPCA-HMIS® III | National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition |
| OSHA | Occupational Safety and Health Administration (United States) |
| PBT | Persistent, Bioaccumulative and Toxic |
| PEL | Permissible exposure limit |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| RTECS | Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| STEL | Short-term exposure limit |
| STOT SE | Specific target organ toxicity - single exposure |
| TLV® | Threshold Limit Values |
| TWA | Time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

## Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|---|---|
| H225 | Highly flammable liquid and vapor. |
| H226 | Flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |

| Code | Text |
|---|---|
| H331 | Toxic if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |

## Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.