



# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name or designation of the mixture Malco Odor Fogger

Registration number -

Synonyms None.

Product Code 1241

Issue date 04-15-2016

Version number 04

**Distributor in New Zealand**  
Pacer Car Clean Products NZ LTD  
33 Ha Crescent Wiri  
Auckland, New Zealand  
Telephone: +64 9 25000 91  
Fax: +64 9 25000 92  
Web: :www.pacer.co.nz

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

Identified uses Odor Eliminator

Uses advised against None known.

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

#### Supplier

Company name Malco Products, Inc.  
Address 361 Fairview Ave  
Barberton, OH 44203  
US

**24hr Emergency Assistance in New Zealand**  
National Poison Control Center: 0800 Poison [764 766]

#### Division

Telephone Phone 800-253-2526  
Fax 330-777-8317

e-mail msdsinfo@malcopro.com

Contact person Not available.

1.4. Emergency telephone number Phone 1-800-424-9300

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

|  |                             |   |
|--|-----------------------------|---|
| Physical hazards                                 |                             |   |
| Aerosols   | Category 1                  | H222 - Extremely flammable aerosol.       |
| Health hazards                                   |                             |   |
| Serious eye damage/eye irritation                | Category 2                  | H319 - Causes serious eye irritation.     |
| Specific target organ toxicity - single exposure | Category 3 narcotic effects | H336 - May cause drowsiness or dizziness. |

#### Hazard summary

**CONTENTS UNDER PRESSURE.**  
Aerosol. Pressurized container may explode when exposed to heat or flame. May cause drowsiness and dizziness. Causes serious eye irritation. Occupational exposure to the substance or mixture may cause adverse health effects.

#### Hazard Summary (according to Dangerous Substances Directive)

Physical hazards Extremely flammable.

Health hazards May cause cancer. May cause heritable genetic damage. Also very toxic in contact with skin and if swallowed. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

Environmental hazards Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards None known.

Main symptoms May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### 2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Acetone (propan-2-one; Propanone), N-butane



Hazard pictograms

Signal word Danger

Hazard statements

H222 Extremely flammable aerosol.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention

P211 Do not spray on an open flame or other ignition source.  
P261 Avoid breathing mist or vapor.  
P264 Wash thoroughly after handling.  
P280 Wear eye protection/face protection.

Response

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.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal

Not available.

Supplemental label information EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards None known.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

General information

| Chemical name                     | %  | CAS-No. / EC No.      | REACH Registration No. | Index No.    | Notes |
|-----------------------------------|--|-----------------------|------------------------|--------------|-------|
| Acetone (propan-2-one; Propanone) | 70 - < 80  | 67-64-1<br>200-662-2  | -                      | 606-001-00-8 | #     |
| Classification:                   | Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336 |                       |                        |              |       |
| N-butane                          | 10 - < 20  | 106-97-8<br>203-448-7 | -                      | 601-004-01-8 |       |
| Classification:                   | Flam. Gas 1;H220                                     |                       |                        |              |       |

Other components below reportable levels 10 - < 20

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16. The full text for all H-statements is displayed in section 16.

### SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

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

Ingestion In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.

- |   |   |
|---|---|
| 4.2. Most important symptoms and effects, both acute and delayed                | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. |
| 4.3. Indication of any immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.  |

## SECTION 5: Firefighting measures

- |  |  |
|--|--|
| General fire hazards                                       | Extremely flammable aerosol.   |
| 5.1. Extinguishing media                                   |  |
| Suitable extinguishing media                               | Powder. Alcohol resistant foam. Carbon dioxide (CO <sub>2</sub> ).   |
| Unsuitable extinguishing media                             | Do not use water jet as an extinguisher, as this will spread the fire.   |
| 5.2. Special hazards arising from the substance or mixture | Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.  |
| 5.3. Advice for firefighters                               |  |
| Special protective equipment for firefighters              | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.   |
| Special fire fighting procedures                           | Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. |
| Specific methods   | Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.   |

## SECTION 6: Accidental release measures

- |  |   |
|--|---|
| 6.1. Personal precautions, protective equipment and emergency procedures |   |
| For non-emergency personnel  | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.  |
| For emergency responders   | Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.   |
| 6.2. Environmental precautions   | Avoid discharge into drains, water courses or onto the ground.  |
| 6.3. Methods and material for containment and cleaning up                | Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. |
|  | Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  |
| 6.4. Reference to other sections   | For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.   |

## SECTION 7: Handling and storage

- |   |  |
|---|--|
| 7.1. Precautions for safe handling                                | Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. |
| 7.2. Conditions for safe storage, including any incompatibilities | Level 3 Aerosol.<br><br>Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).   |
| 7.3. Specific end use(s)  | Not available.   |

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

## Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

| Components   | Type    | Value                              |
|--|---------|------------------------------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | MAK     | 1200 mg/m <sup>3</sup>             |
|  |         | 500 ppm                            |
|  | STEL    | 4800 mg/m <sup>3</sup><br>2000 ppm |
| N-butane (CAS 106-97-8)                            | Ceiling | 3800 mg/m <sup>3</sup><br>1600 ppm |
|  | MAK     | 1900 mg/m <sup>3</sup><br>800 ppm  |
| Propane (CAS 74-98-6)                              | Ceiling | 3600 mg/m <sup>3</sup><br>2000 ppm |
|  |         | 1800 mg/m <sup>3</sup>             |
|  | MAK     | 1800 mg/m <sup>3</sup><br>1000 ppm |

Belgium. Exposure Limit Values

| Components              | Type | Value    |
|-------------------------|------|----------|
| N-butane (CAS 106-97-8) | TWA  | 1000 ppm |
| Propane (CAS 74-98-6)   | TWA  | 1000 ppm |

Belgium. Exposure Limit Values.

| Components   | Type | Value                             |
|--|------|-----------------------------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | STEL | 2420 mg/m <sup>3</sup>            |
|  |      | 1000 ppm                          |
|  | TWA  | 1210 mg/m <sup>3</sup><br>500 ppm |

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

| Components   | Type | Value                  |
|--|------|------------------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | STEL | 1400 mg/m <sup>3</sup> |
|  | TWA  | 600 mg/m <sup>3</sup>  |
| N-butane (CAS 106-97-8)                            | TWA  | 1800 mg/m <sup>3</sup> |
| Propane (CAS 74-98-6)                              | TWA  | 1800 mg/m <sup>3</sup> |

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

| Components   | Type | Value                              |
|--|------|------------------------------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | MAC  | 1210 mg/m <sup>3</sup>             |
|  |      | 500 ppm                            |
|  | STEL | 3620 mg/m <sup>3</sup><br>1500 ppm |
| N-butane (CAS 106-97-8)                            | MAC  | 1450 mg/m <sup>3</sup><br>10 ppm   |
|  | STEL | 1810 mg/m <sup>3</sup><br>750 ppm  |

Czech Republic. OELs. Government Decree 361

| Components   | Type    | Value                  |
|--|---------|------------------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | Ceiling | 1500 mg/m <sup>3</sup> |
|  | TWA     | 800 mg/m <sup>3</sup>  |

Denmark. Exposure Limit Values

| Components   | Type | Value                              |
|--|------|------------------------------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TLV  | 600 mg/m <sup>3</sup>              |
|  |      | 250 ppm                            |
| N-butane (CAS 106-97-8)                            | TLV  | 1200 mg/m <sup>3</sup><br>500 ppm  |
| Propane (CAS 74-98-6)                              | TLV  | 1800 mg/m <sup>3</sup><br>1000 ppm |

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

| Components   | Type | Value                              |
|--|------|------------------------------------|
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)  | TWA  | 1210 mg/m3                         |
| N-butane (CAS 106-97-8)  | TWA  | 500 ppm<br>1500 mg/m3              |
| Propane (CAS 74-98-6)  | TWA  | 800 ppm<br>1800 mg/m3<br>1000 ppm  |
| Finland. Workplace Exposure Limits   |      |                                    |
| Components   | Type | Value                              |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)  | STEL | 1500 mg/m3                         |
|  | TWA  | 630 ppm<br>1200 mg/m3              |
| N-butane (CAS 106-97-8)  | STEL | 500 ppm<br>2400 mg/m3              |
|  | TWA  | 1000 ppm<br>1900 mg/m3             |
| Propane (CAS 74-98-6)  | STEL | 800 ppm<br>2000 mg/m3              |
|  | TWA  | 1100 ppm<br>1500 mg/m3<br>800 ppm  |
| France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984                                    |      |                                    |
| Components   | Type | Value                              |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)  | VLE  | 2420 mg/m3                         |
|  | VME  | 1000 ppm<br>1210 mg/m3             |
| N-butane (CAS 106-97-8)  | VME  | 500 ppm<br>1900 mg/m3              |
|  |      | 800 ppm                            |
| Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG) |      |                                    |
| Components   | Type | Value                              |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)  | TWA  | 1200 mg/m3                         |
| N-butane (CAS 106-97-8)  | TWA  | 500 ppm<br>2400 mg/m3              |
| Propane (CAS 74-98-6)  | TWA  | 1000 ppm<br>1800 mg/m3<br>1000 ppm |
| Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace  |      |                                    |
| Components   | Type | Value                              |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)  | AGW  | 1200 mg/m3                         |
| N-butane (CAS 106-97-8)  | AGW  | 500 ppm<br>2400 mg/m3              |
| Propane (CAS 74-98-6)  | AGW  | 1000 ppm<br>1800 mg/m3<br>1000 ppm |
| Greece. OELs (Decree No. 90/1999, as amended)  |      |                                    |
| Components   | Type | Value                              |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)  | STEL | 3560 mg/m3                         |
|  | TWA  | 1780 mg/m3                         |
| N-butane (CAS 106-97-8)  | TWA  | 2350 mg/m3                         |
| Propane (CAS 74-98-6)  | TWA  | 1000 ppm<br>1800 mg/m3<br>1000 ppm |

| Hungary. OELs. Joint Decree on Chemical Safety of Workplaces  |      |            |
|---|------|------------|
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | STEL | 2420 mg/m3 |
|   | TWA  | 1210 mg/m3 |
| N-butane (CAS 106-97-8)   | STEL | 9400 mg/m3 |
|   | TWA  | 2350 mg/m3 |
| Iceland. OELs. Regulation 154/1999 on occupational exposure limits  |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | TWA  | 600 mg/m3  |
|   |      | 250 ppm    |
| N-butane (CAS 106-97-8)   | TWA  | 1200 mg/m3 |
|   |      | 500 ppm    |
| Propane (CAS 74-98-6)   | TWA  | 1800 mg/m3 |
|   |      | 1000 ppm   |
| Ireland. Occupational Exposure Limits   |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | TWA  | 1210 mg/m3 |
|   |      | 500 ppm    |
| N-butane (CAS 106-97-8)   | TWA  | 1000 ppm   |
|   |      | 1000 ppm   |
| Propane (CAS 74-98-6)   | TWA  | 1000 ppm   |
|   |      | 1000 ppm   |
| Italy. Occupational Exposure Limits   |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | TWA  | 1210 mg/m3 |
|   |      | 500 ppm    |
| N-butane (CAS 106-97-8)   | STEL | 1000 ppm   |
|   |      | 1000 ppm   |
| Latvia. OELs. Occupational exposure limit values of chemical substances in work environment   |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | TWA  | 1210 mg/m3 |
|   |      | 500 ppm    |
| N-butane (CAS 106-97-8)   | TWA  | 300 mg/m3  |
|   |      | 300 mg/m3  |
| Lithuania. OELs. Limit Values for Chemical Substances, General Requirements   |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | STEL | 2420 mg/m3 |
|   |      | 1000 ppm   |
|   | TWA  | 1210 mg/m3 |
|   |      | 500 ppm    |
| Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A  |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | TWA  | 1210 mg/m3 |
|   |      | 500 ppm    |
| Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V) |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | TWA  | 1210 mg/m3 |
|   |      | 500 ppm    |
| Netherlands. OELs (binding)   |      |            |
| Components  | Type | Value      |
| Acetone (propan-2-one; Propanone) (CAS 67-64-1)   | STEL | 2420 mg/m3 |
|   | TWA  | 1210 mg/m3 |

Norway. Administrative Norms for Contaminants in the Workplace

| Components   | Type | Value     |
|--|------|-----------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TLV  | 295 mg/m3 |
|  |      | 125 ppm   |
| N-butane (CAS 106-97-8)                            | TLV  | 600 mg/m3 |
|  |      | 250 ppm   |
| Propane (CAS 74-98-6)                              | TLV  | 900 mg/m3 |
|  |      | 500 ppm   |

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

| Components   | Type | Value      |
|--|------|------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | STEL | 1800 mg/m3 |
|  |      | TWA        |
| N-butane (CAS 106-97-8)                            | STEL | 3000 mg/m3 |
|  |      | TWA        |
| Propane (CAS 74-98-6)                              | TWA  | 1800 mg/m3 |

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

| Components   | Type | Value      |
|--|------|------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TWA  | 1210 mg/m3 |
|  |      | 500 ppm    |

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

| Components   | Type | Value    |
|--|------|----------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | STEL | 750 ppm  |
|  |      | TWA      |
| Propane (CAS 74-98-6)                              | TWA  | 2500 ppm |

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

| Components   | Type | Value      |
|--|------|------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TWA  | 1210 mg/m3 |
|  |      | 500 ppm    |
| Propane (CAS 74-98-6)                              | STEL | 1800 mg/m3 |
|  |      | 1000 ppm   |
|  |      | TWA        |
|  |      | 778 ppm    |

Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances

| Components              | Type | Value      |
|-------------------------|------|------------|
| N-butane (CAS 106-97-8) | TWA  | 2400 mg/m3 |
|                         |      | 1000 ppm   |

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

| Components   | Type | Value      |
|--|------|------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TWA  | 1210 mg/m3 |
|  |      | 500 ppm    |

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

| Components   | Type | Value      |
|--|------|------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TWA  | 1210 mg/m3 |
|  |      | 500 ppm    |
| N-butane (CAS 106-97-8)                            | TWA  | 2400 mg/m3 |
|  |      | 1000 ppm   |
| Propane (CAS 74-98-6)                              | TWA  | 1800 mg/m3 |
|  |      | 1000 ppm   |

Spain. Occupational Exposure Limits

| Components   | Type | Value      |
|--|------|------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | TWA  | 1210 mg/m3 |

| Spain. Occupational Exposure Limits  |      |                        |
|--|------|------------------------|
| Components   | Type | Value                  |
|  |      | 500 ppm                |
| Sweden. Occupational Exposure Limit Values   |      |                        |
| Components   | Type | Value                  |
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1)   | STEL | 1200 mg/m3             |
|  |      | 500 ppm                |
|  | TWA  | 600 mg/m3<br>250 ppm   |
| Switzerland. SUVA Grenzwerte am Arbeitsplatz   |      |                        |
| Components   | Type | Value                  |
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1)   | STEL | 2400 mg/m3             |
|  |      | 1000 ppm               |
|  | TWA  | 1200 mg/m3<br>500 ppm  |
| N-butane (CAS 106-97-8)  | STEL | 7200 mg/m3<br>3200 ppm |
|  | TWA  | 1900 mg/m3<br>800 ppm  |
| Propane (CAS 74-98-6)  | STEL | 7200 mg/m3<br>4000 ppm |
|  |      | 1800 mg/m3             |
|  | TWA  | 1000 ppm               |
| UK. EH40 Workplace Exposure Limits (WELs)  |      |                        |
| Components   | Type | Value                  |
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1)   | STEL | 3620 mg/m3             |
|  |      | 1500 ppm               |
|  | TWA  | 1210 mg/m3<br>500 ppm  |
| N-butane (CAS 106-97-8)  | STEL | 1810 mg/m3<br>750 ppm  |
|  |      | 1450 mg/m3             |
|  | TWA  | 600 ppm                |
| EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU |      |                        |
| Components   | Type | Value                  |
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1)   | TWA  | 1210 mg/m3             |
|  |      | 500 ppm                |

#### Biological limit values

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065))

| Components   | Value    | Determinant | Specimen | Sampling Time |
|--|----------|-------------|----------|---------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | 100 mg/l | Acétone     | Urine    | *             |

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

Germany. TRGS 903, BAT List (Biological Limit Values)

| Components   | Value   | Determinant | Specimen | Sampling Time |
|--|---------|-------------|----------|---------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | 80 mg/l | Aceton      | Urine    | *             |

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

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

| Components   | Value      | Determinant | Specimen            | Sampling Time |
|--|------------|-------------|---------------------|---------------|
| Acetone (propan-2-one;<br>Propanone) (CAS 67-64-1) | 53,36 mg/g | Acetone     | Creatinine in urine | *             |
|  | 80 mg/l    | Acetone     | Urine               | *             |

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



Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

| Components                                      | Value   | Determinant | Specimen | Sampling Time |
|---|---------|-------------|----------|---------------|
| Acetone (propan-2-one; Propanone) (CAS 67-64-1) | 50 mg/l | Acetona     | Urine    | *             |

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

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

| Components                                      | Value   | Determinant | Specimen | Sampling Time |
|---|---------|-------------|----------|---------------|
| Acetone (propan-2-one; Propanone) (CAS 67-64-1) | 80 mg/l | Aceton      | Urine    | *             |

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

## 8.2. Exposure controls

Appropriate engineering controls 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.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

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

Skin protection

- Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other Wear suitable protective clothing.

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

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not 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.

Environmental exposure controls Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|  |                                    |
|--|------------------------------------|
| Appearance                                   | Aerosol.                           |
| Physical state                               | Liquid.                            |
| Form   | Aerosol. Compressed liquefied gas. |
| Color  | White.                             |
| Odor   | Characteristic.                    |
| Odor threshold                               | Not available.                     |
| pH   | Not available.                     |
| Melting point/freezing point                 | Not available.                     |
| Initial boiling point and boiling range      | Not available.                     |
| Flash point                                  | < 20,0 °F (< -6,7 °C)              |
| Evaporation rate                             | Not available.                     |
| Flammability (solid, gas)                    | Not applicable.                    |
| Upper/lower flammability or explosive limits |                                    |
| Flammability limit - lower (%)               | 1,8 %                              |
| Flammability limit - upper (%)               | 12,8 %                             |

|   |                |
|---|----------------|
| Vapor pressure                          | 60 mm Hg psig  |
| Vapor pressure temp.                    | 68 °F (20 °C)  |
| Vapor density                           | Not available. |
| Relative density                        | Not available. |
| Solubility(ies)                         |                |
| Solubility (water)                      | Not available. |
| Solubility (other)                      | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature               | Not available. |
| Decomposition temperature               | Not available. |
| Viscosity                               | Not available. |
| Explosive properties                    | Not explosive. |
| Oxidizing properties                    | Not oxidizing. |

#### 9.2. Other information

|                               |                       |
|-------------------------------|-----------------------|
| Heat of combustion (NFPA 30B) | 32,49 kJ/g estimated  |
| Specific gravity              | 0,75 - 0,8 (water =1) |
| VOC (Weight %)                | 30 %                  |

### SECTION 10: Stability and reactivity

|  |   |
|--|---|
| 10.1. Reactivity                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| 10.2. Chemical stability                 | Material is stable under normal conditions.   |
| 10.3. Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use.                                   |
| 10.4. Conditions to avoid                | Avoid temperatures exceeding the flash point. Contact with incompatible materials.            |
| 10.5. Incompatible materials             | Acids. Strong oxidizing agents. Nitrates. Fluorine. Chlorine.                                 |
| 10.6. Hazardous decomposition products   | No hazardous decomposition products are known.  |

### SECTION 11: Toxicological information

|  |   |
|--|---|
| General information                      | Occupational exposure to the substance or mixture may cause adverse effects.  |
| Information on likely routes of exposure |   |
| Inhalation                               | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.  |
| Skin contact                             | No adverse effects due to skin contact are expected.  |
| Eye contact                              | Causes serious eye irritation.  |
| Ingestion                                | May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.   |
| Symptoms                                 | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. |

#### 11.1. Information on toxicological effects

Acute toxicity                      Narcotic effects.

| Components                                      | Species | Test Results                           |
|---|---------|--|
| Acetone (propan-2-one; Propanone) (CAS 67-64-1) |         |  |
| <u>Acute</u>                                    |         |  |
| Dermal  |         |  |
| LD50  | Rabbit  | 20000 mg/kg<br>20 ml/kg                |
| Inhalation                                      |         |  |
| LC50  | Rat     | 76 mg/l, 4 Hours<br>50,1 mg/l, 8 Hours |
| Oral  |         |  |
| LD50  | Mouse   | 3000 mg/kg                             |
|   | Rabbit  | 5340 mg/kg                             |

| Components              | Species | Test Results      |
|-------------------------|---------|-------------------|
|                         | Rat     | 5800 mg/kg        |
| N-butane (CAS 106-97-8) |         |                   |
| <u>Acute</u>            |         |                   |
| Inhalation              |         |                   |
| LC50                    | Mouse   | 680 mg/l, 2 Hours |
|                         | Rat     | 658 mg/l, 4 Hours |

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

|  |  |
|--|--|
| Skin corrosion/irritation                          | Based on available data, the classification criteria are not met.  |
| Serious eye damage/eye irritation                  | Causes serious eye irritation.   |
| Respiratory sensitization                          | Due to partial or complete lack of data the classification is not possible.                                      |
| Skin sensitization                                 | Due to partial or complete lack of data the classification is not possible.                                      |
| Germ cell mutagenicity                             | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity                                    | Not available.   |
| Reproductive toxicity                              | Due to partial or complete lack of data the classification is not possible.                                      |
| Specific target organ toxicity - single exposure   | May cause drowsiness and dizziness.  |
| Specific target organ toxicity - repeated exposure | Due to partial or complete lack of data the classification is not possible.                                      |
| Aspiration hazard                                  | Due to partial or complete lack of data the classification is not possible.                                      |
| Mixture versus substance information               | No information available.  |
| Other information                                  | Not available.   |

## SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Components                                      | Species | Test Results  |
|---|---------|---|
| Acetone (propan-2-one; Propanone) (CAS 67-64-1) |         |   |
| Aquatic   |         |   |
| Crustacea                                       | EC50    | Water flea (Daphnia magna) 10294 - 17704 mg/l, 48 hours                         |
| Fish  | LC50    | Rainbow trout, donaldson trout (Oncorhynchus mykiss) 4740 - 6330 mg/l, 96 hours |

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

|   |   |
|---|---|
| 12.2. Persistence and degradability             | No data is available on the degradability of this product.  |
| 12.3. Bioaccumulative potential                 | No data available.  |
| Partition coefficient n-octanol/water (log Kow) |   |
| Acetone (propan-2-one; Propanone)               | -0,24   |
| N-butane  | 2,89  |
| Bioconcentration factor (BCF)                   | Not available.  |
| 12.4. Mobility in soil                          | No data available.  |
| 12.5. Results of PBT and vPvB assessment        | Not available.  |
| 12.6. Other adverse effects                     | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

## SECTION 13: Disposal considerations

|                               |  |
|-------------------------------|--|
| 13.1. Waste treatment methods |  |
| Residual waste                | 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. Do not re-use empty containers.              |
| EU waste code                | The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.  |
| Disposal methods/information | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Special precautions          | Dispose in accordance with all applicable regulations.  |

## SECTION 14: Transport information

### ADR

|                                    |   |
|------------------------------------|---|
| 14.1. UN number                    | UN1950  |
| 14.2. UN proper shipping name      | AEROSOLS, FLAMMABLE   |
| 14.3. Transport hazard class(es)   |   |
| Class                              | 2.1   |
| Subsidiary risk                    | -   |
| Label(s)                           | 2.1   |
| Hazard No. (ADR)                   | Not available.  |
| Tunnel restriction code            | D   |
| 14.4. Packing group                | Not applicable.   |
| 14.5. Environmental hazards        | No.   |
| 14.6. Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

### RID

|                                    |   |
|------------------------------------|---|
| 14.1. UN number                    | UN1950  |
| 14.2. UN proper shipping name      | AEROSOLS, FLAMMABLE   |
| 14.3. Transport hazard class(es)   |   |
| Class                              | 2.1   |
| Subsidiary risk                    | -   |
| Label(s)                           | 2.1   |
| 14.4. Packing group                | Not applicable.   |
| 14.5. Environmental hazards        | No.   |
| 14.6. Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

### ADN

|                                    |   |
|------------------------------------|---|
| 14.1. UN number                    | UN1950  |
| 14.2. UN proper shipping name      | AEROSOLS, FLAMMABLE   |
| 14.3. Transport hazard class(es)   |   |
| Class                              | 2.1   |
| Subsidiary risk                    | -   |
| 14.4. Packing group                | Not applicable.   |
| 14.5. Environmental hazards        | No.   |
| 14.6. Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

### IATA

|                                    |   |
|------------------------------------|---|
| 14.1. UN number                    | UN1950  |
| 14.2. UN proper shipping name      | Aerosols, flammable   |
| 14.3. Transport hazard class(es)   |   |
| Class                              | 2.1   |
| Subsidiary risk                    | -   |
| 14.4. Packing group                | Not applicable.   |
| 14.5. Environmental hazards        | No.   |
| ERG Code                           | 10L   |
| 14.6. Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information                  |   |
| Passenger and cargo aircraft       | Allowed.  |
| Cargo aircraft only                | Allowed.  |

## IMDG

|  |   |
|--|---|
| 14.1. UN number  | UN1950  |
| 14.2. UN proper shipping name  | AEROSOLS, FLAMMABLE   |
| 14.3. Transport hazard class(es)   |   |
| Class  | 2.1   |
| Subsidiary risk  | -   |
| 14.4. Packing group  | Not applicable.   |
| 14.5. Environmental hazards  |   |
| Marine pollutant   | No.   |
| EmS  | Not available.  |
| 14.6. Special precautions for user   | Read safety instructions, SDS and emergency procedures before handling. |
| 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not established.  |

ADN; ADR; IATA; IMDG; RID

New Zealand ERMA Register of Hazardous Substances  
HSNO: HSR002515  
Aerosols (Flammable) Group Standard 2006



## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended  
Not listed.
- Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended  
Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended  
Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA  
Not listed.

#### Authorizations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended  
Not listed.

#### Restrictions on use

- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended  
N-butane (CAS 106-97-8)
- Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended  
N-butane (CAS 106-97-8)
- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended  
N-butane (CAS 106-97-8)

## Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

Acetone (propan-2-one; Propanone) (CAS 67-64-1)

N-butane (CAS 106-97-8)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

Acetone (propan-2-one; Propanone) (CAS 67-64-1)

N-butane (CAS 106-97-8)

Directive 94/33/EC on the protection of young people at work, as amended

N-butane (CAS 106-97-8)

## Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. Pregnant women should not work with the product, if there is the least risk of exposure. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

## National regulations

Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

### List of abbreviations

Not available.

### References

Not available.

### Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

### Full text of any H-statements not written out in full under Sections 2 to 15

H220 Extremely flammable gas.  
H225 Highly flammable liquid and vapor.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

### Revision information

None.

### Training information

Follow training instructions when handling this material.

### Disclaimer

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