

## 1. Identification

|                                                               |                                                         |
|---------------------------------------------------------------|---------------------------------------------------------|
| <b>Product identifier</b>                                     | <b>REDKEN TRIPLE DRY 15 DRY TEXTURE FINISHING SPRAY</b> |
| <b>Other means of identification</b>                          |                                                         |
| <b>SDS number</b>                                             | 21-92-0000138                                           |
| <b>Recommended use</b>                                        | Personal care product used for cosmetic effect.         |
| <b>Recommended restrictions</b>                               | None known.                                             |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |                                                         |

**US Address:** L'Oreal USA Products, Inc  
133 Terminal Avenue  
Clark, NJ 07066  
USA

**Canadian Address:** L'Oreal Canada  
4895 rue Hickmore  
Ville St-Laurent, H4T 1K5  
Canada

**Emergency Phone # :** 1-800-535-5053 (International: 352-323-3500)  
In Canada - 1-613-996-6666 (Canutec (\*666 Cellular))

**For further Information:** 1-732-499-2741

**Poison Control # :** 412-390-3326

## 2. Hazard(s) identification

|                             |                                   |               |
|-----------------------------|-----------------------------------|---------------|
| <b>Physical hazards</b>     | Flammable aerosols                | Category 1    |
|                             | Gases under pressure              | Liquefied gas |
| <b>Health hazards</b>       | Serious eye damage/eye irritation | Category 2A   |
| <b>OSHA defined hazards</b> | Not classified.                   |               |

### Label elements



**Signal word** Danger

**Hazard statement** Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation.

### Precautionary statement

#### Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Wash thoroughly after handling. Wear eye protection/face protection.

#### Response

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 advice/attention.

#### Storage

Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50°C/122°F.

#### Disposal

Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name          | Common name and synonyms | CAS number | %     |
|------------------------|--------------------------|------------|-------|
| HYDROFLUOROCARBON 152A |                          | 75-37-6    | 42    |
| ETHANOL                |                          | 64-17-5    | 25.33 |
| BUTANE                 |                          | 106-97-8   | 23    |
| CALCIUM CARBONATE      |                          | 1317-65-3  | 6     |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

|                                                                               |                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                                                             | Move to fresh air. Call a physician if symptoms develop or persist.                                                                                                                                |
| <b>Skin contact</b>                                                           | Wash off with soap and water. Get medical attention if irritation develops and persists.                                                                                                           |
| <b>Eye contact</b>                                                            | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| <b>Ingestion</b>                                                              | Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.                                                         |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.                                                                          |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.                                                                             |
| <b>General information</b>                                                    | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.                                                                                   |

### 5. Fire-fighting measures

|                                                                      |                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>                                  | Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).                                                                                                                                                                                                                                                                                                           |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                                                                                                                                                                                                                                                                                                                  |
| <b>Specific hazards arising from the chemical</b>                    | Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.                                                                                                                                                                                                                                         |
| <b>Special protective equipment and precautions for firefighters</b> | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.                                                                                                                                                                                                                        |
| <b>Fire fighting equipment/instructions</b>                          | In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. 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. |
| <b>Specific methods</b>                                              | 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.                                                                                                                                                                    |
| <b>General fire hazards</b>                                          | Extremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.                                                                                                                                                                                                                                                                  |

### 6. Accidental release measures

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. 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. |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Methods and materials 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. Isolate area until gas has dispersed. Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****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. Close valve after each use and when empty. Protect containers from physical damage; do not drag, roll, slide, or drop. When moving containers, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport containers. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not re-use empty containers. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Level 2 Aerosol.

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 in tightly closed container. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits**

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

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

| Components                           | Type | Value      | Form                 |
|--------------------------------------|------|------------|----------------------|
| CALCIUM CARBONATE<br>(CAS 1317-65-3) | PEL  | 5 mg/m3    | Respirable fraction. |
|                                      |      | 15 mg/m3   | Total dust.          |
| ETHANOL (CAS 64-17-5)                | PEL  | 1900 mg/m3 |                      |
|                                      |      | 1000 ppm   |                      |

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

| Components                           | Type | Value    | Form                 |
|--------------------------------------|------|----------|----------------------|
| CALCIUM CARBONATE<br>(CAS 1317-65-3) | TWA  | 5 mg/m3  | Respirable fraction. |
|                                      |      | 15 mg/m3 | Total dust.          |
|                                      |      | 50 mppcf | Total dust.          |
|                                      |      | 15 mppcf | Respirable fraction. |

**US. ACGIH Threshold Limit Values**

| Components            | Type | Value    |
|-----------------------|------|----------|
| BUTANE (CAS 106-97-8) | STEL | 1000 ppm |
| ETHANOL (CAS 64-17-5) | STEL | 1000 ppm |

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

| Components            | Type | Value      | Form |
|-----------------------|------|------------|------|
| BUTANE (CAS 106-97-8) | TWA  | 1900 mg/m3 |      |
|                       |      | 800 ppm    |      |

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

| Components                           | Type | Value      | Form        |
|--------------------------------------|------|------------|-------------|
| CALCIUM CARBONATE<br>(CAS 1317-65-3) | TWA  | 5 mg/m3    | Respirable. |
|                                      |      | 10 mg/m3   | Total       |
| ETHANOL (CAS 64-17-5)                | TWA  | 1900 mg/m3 |             |
|                                      |      | 1000 ppm   |             |

**US. Workplace Environmental Exposure Level (WEEL) Guides**

| Components                              | Type | Value      |
|-----------------------------------------|------|------------|
| HYDROFLUOROCARBON<br>152A (CAS 75-37-6) | TWA  | 2700 mg/m3 |
|                                         |      | 1000 ppm   |

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation 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**

**Eye/face protection** Applicable for industrial settings only. Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Applicable for industrial settings only. Wear appropriate chemical resistant gloves.

**Other** Applicable for industrial settings only. Wear appropriate chemical resistant clothing.

**Respiratory protection** Applicable for industrial settings only. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

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

**General hygiene considerations**

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.

**9. Physical and chemical properties****Appearance**

**Physical state** Liquid.

**Form** Aerosol.

**Color** Not available.

**Odor** Characteristic.

**Odor threshold** Not available.

**pH** Not applicable.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** > 95 °F (> 35 °C) (liquid)

**Flash point** 59.0 °F (15.0 °C) Closed Cup (liquid)

**Evaporation rate** Not available.

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

**Upper/lower flammability or explosive limits**

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

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

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

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

**Vapor pressure** Not available.

**Vapor density** Not available.

|                                            |                                          |
|--------------------------------------------|------------------------------------------|
| Relative density                           | Not available.                           |
| Solubility(ies)                            |                                          |
| Solubility (water)                         | Not available.                           |
| Partition coefficient<br>(n-octanol/water) | Not available.                           |
| Auto-ignition temperature                  | Not available.                           |
| Decomposition temperature                  | Not available.                           |
| Viscosity                                  | Not available.                           |
| Other information                          |                                          |
| Density                                    | 0.915 - 0.925 g/cm <sup>3</sup> (liquid) |
| Explosive properties                       | Not explosive.                           |
| Heat of combustion (NFPA<br>30B)           | 20.2 kJ/g                                |
| Oxidizing properties                       | Not oxidizing.                           |

## 10. Stability and reactivity

|                                    |                                                                                                                                                                       |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | The product is stable and non-reactive under normal conditions of use, storage and transport.                                                                         |
| Chemical stability                 | Material is stable under normal conditions.                                                                                                                           |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use.                                                                                                           |
| Conditions to avoid                | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| Incompatible materials             | Acids. Strong oxidizing agents. Chlorine. Fluorine. Nitrates.                                                                                                         |
| Hazardous decomposition products   | No hazardous decomposition products are known.                                                                                                                        |

## 11. Toxicological information

### Information on likely routes of exposure

|              |                                                      |
|--------------|------------------------------------------------------|
| Inhalation   | Prolonged inhalation may be harmful.                 |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact  | Causes serious eye irritation.                       |
| Ingestion    | Expected to be a low ingestion hazard.               |

|                                                                              |                                                                                                                           |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Symptoms related to the physical, chemical and toxicological characteristics | Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing. |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|

### Information on toxicological effects

|                |            |
|----------------|------------|
| Acute toxicity | Not known. |
|----------------|------------|

| Components            | Species | Test Results             |
|-----------------------|---------|--------------------------|
| BUTANE (CAS 106-97-8) |         |                          |
| <u>Acute</u>          |         |                          |
| Inhalation            |         |                          |
| Gas                   |         |                          |
| LC50                  | Mouse   | 1237 mg/l, 2 Hours       |
| ETHANOL (CAS 64-17-5) |         |                          |
| <u>Acute</u>          |         |                          |
| Dermal                |         |                          |
| LD50                  | Rabbit  | > 20000 mg/kg            |
| Inhalation            |         |                          |
| Vapor                 |         |                          |
| LC50                  | Rat     | 124.7 mg/l, 4 h OECD 403 |
| Oral                  |         |                          |
| LD50                  | Rat     | 10470 mg/kg OECD 401     |

| Components                                                            | Species                                                                                                                          | Test Results                                                                     |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| HYDROFLUOROCARBON 152A (CAS 75-37-6)                                  |                                                                                                                                  |                                                                                  |
| <b>Acute</b>                                                          |                                                                                                                                  |                                                                                  |
| <b>Inhalation</b>                                                     |                                                                                                                                  |                                                                                  |
| <b>Gas</b>                                                            |                                                                                                                                  |                                                                                  |
| ALC                                                                   | Rat                                                                                                                              | > 437500 ppm, 4 h                                                                |
| LC50                                                                  | -                                                                                                                                | 369000 ppm, 2 Hours                                                              |
| <b>Skin corrosion/irritation</b>                                      | Due to partial or complete lack of data the classification is not possible. No adverse effects due to skin contact are expected. |                                                                                  |
| <b>Irritation Corrosion - Skin</b>                                    |                                                                                                                                  |                                                                                  |
| ETHANOL                                                               |                                                                                                                                  | OECD 404<br>Result: Not Irritating<br>Species: Rabbit                            |
| BUTANE                                                                |                                                                                                                                  | Result: Contact with liquid form may cause frostbite.                            |
| HYDROFLUOROCARBON 152A                                                |                                                                                                                                  | Result: Contact with liquid form may cause frostbite.                            |
| <b>Serious eye damage/eye irritation</b>                              | Causes serious eye irritation.                                                                                                   |                                                                                  |
| <b>Irritation Corrosion - Eye</b>                                     |                                                                                                                                  |                                                                                  |
| ETHANOL                                                               |                                                                                                                                  | OECD 405<br>Result: Irritating<br>Species: Rabbit                                |
| BUTANE                                                                |                                                                                                                                  | Result: Contact with liquid form may cause frostbite.                            |
| HYDROFLUOROCARBON 152A                                                |                                                                                                                                  | Result: Contact with liquid form may cause frostbite.                            |
| <b>Respiratory or skin sensitization</b>                              |                                                                                                                                  |                                                                                  |
| <b>Respiratory sensitization</b>                                      | Due to partial or complete lack of data the classification is not possible.                                                      |                                                                                  |
| <b>Skin sensitization</b>                                             | Due to partial or complete lack of data the classification is not possible.                                                      |                                                                                  |
| <b>Skin sensitization</b>                                             |                                                                                                                                  |                                                                                  |
| ETHANOL                                                               |                                                                                                                                  | OECD 406<br>Result: Not Sensitizing<br>Species: Guinea pig                       |
| <b>Germ cell mutagenicity</b>                                         | Due to partial or complete lack of data the classification is not possible.                                                      |                                                                                  |
| <b>Mutagenicity</b>                                                   |                                                                                                                                  |                                                                                  |
| BUTANE                                                                |                                                                                                                                  | Result: In vitro and in vivo tests did not show mutagenic effects.               |
| ETHANOL                                                               |                                                                                                                                  | Result: In vitro and in vivo tests did not show mutagenic effects.               |
| HYDROFLUOROCARBON 152A                                                |                                                                                                                                  | Result: In vitro and in vivo tests did not show mutagenic effects.               |
| <b>Carcinogenicity</b>                                                | Not classifiable as to carcinogenicity to humans. Due to partial or complete lack of data the classification is not possible.    |                                                                                  |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>         |                                                                                                                                  |                                                                                  |
| Not listed.                                                           |                                                                                                                                  |                                                                                  |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b> |                                                                                                                                  |                                                                                  |
| Not regulated.                                                        |                                                                                                                                  |                                                                                  |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>    |                                                                                                                                  |                                                                                  |
| Not listed.                                                           |                                                                                                                                  |                                                                                  |
| <b>Reproductive toxicity</b>                                          | Possible reproductive hazard.                                                                                                    |                                                                                  |
| <b>Developmental effects</b>                                          |                                                                                                                                  |                                                                                  |
| ETHANOL                                                               |                                                                                                                                  | > 20000 ppm OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat |
| BUTANE                                                                |                                                                                                                                  | 19678 mg/m³ OECD 422<br>Result: NOAEC<br>Species: Rat                            |
| HYDROFLUOROCARBON 152A                                                |                                                                                                                                  | 50000 ppm OECD 414<br>Result: NOAEC<br>Species: Rat                              |

**Reproductivity**

ETHANOL

20700 mg/kg bw/d OECD 416, No effects on fertility

Result: NOAEL

Species: Rat

HYDROFLUOROCARBON 152A

25000 ppm

Result: NOAEL

Species: Rat

BUTANE

7131 mg/m<sup>3</sup> OECD 422

Result: NOAEC

Species: Rat

**Specific target organ toxicity - single exposure**

Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure**

Due to partial or complete lack of data the classification is not possible.

ETHANOL

1730 mg/kg bw/d OECD 408, Oral

Result: NOAEL

Species: Rat

HYDROFLUOROCARBON 152A

25000 ppm OECD 453, Inhalation

Result: NOAEC

Species: Rat

BUTANE

Test Duration: 104 wk

7214 mg/m<sup>3</sup> OECD 422

Result: NOAEC

Species: Rat

Test Duration: 28 d

**Aspiration hazard**

Due to partial or complete lack of data the classification is not possible.

**Further information**

The reference to any animal testing for individual constituents mentioned in this document is based on public, third-party data.

**12. Ecological information****Ecotoxicity**

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             |
|--------------------------------------|------|-----------------------------------------------------|--------------------------|
| ETHANOL (CAS 64-17-5)                |      |                                                     |                          |
| Aquatic                              |      |                                                     |                          |
| Acute                                |      |                                                     |                          |
| Algae                                | EC50 | Pseudokirchneriella subcapitata                     | 22200 mg/l, 96 h         |
| Crustacea                            | EC50 | Ceriodaphnia dubia                                  | 5012 mg/l, 48 h          |
| Fish                                 | LC50 | Pimephales promelas                                 | 15300 mg/l, 96 h         |
| Other                                | IC50 | Activated sludge of a predominantly domestic sewage | > 1000 mg/l, 3 h         |
| Chronic                              |      |                                                     |                          |
| Crustacea                            | NOEC | Daphnia magna                                       | 9.6 mg/l, 9 d            |
| Fish                                 | NOEC | Danio rerio                                         | 250 mg/l, 120 h OECD 212 |
| HYDROFLUOROCARBON 152A (CAS 75-37-6) |      |                                                     |                          |
| Aquatic                              |      |                                                     |                          |
| Acute                                |      |                                                     |                          |
| Algae                                | EC50 | Algae                                               | 47.755 mg/l QSAR         |
| Crustacea                            | EC50 | Daphnia                                             | 146.695 mg/l QSAR        |
| Fish                                 | LC50 | Fish                                                | 295.783 mg/l QSAR        |

**Persistence and degradability****Biodegradability****Percent degradation (Aerobic biodegradation)**

BUTANE

100 %

Result: Readily Biodegradable

Test Duration: 385.5 Hours

ETHANOL

84 %

Result: Readily Biodegradable

Test Duration: 20 d

## Bioaccumulative potential

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

|                        |       |
|------------------------|-------|
| BUTANE                 | 2.89  |
| ETHANOL                | -0.31 |
| HYDROFLUOROCARBON 152A | 0.75  |

**Mobility in soil** No data available.

**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.

## 13. Disposal considerations

**Disposal instructions** 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.

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

**Hazardous waste code** This product is ignitable (D001) RCRA hazardous wastes when intended for disposal.

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

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

## 14. Transport information

### DOT

#### FINISHED GOODS

|                            |                                       |
|----------------------------|---------------------------------------|
| UN number                  | UN1950                                |
| UN proper shipping name    | AEROSOLS, FLAMMABLE, Limited Quantity |
| Class                      | 2.1                                   |
| Packing group              | Not applicable.                       |
| Transport hazard class(es) |                                       |
| Label(s)                   | Limited Quantity                      |
| Packaging exceptions       | 306                                   |
| LTD QTY Net Inner Capacity | 1.0 L                                 |

#### BULK

|                            |                  |
|----------------------------|------------------|
| UN number                  | UN1170           |
| UN proper shipping name    | ETHANOL SOLUTION |
| Class                      | 3                |
| Packing group              | II               |
| Transport hazard class(es) |                  |
| Label(s)                   | 3                |
| Special provisions         | 24, IB2, T4, TP1 |
| Packaging non bulk         | 202              |

### IATA

#### FINISHED GOODS

|                         |                    |
|-------------------------|--------------------|
| UN number               | ID8000             |
| UN proper shipping name | CONSUMER COMMODITY |
| Class                   | 9 - Class 9        |
| Packing group           | Not applicable.    |
| ERG Number              | 9L                 |

#### BULK

|                         |                  |
|-------------------------|------------------|
| UN number               | UN1170           |
| UN proper shipping name | ETHANOL SOLUTION |
| Class                   | 3                |
| Packing group           | II               |
| ERG Number              | 3L               |

### IMDG

#### FINISHED GOODS

|                         |                                       |
|-------------------------|---------------------------------------|
| UN number               | UN1950                                |
| UN proper shipping name | AEROSOLS, FLAMMABLE, Limited Quantity |
| Class                   | 2.1                                   |

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Packing group</b>              | Not applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Environmental Hazards</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Marine pollutant</b>           | No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Transport hazard class(es)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Label(s)</b>                   | Limited Quantity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>EmS</b>                        | F-D, S-U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>LTD QTY Net Inner Capacity</b> | 1.0 L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>BULK</b>                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>UN number</b>                  | UN1170                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>UN proper shipping name</b>    | ETHANOL SOLUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Class</b>                      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Packing group</b>              | II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Environmental hazards</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Marine pollutant</b>           | No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>EmS</b>                        | F-E, S-D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>General information</b>        | Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations. |

## 15. Regulatory information

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

### Toxic Substances Control Act (TSCA)

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

Not regulated.

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

BUTANE (CAS 106-97-8) Listed.

ETHANOL (CAS 64-17-5) Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

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

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** No (Exempt)

### SARA 313 (TRI reporting)

Not regulated.

## Other federal regulations

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

Not regulated.

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

BUTANE (CAS 106-97-8)

HYDROFLUOROCARBON 152A (CAS 75-37-6)

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

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

ETHANOL (CAS 64-17-5)

Low priority

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

**Issue date** 03-28-2022

**Version #** 01

**NFPA ratings**

Health: 2  
Flammability: 4  
Instability: 0

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.