# SAFETY DATA SHEET

# RUBBER CARE

| Version | Revision Date: | SDS Number: | Date of last issue: 04/03/2017 |
|---|---|---|---|
| 2.0 | 05/02/2017 | 1141568-00004 | Date of first issue: 12/08/2016 |

## SECTION 1. IDENTIFICATION

Product name : RUBBER CARE

Product code : 0890110

**Manufacturer or supplier's details**

Company name of supplier : Wurth USA Inc.

Address : 93 Grant St.
Ramsey, NJ 07446

Telephone : (201) 825-2710

Telefax : (201) 825-1643

Emergency telephone : +1 800 255 3924

E-mail address : prodsafe@wuerth.com

**Recommended use of the chemical and restrictions on use**

Recommended use : Care product

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with 29 CFR 1910.1200**

Flammable aerosols : Category 1

Gases under pressure : Liquefied gas

Skin irritation : Category 2

Reproductive toxicity : Category 2

Specific target organ systemic toxicity - single exposure : Category 3

Aspiration hazard : Category 1

Simple Asphyxiant

**GHS label elements**

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
May displace oxygen and cause rapid suffocation.

Precautionary Statements : **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage:**

P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous ingredients**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| Butane | 106-97-8 | >= 30 - < 50 |
| Hydrocarbons, C6, isoalkanes, <5% n-hexane | 64742-49-0 | >= 10 - < 20 |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 | >= 10 - < 20 |
| Propane | 74-98-6 | >= 5 - < 10 |
| Propan-2-ol | 67-63-0 | >= 5 - < 10 |
| Castor oil | 8001-79-4 | >= 5 - < 10 |
| Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane | 64742-49-0 | >= 1 - < 5 |
| Isobutane | 75-28-5 | >= 1 - < 5 |
| Polyethylene glycol | 25322-68-3 | >= 1 - < 5 |
| n-Hexane | 110-54-3 | >= 0.1 - < 1 |

## SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control center immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

## SECTION 5. FIRE-FIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during fire fighting | : | Flash back possible over considerable distance.<br>Vapors may form explosive mixtures with air.<br>Exposure to combustion products may be a hazard to health.<br>If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. |
| Hazardous combustion products | : | Carbon oxides |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |
| Special protective equipment for fire-fighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Remove all sources of ignition.<br>Use personal protective equipment.<br>Follow safe handling advice and personal protective equipment recommendations. |
| Environmental precautions | : | Discharge into the environment must be avoided.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g. by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained. |
| Methods and materials for containment and cleaning up | : | Non-sparking tools should be used.<br>Soak up with inert absorbent material.<br>Suppress (knock down) gases/vapors/mists with a water spray jet.<br>For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.<br>Clean up remaining materials from spill with suitable absorbent.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine |

which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | Use with local exhaust ventilation.<br>Use only in an area equipped with explosion proof exhaust ventilation. |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Do not breathe vapors or spray mist.<br>Do not swallow.<br>Avoid contact with eyes.<br>Handle in accordance with good industrial hygiene and safety practice.<br>Keep container tightly closed.<br>Keep away from heat and sources of ignition.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to the environment.<br><br>Do not spray on an open flame or other ignition source. |
| Conditions for safe storage | : | Store locked up.<br>Keep tightly closed.<br>Keep in a cool, well-ventilated place.<br>Store in accordance with the particular national regulations.<br>Do not pierce or burn, even after use.<br>Keep cool. Protect from sunlight. |
| Materials to avoid | : | Do not store with the following product types:<br>Self-reactive substances and mixtures<br>Organic peroxides<br>Oxidizing agents<br>Flammable solids<br>Pyrophoric liquids<br>Pyrophoric solids<br>Self-heating substances and mixtures<br>Substances and mixtures which in contact with water emit flammable gases<br>Explosives |
| Recommended storage temperature | : | 5 - 35 °C |
| Storage period | : | 24 Months |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Ingredients | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Butane | 106-97-8 | TWA | 800 ppm<br>1,900 mg/m³ | NIOSH REL |
| | | STEL | 1,000 ppm | ACGIH |
| Hydrocarbons, C6, isoalkanes, <5% n-hexane | 64742-49-0 | TWA | 500 ppm | ACGIH |
| | | STEL | 1,000 ppm | ACGIH |
| | | TWA | 100 ppm<br>350 mg/m³ | NIOSH REL |
| | | C | 510 ppm<br>1,800 mg/m³ | NIOSH REL |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 | TWA | 85 ppm<br>350 mg/m³ | NIOSH REL |
| | | C | 440 ppm<br>1,800 mg/m³ | NIOSH REL |
| | | TWA | 500 ppm<br>2,000 mg/m³ | OSHA Z-1 |
| | | TWA | 500 ppm<br>2,000 mg/m³ | OSHA Z-1 |
| | | TWA | 400 ppm | ACGIH |
| | | STEL | 500 ppm | ACGIH |
| Propane | 74-98-6 | TWA | 1,000 ppm<br>1,800 mg/m³ | NIOSH REL |
| | | TWA | 1,000 ppm<br>1,800 mg/m³ | OSHA Z-1 |
| Propan-2-ol | 67-63-0 | TWA | 200 ppm | ACGIH |
| | | STEL | 400 ppm | ACGIH |
| | | TWA | 400 ppm<br>980 mg/m³ | NIOSH REL |
| | | ST | 500 ppm<br>1,225 mg/m³ | NIOSH REL |
| | | TWA | 400 ppm<br>980 mg/m³ | OSHA Z-1 |
| Castor oil | 8001-79-4 | TWA (mist - total) | 10 mg/m³ | NIOSH REL |
| | | TWA (mist - respirable) | 5 mg/m³ | NIOSH REL |
| Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane | 64742-49-0 | TWA | 500 ppm<br>2,000 mg/m³ | OSHA Z-1 |
| Isobutane | 75-28-5 | TWA | 800 ppm<br>1,900 mg/m³ | NIOSH REL |
| | | STEL | 1,000 ppm | ACGIH |
| Polyethylene glycol | 25322-68-3 | TWA (aerosol) | 10 mg/m³ | US WEEL |
| n-Hexane | 110-54-3 | TWA | 50 ppm | ACGIH |
| | | TWA | 50 ppm<br>180 mg/m³ | NIOSH REL |

| | | | | |
|---|---|---|---|---|
| | | TWA | 500 ppm<br>1,800 mg/m³ | OSHA Z-1 |

**Biological occupational exposure limits**

| Ingredients | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|---|---|---|---|---|---|---|
| Propan-2-ol | 67-63-0 | Acetone | Urine | End of shift at end of work-week | 40 mg/l | ACGIH BEI |
| n-Hexane | 110-54-3 | 2,5-Hexanedione | Urine | End of shift at end of work-week | 0.4 mg/l | ACGIH BEI |

**Engineering measures** : Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Use with local exhaust ventilation.

**Personal protective equipment**

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
- Material : Nitrile rubber
- Break through time : 480 min
- Glove thickness : 0.7 mm
- Directive : DIN EN 374

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety glasses

| | | |
|---|---|---|
| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.<br>Wear the following personal protective equipment:<br>Flame retardant antistatic protective clothing.<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Hygiene measures | : | Ensure that eye flushing systems and safety showers are located close to the working place.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Aerosol containing a liquefied gas |
| Propellant | : | Butane, Propane, Isobutane |
| Color | : | Colorless to pale yellow |
| Odor | : | aliphatic |
| Odor Threshold | : | No data available |
| pH | : | No data available |
| Melting point/freezing point | : | No data available |
| Initial boiling point and boiling range | : | Not applicable |
| Flash point | : | < -20 °C<br>Flash point is only valid for liquid portion in the aerosol can. |
| Evaporation rate | : | Not applicable |
| Flammability (solid, gas) | : | Extremely flammable aerosol. |
| Upper explosion limit / Upper flammability limit | : | 12 %(V) |
| Lower explosion limit / Lower flammability limit | : | 0.8 %(V) |
| Vapor pressure | : | 2,200 - 3,400 hPa (23 °C) |
| Relative vapor density | : | Not applicable |
| Relative density | : | 0.66 |
| Density | : | 0.66 g/cm³ |

| | | |
|---|---|---|
| Solubility(ies) | | |
| Water solubility | : | partly miscible |
| Solubility in other solvents | : | soluble<br>Solvent: organic solvents |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | 50 °C |
| Viscosity | | |
| Viscosity, kinematic | : | Not applicable |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Metal corrosion rate | : | Not corrosive to metals. |
| Particle size | : | Not applicable |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Not classified as a reactivity hazard. |
| Chemical stability | : | Stable under normal conditions. |
| Possibility of hazardous reactions | : | Extremely flammable aerosol.<br>Vapors may form explosive mixture with air.<br>If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.<br>Can react with strong oxidizing agents. |
| Conditions to avoid | : | Heat, flames and sparks. |
| Incompatible materials | : | Oxidizing agents |
| Hazardous decomposition products | : | No hazardous decomposition products are known. |

## SECTION 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Not classified based on available information.

**Ingredients:**

**Butane:**

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: vapor

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Acute oral toxicity : LD50 (Rat): 16,750 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 259.354 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 3,350 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Acute oral toxicity : LD50 (Rat): > 5,840 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 23.3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,800 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

**Propane:**

Acute inhalation toxicity : LC50 (Rat): > 800000 ppm
Exposure time: 15 min
Test atmosphere: gas

**Propan-2-ol:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 72.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

**Castor oil:**

Acute oral toxicity : LD50 (Rat): > 4,763 mg/kg

Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 3,350 mg/kg
Remarks: Based on data from similar materials

**Isobutane:**

Acute inhalation toxicity : LC50 (Mouse): 260200 ppm
Exposure time: 4 h
Test atmosphere: gas

**Polyethylene glycol:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

**n-Hexane:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 31.86 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Ingredients:**

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Species: Rabbit
Method: OECD Test Guideline 404
Result: Skin irritation

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Species: Rabbit
Result: Skin irritation
Remarks: Based on data from similar materials

**Propan-2-ol:**

Species: Rabbit
Result: No skin irritation

**Castor oil:**

Species: Rat
Result: No skin irritation
Remarks: Based on data from similar materials

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Remarks: Based on data from similar materials

Assessment: Repeated exposure may cause skin dryness or cracking.

**Polyethylene glycol:**

Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

**n-Hexane:**

Species: Rabbit
Result: Skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Ingredients:**

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

**Propan-2-ol:**

Species: Rabbit

Result: Irritation to eyes, reversing within 21 days

**Castor oil:**

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

**Polyethylene glycol:**

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

**n-Hexane:**

Species: Rabbit
Result: No eye irritation

**Respiratory or skin sensitization**

**Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Ingredients:**

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative
Remarks: Based on data from similar materials

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

**Propan-2-ol:**

Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative
Remarks: Based on data from similar materials

**n-Hexane:**

Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

**Germ cell mutagenicity**

Not classified based on available information.

**Ingredients:**

**Butane:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Rat<br>Application Route: inhalation (gas)<br>Method: OECD Test Guideline 474<br>Result: negative<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br>Remarks: Based on data from similar materials |
| | : | Test Type: Chromosome aberration test in vitro<br>Result: negative<br>Remarks: Based on data from similar materials |
| | : | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative<br>Remarks: Based on data from similar materials |
| Genotoxicity in vivo | : | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative |

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro |

Result: negative
Remarks: Based on data from similar materials

: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

: Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

**Propane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative

**Propan-2-ol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

**Castor oil:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

: Test Type: Chromosome aberration test in vitro

| | | |
|---|---|---|
| | | Result: negative<br>Remarks: Based on data from similar materials |
| | : | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative<br>Remarks: Based on data from similar materials |
| Genotoxicity in vivo | : | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative |

**Isobutane:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: negative<br>Remarks: Based on data from similar materials |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Rat<br>Application Route: inhalation (gas)<br>Method: OECD Test Guideline 474<br>Result: negative<br>Remarks: Based on data from similar materials |

**Polyethylene glycol:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br>Remarks: Based on data from similar materials |

**n-Hexane:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative |
| | : | Test Type: In vitro mammalian cell gene mutation test<br>Result: positive |
| Genotoxicity in vivo | : | Test Type: Rodent dominant lethal test (germ cell) (in vivo)<br>Species: Mouse<br>Application Route: inhalation (vapor)<br>Result: negative |
| Germ cell mutagenicity - Assessment | : | Weight of evidence does not support classification as a germ cell mutagen. |

**Carcinogenicity**

Not classified based on available information.

**Ingredients:**

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 2 yr
Result: negative
Remarks: Based on data from similar materials

Species: Mouse
Application Route: inhalation (vapor)
Exposure time: 2 yr
Result: negative
Remarks: Based on data from similar materials

**Propan-2-ol:**

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 104 weeks
Method: OECD Test Guideline 451
Result: negative

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 2 yr
Result: negative
Remarks: Based on data from similar materials

Species: Mouse
Application Route: inhalation (vapor)
Exposure time: 2 yr
Result: negative
Remarks: Based on data from similar materials

**n-Hexane:**

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 2 Years
Method: OECD Test Guideline 451
Result: negative

| | |
|---|---|
| **IARC** | No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| **OSHA** | No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. |
| **NTP** | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |

**Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

**Ingredients:**

**Butane:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: inhalation (gas)<br>Method: OECD Test Guideline 422<br>Result: negative |
| Effects on fetal development | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Application Route: inhalation (gas)<br>Method: OECD Test Guideline 422<br>Result: negative |

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on fetal development | : | Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on fetal development | : | Test Type: Fertility/early embryonic development<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative<br>Remarks: Based on data from similar materials |

**Propane:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: inhalation (gas)<br>Method: OECD Test Guideline 422<br>Result: negative |

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

**Propan-2-ol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

**Castor oil:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Two-generation study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

**Isobutane:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 422
Result: negative

| | | |
|---|---|---|
| Effects on fetal development | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: inhalation (gas)<br>Method: OECD Test Guideline 422<br>Result: negative |

**Polyethylene glycol:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Reproduction/Developmental toxicity screening test<br>Species: Rabbit<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on fetal development | : | Test Type: Fertility/early embryonic development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials |

**n-Hexane:**

| | | |
|---|---|---|
| Reproductive toxicity - Assessment | : | Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments. |

**STOT-single exposure**

May cause drowsiness or dizziness.

**Ingredients:**

**Butane:**

Assessment: May cause drowsiness or dizziness.

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Assessment: May cause drowsiness or dizziness.

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Assessment: May cause drowsiness or dizziness.

**Propane:**

Assessment: May cause drowsiness or dizziness.

**Propan-2-ol:**

Assessment: May cause drowsiness or dizziness.

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Assessment: May cause drowsiness or dizziness.

**Isobutane:**

Assessment: May cause drowsiness or dizziness.

**n-Hexane:**

Assessment: May cause drowsiness or dizziness.

**STOT-repeated exposure**

Not classified based on available information.

**Ingredients:**

**n-Hexane:**

Target Organs: Central nervous system
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity**

**Ingredients:**

**Butane:**

Species: Rat
NOAEL: 9000 ppm
Application Route: inhalation (gas)
Exposure time: 6 Weeks
Method: OECD Test Guideline 422

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Species: Rat, male
NOAEL: 10.504 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 Days
Remarks: Based on data from similar materials

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Species: Rat
NOAEL: 12.47 mg/l
Application Route: Inhalation
Exposure time: 90 Days
Remarks: Based on data from similar materials

**Propane:**

Species: Rat
NOAEL: 7.214 mg/l
Application Route: inhalation (gas)
Exposure time: 6 Weeks
Method: OECD Test Guideline 422

**Propan-2-ol:**

Species: Rat
NOAEL: 5000 ppm

Application Route: inhalation (vapor)
Exposure time: 104 Weeks
Method: OECD Test Guideline 413

**Castor oil:**

Species: Rat, male
NOAEL: 8,866 mg/kg
Application Route: Ingestion
Exposure time: 100 Days
Method: OECD Test Guideline 408

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Species: Rat, male
NOAEL: 10.504 mg/l
LOAEL: 31.652 mg/l
Application Route: inhalation (vapor)
Exposure time: 13 Weeks
Remarks: Based on data from similar materials

**Isobutane:**

Species: Rat
NOAEL: 9000 ppm
Application Route: inhalation (gas)
Exposure time: 6 Weeks
Method: OECD Test Guideline 422

**Polyethylene glycol:**

Species: Rat
NOAEL: 1,100 mg/kg
Application Route: Ingestion
Exposure time: 13 Weeks
Remarks: Based on data from similar materials

**n-Hexane:**

Species: Rat
LOAEL: 10.6 mg/l
Application Route: inhalation (vapor)
Exposure time: 16 Weeks

**Aspiration toxicity**

May be fatal if swallowed and enters airways.

**Product:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Ingredients:**

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be re-

garded as if it causes a human aspiration toxicity hazard.

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**n-Hexane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Experience with human exposure**

**Ingredients:**

**n-Hexane:**

| | | |
|---|---|---|
| Inhalation | : | Target Organs: Central nervous system |

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ingredients:**

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Oncorhynchus mykiss (rainbow trout)): > 10 - 100 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 203<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): > 1 - 10 mg/l<br>Exposure time: 48 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials |
| Toxicity to algae | : | EL50 (Selenastrum capricornutum (green algae)): > 10 - 100 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>NOELR (Selenastrum capricornutum (green algae)): 0.1 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201 |

| | | |
|---|---|---|
| | | Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOELR (Daphnia magna (Water flea)): > 0.1 - 1 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Oncorhynchus mykiss (rainbow trout)): > 13.4 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 203<br>Remarks: No toxicity at the limit of solubility. |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): 3 mg/l<br>Exposure time: 48 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials |
| Toxicity to algae | : | EL50 (Selenastrum capricornutum (green algae)): > 10 - 100 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>NOELR (Selenastrum capricornutum (green algae)): 0.1 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0.17 mg/l<br>Exposure time: 21 d<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |

**Propan-2-ol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 10,000 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 10,000 mg/l<br>Exposure time: 24 h |
| Toxicity to microorganisms | : | EC50 (Pseudomonas putida): > 1,050 mg/l<br>Exposure time: 16 h |

**Castor oil:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): > 1,000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials |
| Toxicity to algae | : | NOEC (Pseudokirchneriella subcapitata (green algae)): 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC10 (Pseudomonas putida): 67,000 mg/l<br>Exposure time: 30 min<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Oncorhynchus mykiss (rainbow trout)): 12 mg/l<br>Exposure time: 96 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): 3 mg/l<br>Exposure time: 48 h<br>Test substance: Water Accommodated Fraction |
| Toxicity to algae | : | EL50 (Selenastrum capricornutum (green algae)): > 10 - 100 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>NOELR (Selenastrum capricornutum (green algae)): 0.1 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |

**Polyethylene glycol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Poecilia reticulata (guppy)): > 100 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials |

**n-Hexane:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 2.5 mg/l<br>Exposure time: 96 h |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 3.88 mg/l<br>Exposure time: 48 h |
| Toxicity to algae | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 55 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |

**Persistence and degradability**

**Ingredients:**

**Butane:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 100 %<br>Exposure time: 385.5 h<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 98 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Method: OECD Test Guideline 301F<br>Remarks: Based on data from similar materials |

**Propane:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 100 %<br>Exposure time: 385.5 h<br>Remarks: Based on data from similar materials |

**Propan-2-ol:**

| | | |
|---|---|---|
| Biodegradability | : | Result: rapidly degradable |

**Castor oil:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Biodegradation: 40 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>Remarks: Based on data from similar materials |

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 81 % |

Exposure time: 28 d
Method: OECD Test Guideline 301F

**Isobutane:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

**Polyethylene glycol:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 68 %
Exposure time: 28 d
Remarks: Based on data from similar materials

**n-Hexane:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Remarks: Based on data from similar materials

**Bioaccumulative potential**

**Ingredients:**

**Butane:**

Partition coefficient: n-octanol/water : log Pow: 2.31

**Hydrocarbons, C6, isoalkanes, <5% n-hexane:**

Partition coefficient: n-octanol/water : log Pow: 3.6

**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:**

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Based on data from similar materials

**Propan-2-ol:**

Partition coefficient: n-octanol/water : log Pow: 0.05

**Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane:**

Partition coefficient: n-octanol/water : log Pow: > 3 - < 4
Remarks: Based on data from similar materials

**Isobutane:**

Partition coefficient: n-octanol/water : log Pow: 2.8

**Polyethylene glycol:**

| | | |
|---|---|---|
| Bioaccumulation | : | Species: Fish<br>Bioconcentration factor (BCF): 3.2 |

**n-Hexane:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | log Pow: 4 |

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Waste from residues | : | Dispose of in accordance with local regulations. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Empty containers retain residue and can be dangerous.<br>Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.<br>If not otherwise specified: Dispose of as unused product.<br>Please ensure aerosol cans are sprayed completely empty (including propellant) |

## SECTION 14. TRANSPORT INFORMATION

**International Regulations**

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 1950 |
| Proper shipping name | : | AEROSOLS |
| Class | : | 2.1 |
| Packing group | : | Not assigned by regulation |
| Labels | : | 2.1 |

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 1950 |
| Proper shipping name | : | Aerosols, flammable |
| Class | : | 2.1 |
| Packing group | : | Not assigned by regulation |
| Labels | : | Flammable Gas |
| Packing instruction (cargo aircraft) | : | 203 |
| Packing instruction (passenger aircraft) | : | 203 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 1950 |

| | | |
|---|---|---|
| Proper shipping name | : | AEROSOLS<br>(Hydrocarbons, C6, isoalkanes, <5% n-hexane, Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics) |
| Class | : | 2.1 |
| Packing group | : | Not assigned by regulation |
| Labels | : | 2.1 |
| EmS Code | : | F-D, S-U |
| Marine pollutant | : | yes |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Domestic regulation**

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | UN 1950 |
| Proper shipping name | : | Aerosols |
| Class | : | 2.1 |
| Packing group | : | Not assigned by regulation |
| Labels | : | FLAMMABLE GAS |
| ERG Code | : | 126 |
| Marine pollutant | : | yes(Hydrocarbons, C6, isoalkanes, <5% n-hexane, Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics) |

## SECTION 15. REGULATORY INFORMATION

**EPCRA - Emergency Planning and Community Right-to-Know**

**CERCLA Reportable Quantity**

| Ingredients | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---|---|---|---|
| Cyclohexane | 110-82-7 | 1000 | 100010 |
| n-Hexane | 110-54-3 | 5000 | * |

*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

| | | |
|---|---|---|
| **SARA 311/312 Hazards** | : | Fire Hazard<br>Acute Health Hazard<br>Sudden Release of Pressure Hazard<br>Chronic Health Hazard |
| **SARA 313** | : | The following components are subject to reporting levels established by SARA Title III, Section 313:<br><br>Propan-2-ol 67-63-0 >= 5 - < 10 % |
| **Volatile organic compounds (VOC) content** | | 40 CFR Part 59 National VOC Emission Standard For Consumer Products, Subpart C: VOC content: 91.67 % / 605 g/l |

**US State Regulations**

**Pennsylvania Right To Know**

| | |
|---|---|
| Butane | 106-97-8 |
| Hydrocarbons, C6, isoalkanes, <5% n-hexane | 64742-49-0 |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 |
| Propane | 74-98-6 |
| Propan-2-ol | 67-63-0 |
| Castor oil | 8001-79-4 |
| Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane | 64742-49-0 |
| Isobutane | 75-28-5 |
| Cyclohexane | 110-82-7 |

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**California List of Hazardous Substances**

| | |
|---|---|
| Butane | 106-97-8 |
| Hydrocarbons, C6, isoalkanes, <5% n-hexane | 64742-49-0 |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 |
| Propan-2-ol | 67-63-0 |
| Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane | 64742-49-0 |

**California Permissible Exposure Limits for Chemical Contaminants**

| | |
|---|---|
| Butane | 106-97-8 |
| Hydrocarbons, C6, isoalkanes, <5% n-hexane | 64742-49-0 |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 |
| Propane | 74-98-6 |
| Propan-2-ol | 67-63-0 |
| Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane | 64742-49-0 |

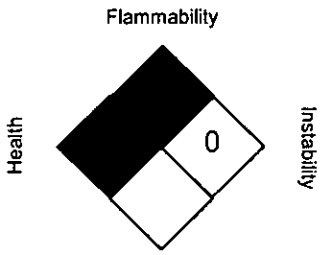
**The ingredients of this product are reported in the following inventories:**

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

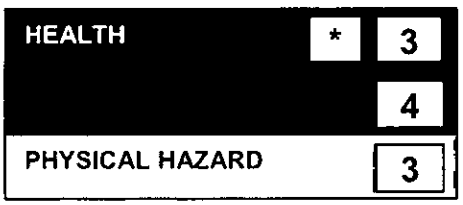
## SECTION 16. OTHER INFORMATION

### Further information

**NFPA:**




**HMIS® IV:**




HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

| | | |
|---|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| ACGIH BEI | : | ACGIH - Biological Exposure Indices (BEI) |
| NIOSH REL | : | USA. NIOSH Recommended Exposure Limits |
| OSHA Z-1 | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| US WEEL | : | USA. Workplace Environmental Exposure Levels (WEEL) |
| ACGIH / TWA | : | 8-hour, time-weighted average |
| ACGIH / STEL | : | Short-term exposure limit |
| NIOSH REL / TWA | : | Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| NIOSH REL / ST | : | STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday |
| NIOSH REL / C | : | Ceiling value not be exceeded at any time. |
| OSHA Z-1 / TWA | : | 8-hour time weighted average |
| US WEEL / TWA | : | 8-hr TWA |

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemi-

cals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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| Sources of key data used to compile the Material Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/ |
| Revision Date | : | 05/02/2017 |

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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