# ENGINE ENAMEL PAINT, Gloss Cummins Beige, 340 g

| Version | Revision Date: | SDS Number: | Date of last issue: 10/06/2022 |
|---|---|---|---|
| 5.0 | 11/27/2023 | 10789179-00007 | Date of first issue: 10/10/2017 |

## SECTION 1. IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | ENGINE ENAMEL PAINT, Gloss Cummins Beige, 340 g |
| Product code | : | 892.140013 |
| Other means of identification | : | No data available |

**Manufacturer or supplier's details**

| | | |
|---|---|---|
| Company name of supplier | : | Würth Canada Limited |
| Address | : | 345 Hanlon Creek Blvd<br>GUELPH, ON N1C 0A1 |
| Telephone | : | +1 (905) 564 6225 |
| Telefax | : | +1 (905) 564 3671 |
| Emergency telephone | : | Emergencies involving a spill, fire, explosion or exposure:<br>CHEMTREC (24/7): 1-800-424-9300<br>Transport related emergencies:<br>CANUTEC (24/7): 1-613-996-6666 or * 666 (cell)<br><br>Urgences impliquant un déversement, incendie, explosion ou exposition:<br>CHEMTREC (24/7): 1-800-424-9300<br>Urgences liées au transport:<br>CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire) |
| E-mail address | : | prodsafe@wurth.ca |

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

| | | |
|---|---|---|
| Recommended use | : | Paint |
| Restrictions on use | : | Not applicable |

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the Hazardous Products Regulations**

| | | |
|---|---|---|
| Aerosols | : | Category 1 |
| Eye irritation | : | Category 2A |
| Specific target organ toxicity - single exposure | : | Category 3 |

**GHS label elements**

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statements :

**Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 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 eye protection and face protection.

**Response:**

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical attention.

**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 and container to an approved waste disposal plant.

**Other hazards**

Repeated exposure may cause skin dryness or cracking.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

| Chemical name | Common Name/Synonym | CAS-No. | Concentration (% w/w) |
|---|---|---|---|
| Acetone | 2-Propanone | 67-64-1 | 34.87 |
| Propane | Dimethylmethane | 74-98-6 | 15.67 |
| Isobutyl acetate | Acetic acid, 2-methylpropyl ester | 110-19-0 | 12.38 |
| Butane | Butyl hydride | 106-97-8 | 9.21 |
| Titanium dioxide | Titanic anhydride | 13463-67-7 | 3.65 |
| Isobutyl methyl ketone | 4-Methylpentan-2-one | 108-10-1 | 1.97 |
| Limestone | Calcium carbonate | 1317-65-3 | 1.92 |
| Pentan-2-one | Methyl propyl ketone | 107-87-9 | 1.64 |
| 2-Methoxy-1-methylethyl acetate | 2-Propanol, 1-methoxy-, 2-acetate | 108-65-6 | 1.55 |
| 2-(Propyloxy)ethanol | Ethanol, 2-propoxy- | 2807-30-9 | 1.43 |
| Zirconium octoate | Hexanoic acid, 2-ethyl-, zirconium salt | 22464-99-9 | 0.18 |

## 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 if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and : Prolonged or repeated contact may dry skin and cause irritation.

| | | |
|---|---|---|
| delayed | | Causes serious eye irritation.<br>May cause drowsiness or dizziness. |
| 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 (see section 8). |
| 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 | : | None known. |
| 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<br>Metal 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 (see section 7) and personal protective equipment recommendations (see section 8). |
| Environmental precautions | : | Avoid release to the environment.<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.<br>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 | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.<br>If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation. |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Avoid breathing spray.<br>Do not swallow.<br>Do not get in eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to the environment.<br>Do not spray on an open flame or other ignition source. |
| Conditions for safe storage | : | Store locked up.<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 |

Organic peroxides
Oxidizing agents
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

Recommended storage temperature : < 40 °C

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Acetone | 67-64-1 | TWA | 500 ppm<br>1,200 mg/m³ | CA AB OEL |
| | | STEL | 750 ppm<br>1,800 mg/m³ | CA AB OEL |
| | | TWA | 250 ppm | CA BC OEL |
| | | STEL | 500 ppm | CA BC OEL |
| | | TWAEV | 250 ppm | CA QC OEL |
| | | STEV | 500 ppm | CA QC OEL |
| | | TWA | 250 ppm | ACGIH |
| | | STEL | 500 ppm | ACGIH |
| Propane | 74-98-6 | TWA | 1,000 ppm | CA AB OEL |
| | | TWAEV | 1,000 ppm<br>1,800 mg/m³ | CA QC OEL |
| Isobutyl acetate | 110-19-0 | TWA | 150 ppm<br>713 mg/m³ | CA AB OEL |
| | | TWAEV | 50 ppm | CA QC OEL |
| | | STEV | 150 ppm | CA QC OEL |
| | | TWA | 50 ppm | CA BC OEL |
| | | STEL | 150 ppm | CA BC OEL |
| | | TWA | 50 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| Butane | 106-97-8 | TWA | 1,000 ppm | CA AB OEL |
| | | TWAEV | 800 ppm<br>1,900 mg/m³ | CA QC OEL |
| | | TWA | 1,000 ppm | CA BC OEL |
| | | STEL | 1,000 ppm | ACGIH |
| Titanium dioxide | 13463-67-7 | TWA | 10 mg/m³ | CA AB OEL |
| | | TWA (Total dust) | 10 mg/m³ | CA BC OEL |

| | | | | |
|---|---|---|---|---|
| | | TWA (respirable dust fraction) | 3 mg/m³ | CA BC OEL |
| | | TWAEV (total dust) | 10 mg/m³ | CA QC OEL |
| | | TWA (Respirable particulate matter) | 2.5 mg/m³ (Titanium dioxide) | ACGIH |
| Isobutyl methyl ketone | 108-10-1 | TWA | 50 ppm<br>205 mg/m³ | CA AB OEL |
| | | STEL | 75 ppm<br>307 mg/m³ | CA AB OEL |
| | | TWA | 20 ppm | CA BC OEL |
| | | STEL | 75 ppm | CA BC OEL |
| | | TWAEV | 20 ppm | CA QC OEL |
| | | STEV | 75 ppm | CA QC OEL |
| | | TWA | 20 ppm | ACGIH |
| | | STEL | 75 ppm | ACGIH |
| Limestone | 1317-65-3 | TWA | 10 mg/m³ | CA AB OEL |
| | | TWAEV (total dust) | 10 mg/m³ | CA QC OEL |
| | | TWA (Total dust) | 10 mg/m³ | CA BC OEL |
| | | TWA (respirable dust fraction) | 3 mg/m³ | CA BC OEL |
| | | STEL | 20 mg/m³ | CA BC OEL |
| Pentan-2-one | 107-87-9 | TWA | 200 ppm<br>705 mg/m³ | CA AB OEL |
| | | STEL | 250 ppm<br>881 mg/m³ | CA AB OEL |
| | | TWA | 150 ppm | CA BC OEL |
| | | STEL | 250 ppm | CA BC OEL |
| | | TWAEV | 150 ppm<br>530 mg/m³ | CA QC OEL |
| | | STEL | 150 ppm | ACGIH |
| 2-Methoxy-1-methylethyl acetate | 108-65-6 | TWA | 50 ppm | CA BC OEL |
| | | STEL | 75 ppm | CA BC OEL |
| | | TWA | 50 ppm<br>270 mg/m³ | CA ON OEL |
| 2-(Propyloxy)ethanol | 2807-30-9 | TWA | 25 ppm<br>110 mg/m³ | CA ON OEL |
| Zirconium octoate | 22464-99-9 | TWA | 5 mg/m³ (Zirconium) | CA AB OEL |
| | | STEL | 10 mg/m³ (Zirconium) | CA AB OEL |
| | | TWAEV | 5 mg/m³ (Zirconium) | CA QC OEL |
| | | STEV | 10 mg/m³ (Zirconium) | CA QC OEL |

| | | | | |
|---|---|---|---|---|
| | | TWA | 5 mg/m³ (Zirconium) | CA BC OEL |
| | | STEL | 10 mg/m³ (Zirconium) | CA BC OEL |
| | | TWA | 5 mg/m³ (Zirconium) | ACGIH |
| | | STEL | 10 mg/m³ (Zirconium) | ACGIH |

**Biological occupational exposure limits**

| Components | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | Acetone | Urine | End of shift (As soon as possible after exposure ceases) | 25 mg/l | ACGIH BEI |
| Isobutyl methyl ketone | 108-10-1 | methyl isobutyl ketone | Urine | End of shift (As soon as possible after exposure ceases) | 1 mg/l | ACGIH BEI |

**Engineering measures** : Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

**Personal protective equipment**

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Self-contained breathing apparatus

Hand protection
Material : Nitrile rubber

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. Breakthrough time is not determined for the product. Change gloves often! |
| Eye protection | : | Wear the following personal protective equipment:<br>Safety goggles |
| 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>If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers 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 |
| Propellant | : | Propane, Butane |
| Color | : | beige |
| Odor | : | aromatic |
| Odor Threshold | : | No data available |
| pH | : | No data available |
| Melting point/freezing point | : | No data available |
| Initial boiling point and boiling range | : | -110 °C |
| Flash point | : | -19 °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 | : | 10.9 %(V) |
| Lower explosion limit / Lower flammability limit | : | 1.7 %(V) |
| Vapor pressure | : | 2,750 hPa |
| Relative vapor density | : | Not applicable |
| Relative density | : | 0.77 - 0.85 |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | Not applicable |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| 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.

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Acute toxicity estimate: > 2,000 mg/kg<br>Method: Calculation method |
| Acute inhalation toxicity | : | Acute toxicity estimate: > 20 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: Calculation method |
| Acute dermal toxicity | : | Acute toxicity estimate: > 2,000 mg/kg<br>Method: Calculation method |

**Components:**

**Acetone:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 5,800 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): 76 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor |
| Acute dermal toxicity | : | LD50 (Rabbit): 7,426 mg/kg |

**Propane:**

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

**Isobutyl acetate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 13,413 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): > 21.1 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: OECD Test Guideline 403 |

LC50 (Rat): 21.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 17,400 mg/kg

**Butane:**

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

**Titanium dioxide:**

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

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

**Isobutyl methyl ketone:**

Acute oral toxicity : LD50 (Rat): 2,080 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 11 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Expert judgment

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

**Limestone:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

| | | |
|---|---|---|
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity<br>Remarks: Based on data from similar materials |

**Pentan-2-one:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 1,600 - 3,200 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): > 25.5 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: OECD Test Guideline 436 |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg<br>Remarks: Based on data from similar materials |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg |
| Acute inhalation toxicity | : | LC0 (Rat): 9.48 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor |
| Acute dermal toxicity | : | LD50 (Rat): > 5,000 mg/kg |

**2-(Propyloxy)ethanol:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Mouse): 3,089 mg/kg |
| Acute dermal toxicity | : | LD50 (Rabbit): 1,337 mg/kg |

**Zirconium octoate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 2,043 mg/kg<br>Remarks: Based on data from similar materials |
| Acute inhalation toxicity | : | LC50 (Rat): > 4.3 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 436<br>Remarks: Based on data from similar materials |
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity<br>Remarks: Based on data from similar materials |

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Acetone:**

Assessment : Repeated exposure may cause skin dryness or cracking.

**Isobutyl acetate:**

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

Assessment : Repeated exposure may cause skin dryness or cracking.
Remarks : Based on national or regional regulation.

**Titanium dioxide:**

Species : Rabbit
Result : No skin irritation

**Isobutyl methyl ketone:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

**Limestone:**

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

**Pentan-2-one:**

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

**2-Methoxy-1-methylethyl acetate:**

Species : Rabbit
Result : No skin irritation

**2-(Propyloxy)ethanol:**

Species : Rabbit
Result : No skin irritation

**Zirconium octoate:**

Species : Rabbit

Method : OECD Test Guideline 404
Result : No skin irritation

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:**

**Acetone:**

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days
Method : OECD Test Guideline 405

**Isobutyl acetate:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

**Titanium dioxide:**

Species : Rabbit
Result : No eye irritation

**Isobutyl methyl ketone:**

Species : Human
Result : Irritation to eyes, reversing within 21 days

**Limestone:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

**Pentan-2-one:**

Species : Rabbit
Result : Irritation to eyes, reversing within 7 days

**2-Methoxy-1-methylethyl acetate:**

Species : Rabbit
Result : No eye irritation

**2-(Propyloxy)ethanol:**

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

**Zirconium octoate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |

**Respiratory or skin sensitization**

**Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Components:**

**Acetone:**

| | | |
|---|---|---|
| Test Type | : | Maximization Test |
| Routes of exposure | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | negative |

**Isobutyl acetate:**

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

**Titanium dioxide:**

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

**Isobutyl methyl ketone:**

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

**Limestone:**

| | | |
|---|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Routes of exposure | : | Skin contact |
| Species | : | Mouse |
| Method | : | OECD Test Guideline 429 |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Pentan-2-one:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Routes of exposure | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**2-Methoxy-1-methylethyl acetate:**

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

**2-(Propyloxy)ethanol:**

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

**Zirconium octoate:**

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

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Acetone:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative<br><br>Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br><br>Test Type: Chromosome aberration test in vitro<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative |

**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

**Isobutyl acetate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

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

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

**Butane:**

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
Remarks: Based on data from similar materials

**Titanium dioxide:**

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

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse

Result: negative

**Isobutyl methyl ketone:**

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

Test Type: In vitro mammalian cell gene mutation test
Result: equivocal

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

**Limestone:**

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

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
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

**Pentan-2-one:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: Directive 67/548/EEC, Annex V, B.13/14.
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)

Species: Mouse
Application Route: Intraperitoneal injection
Result: negative
Remarks: Based on data from similar materials

**2-Methoxy-1-methylethyl acetate:**

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

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

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

**2-(Propyloxy)ethanol:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

**Zirconium octoate:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
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
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

**Carcinogenicity**

Not classified based on available information.

**Product:**

Carcinogenicity - Assessment : No data available

**Components:**

**Acetone:**

| | | |
|---|---|---|
| Species | : | Mouse |
| Application Route | : | Skin contact |
| Exposure time | : | 424 days |
| Result | : | negative |

**Titanium dioxide:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | inhalation (dust/mist/fume) |
| Exposure time | : | 2 Years |
| Method | : | OECD Test Guideline 453 |
| Result | : | positive |
| Remarks | : | The mechanism or mode of action may not be relevant in humans. |
| Carcinogenicity - Assessment | : | Limited evidence of carcinogenicity in inhalation studies with animals. |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 2 Years |
| Method | : | OECD Test Guideline 451 |
| Result | : | positive |
| Species | : | Mouse |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 2 Years |
| Method | : | OECD Test Guideline 451 |
| Result | : | positive |
| Carcinogenicity - Assessment | : | Limited evidence of carcinogenicity in animal studies |

**2-Methoxy-1-methylethyl acetate:**

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

**Reproductive toxicity**

Not classified based on available information.

**Product:**

| | | |
|---|---|---|
| Reproductive toxicity - As- | : | No data available |

sessment

**Components:**

**Acetone:**

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

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

**Propane:**

Effects on fertility : 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

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

**Isobutyl acetate:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Method: OPPTS 870.3800
Result: negative
Remarks: Based on data from similar materials

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

**Butane:**

Effects on fertility : 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

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

**Isobutyl methyl ketone:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

**Limestone:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

**Pentan-2-one:**

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 421
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 414
Result: negative

**2-Methoxy-1-methylethyl acetate:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 416
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

**2-(Propyloxy)ethanol:**

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit
Application Route: inhalation (vapor)
Result: negative

**Zirconium octoate:**

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: positive
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.
Remarks: Based on data from similar materials

**STOT-single exposure**

May cause drowsiness or dizziness.

**Components:**

**Acetone:**

Assessment : May cause drowsiness or dizziness.

**Propane:**

Assessment : May cause drowsiness or dizziness.

**Isobutyl acetate:**

Assessment : May cause drowsiness or dizziness.

Remarks : Based on data from similar materials

**Butane:**

Assessment : May cause drowsiness or dizziness.

**Isobutyl methyl ketone:**

Assessment : May cause drowsiness or dizziness.

**2-Methoxy-1-methylethyl acetate:**

Assessment : May cause drowsiness or dizziness.

**STOT-repeated exposure**

Not classified based on available information.

**Repeated dose toxicity**

**Components:**

**Acetone:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 900 mg/kg |
| LOAEL | : | 1,700 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 45 mg/l |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 8 Weeks |

**Propane:**

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

**Isobutyl acetate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 100 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 92 Days |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 2.4 mg/l |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 13 Weeks |
| Remarks | : | Based on data from similar materials |

**Butane:**

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

**Titanium dioxide:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 24,000 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 28 Days |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 10 mg/m³ |
| Application Route | : | inhalation (dust/mist/fume) |
| Exposure time | : | 2 y |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 250 mg/kg |
| LOAEL | : | 1,000 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 13 Weeks |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 4.106 mg/l |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 14 Weeks |

**Limestone:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 300 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 28 Days |
| Method | : | OECD Test Guideline 422 |
| Remarks | : | Based on data from similar materials |

**Pentan-2-one:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 5.28 mg/l |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 13 Weeks |
| Method | : | OECD Test Guideline 413 |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rat |

| | | |
|---|---|---|
| NOAEL | : | > 1,000 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 41 - 45 Days |
| Method | : | OECD Test Guideline 422 |

| | | |
|---|---|---|
| Species | : | Mouse |
| NOAEL | : | 1.62 mg/l |
| Application Route | : | inhalation (vapor) |
| Exposure time | : | 2 y |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rabbit |
| NOAEL | : | > 1,838 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 90 Days |
| Remarks | : | Based on data from similar materials |

**2-(Propyloxy)ethanol:**

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | 195 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 6 Weeks |

**Zirconium octoate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 300 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 91 - 93 Days |
| Remarks | : | Based on data from similar materials |

**Aspiration toxicity**

Not classified based on available information.

**Components:**

**Acetone:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

**Isobutyl methyl ketone:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

**Pentan-2-one:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**Acetone:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 5,540 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia pulex (Water flea)): 8,800 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | NOEC (Pseudokirchneriella subcapitata (green algae)): 7,000 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): >= 79 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211 |
| Toxicity to microorganisms | : | EC50: 61,150 mg/l<br>Exposure time: 30 min<br>Method: ISO 8192 |

**Isobutyl acetate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oryzias latipes (Japanese medaka)): 16.6 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)): 24.6 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic plants | : | EL50 (Pseudokirchneriella subcapitata (green algae)): 397 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br><br>NOELR (Pseudokirchneriella subcapitata (green algae)): 196 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 23.2 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211 |
| Toxicity to microorganisms | : | EC10 (Pseudomonas putida): 487 mg/l |

Exposure time: 6 h

**Titanium dioxide:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 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 |
| Toxicity to algae/aquatic plants | : | EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l<br>Exposure time: 72 h |
| Toxicity to microorganisms | : | EC50: > 1,000 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209 |

**Isobutyl methyl ketone:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): > 179 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)): > 200 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 30 mg/l<br>Exposure time: 21 d |

**Limestone:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Oncorhynchus mykiss (rainbow trout)): > 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 | : | LL50 (Daphnia magna (Water flea)): > 100 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/aquatic plants | : | EL50 (Desmodesmus subspicatus (green algae)): > 14 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: No toxicity at the limit of solubility.<br>Based on data from similar materials |

EL10 (Desmodesmus subspicatus (green algae)): > 14 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility.
Based on data from similar materials

Toxicity to microorganisms : EC50: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

**Pentan-2-one:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,240 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 110 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 150 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 73.77 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

**2-Methoxy-1-methylethyl acetate:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 - 180 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (algae)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): >= 100 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

| | | |
|---|---|---|
| Toxicity to microorganisms | : | EC10: > 1,000 mg/l<br>Exposure time: 0.5 h |

**2-(Propyloxy)ethanol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): > 5,000 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 5,000 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | NOEC (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | IC50: > 1,000 mg/l<br>Exposure time: 16 h |

**Zirconium octoate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 180 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 0.17 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>Remarks: No toxicity at the limit of solubility. |
| Toxicity to algae/aquatic plants | : | EC50 (Desmodesmus subspicatus (green algae)): 49.3 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials<br><br>EC10 (Desmodesmus subspicatus (green algae)): 32 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 25 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC50 (Pseudomonas putida): 112.1 mg/l<br>Exposure time: 17 h<br>Method: DIN 38 412 Part 8<br>Remarks: Based on data from similar materials |

**Persistence and degradability**

**Components:**

**Acetone:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 91 %
Exposure time: 28 d

**Propane:**

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

**Isobutyl acetate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 20 d

**Butane:**

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

**Isobutyl methyl ketone:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

**Pentan-2-one:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

**2-Methoxy-1-methylethyl acetate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

**2-(Propyloxy)ethanol:**

Biodegradability : Result: Readily biodegradable.

Biodegradation: 100 %
Exposure time: 20 d

**Zirconium octoate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
Remarks: Based on data from similar materials

**Bioaccumulative potential**

**Components:**

**Acetone:**

Partition coefficient: n-octanol/water : log Pow: -0.27 - -0.23

**Isobutyl acetate:**

Partition coefficient: n-octanol/water : log Pow: 2.3

**Butane:**

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

**Isobutyl methyl ketone:**

Partition coefficient: n-octanol/water : log Pow: 1.9

**Pentan-2-one:**

Partition coefficient: n-octanol/water : log Pow: 0.857

**2-Methoxy-1-methylethyl acetate:**

Partition coefficient: n-octanol/water : log Pow: 1.2

**2-(Propyloxy)ethanol:**

Partition coefficient: n-octanol/water : log Pow: 0.673

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Waste from residues | : | Do not dispose of waste into sewer.<br><br>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 |
| Environmentally hazardous | : | no |

**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 |
| Class | : | 2.1 |
| Packing group | : | Not assigned by regulation |
| Labels | : | 2.1 |
| EmS Code | : | F-D, S-U |

Marine pollutant : no

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

Not applicable for product as supplied.

**Domestic regulation**

**TDG**

| | | |
|---|---|---|
| UN number | : | UN 1950 |
| Proper shipping name | : | AEROSOLS |
| Class | : | 2.1 |
| Packing group | : | Not assigned by regulation |
| Labels | : | 2.1 |
| ERG Code | : | 126 |
| Marine pollutant | : | no |

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

**Volatile organic compounds (VOC) content**

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 - Guidelines for VOC in Consumer Products
VOC content: 5 % / 538.9 g/l

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

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

## SECTION 16. OTHER INFORMATION

**Full text of other abbreviations**

| | | |
|---|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| ACGIH BEI | : | ACGIH - Biological Exposure Indices (BEI) |
| CA AB OEL | : | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| CA BC OEL | : | Canada. British Columbia OEL |
| CA ON OEL | : | Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act. |
| CA QC OEL | : | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| ACGIH / TWA | : | 8-hour, time-weighted average |
| ACGIH / STEL | : | Short-term exposure limit |
| CA AB OEL / TWA | : | 8-hour Occupational exposure limit |

| | | |
|---|---|---|
| CA AB OEL / STEL | : | 15-minute occupational exposure limit |
| CA BC OEL / TWA | : | 8-hour time weighted average |
| CA BC OEL / STEL | : | short-term exposure limit |
| CA ON OEL / TWA | : | Time-Weighted Average Limit (TWA) |
| CA QC OEL / TWAEV | : | Time-weighted average exposure value |
| CA QC OEL / STEV | : | Short-term exposure value |

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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 Chemicals 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals 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; WHMIS - Workplace Hazardous Materials Information System

| | | |
|---|---|---|
| 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 | : | 11/27/2023 |
| Date format | : | mm/dd/yyyy |

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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