

SAFETY DATA SHEET

Aluminium Spray A-400

Section 1. Identification

GHS product identifier	: Aluminium Spray A-400
Product code	: 110510
Other means of identification	: Not available.
Color	: Gray.
Product type	: Aerosol.

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

Identified uses

Not available.

Uses advised against

Not applicable.

Supplier's details	: WEICON GmbH & Co. KG Königsberger Str. 255, 48157 Münster, Germany phone:+49 251 93220, email: info@weicon.de, URL: www.weicon.de
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e-mail address of person responsible for this SDS	: msds@weicon.de
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Emergency telephone number (with hours of operation)	: +1 202 464 2554 TRANSPORT (24 Hours/Day): +1 202 464 2554
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Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Classification of the substance or mixture	: AEROSOLS - Category 1 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
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GHS label elements

Hazard pictograms



Signal word	: Danger
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Hazard statements	: H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.
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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.
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Response	: Not applicable.
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Section 2. Hazards identification

Storage	: Not applicable.
Disposal	: P501 - Dispose of waste according to applicable legislation.
Hazards not otherwise classified	: None known.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

Ingredient name	Synonyms	%	Identifiers
propane	Propyl hydride; n-Propane; Dimethyl methane; E 944; HC-290; R290; PROPYL HYDRID; Normal propane; liquefied petroleum gas; Propagas; n-propana	≥10 - ≤30	CAS: 74-98-6
butane	n-BUTANE; Methylethylmethane; Diethyl; Butyl hydride; normal-Butane; butane, pure	≥10 - ≤30	CAS: 106-97-8
acetone	propan-2-one; propanone; 2-Propanone; Ketone propane; Dimethyl ketone; β-ketonepropane; acetonum; dimethylketone; methyl ketone; pyroacetic acid; pyroacetic ether; dimethylformaldehyde; Acetone (I); 2-Propanone (I); 2-OXOPROPANE; BETA-KETOPROPANE; 2-Propanon, -e	≥10 - ≤30	CAS: 67-64-1
Solvent naphtha (petroleum), light arom.	Low boiling point naphtha - unspecified; Solvent naphtha (petroleum), light arom; Solvent naphtha, petroleum, light aromatic; Aromatic hydrocarbon solvents - medium flashpoint; Light aromatic solvent naphtha; Solvent naphtha, light aromatic; Solvent naphtha (petroleum), light aromatic; Light aromatic solvent naphtha (petroleum) (C8 to C10); Solvent naphtha, petroleum, light arom.; AROMATIC PETROLUEM DISTILLATE; SOLVENT, AROMATIC PETROLEUM	≥10 - ≤30	CAS: 64742-95-6
Naphtha (petroleum), hydrotreated light	Low boiling point hydrogen treated naphtha; Naphtha, petroleum, hydrotreated light; Hydrotreated light, straight run, petroleum; naphtha (petroleum), hydrotreated light, as light oils; low boiling point hydrogen treated naphtha, as light oils; Hydrotreated light straight run	≥3 - ≤7	CAS: 64742-49-0

Section 3. Composition/information on ingredients

n-butyl acetate	(petroleum); Naphtha (petroleum), hydrotreated light, Low boiling point hydrogen treated naphtha Acetic acid, butyl ester; Butyl Acetate; n-Butyl-acetate; Butyl ethanoate; n-Butyl ester of acetic acid; product composed of hydrocarbons (predominantly paraffinic and naphthenic) and n-butyl acetate; 1-butyl acetate; 1-Acetoxybutane; Butyl ester, Acetic acid; normal butyl acetate; Acetic acid, n-butyl ester	≥3 - ≤7	CAS: 123-86-4
Aluminium powder (stabilized)	aluminium powder (stabilised)	≥3 - ≤7	CAS: 7429-90-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
propane	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 1000 ppm. TWA 10 hours: 1800 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 1800 mg/m³. TWA 8 hours: 1000 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 1000 ppm. TWA 8 hours: 1800 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 1000 ppm. TWA 8 hours: 1800 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) Oxygen depletion [asphyxiant] , Explosive potential.</p>
butane	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 800 ppm. TWA 10 hours: 1900 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 1900 mg/m³. TWA 8 hours: 800 ppm.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 800 ppm. TWA 8 hours: 1900 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) [Butane] Explosive potential. STEL 15 minutes: 1000 ppm.</p>
acetone	<p>NIOSH REL (United States, 10/2020) TWA 10 hours: 250 ppm. TWA 10 hours: 590 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025) STEL 15 minutes: 1780 mg/m³. STEL 15 minutes: 750 ppm. C: 3000 ppm. TWA 8 hours: 1200 mg/m³. TWA 8 hours: 500 ppm.</p> <p>OSHA PEL (United States, 5/2018) TWA 8 hours: 1000 ppm. TWA 8 hours: 2400 mg/m³.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 750 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 2400 mg/m³.</p> <p>ACGIH TLV (United States, 1/2025) A4. TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm.</p>
Solvent naphtha (petroleum), light arom.	<p>OSHA PEL 1989 (United States, 3/1989) [Petroleum distillates (Naphtha)] TWA 8 hours: 400 ppm. TWA 8 hours: 1600 mg/m³.</p>
Naphtha (petroleum), hydrotreated light n-butyl acetate	<p>None.</p> <p>NIOSH REL (United States, 10/2020) TWA 10 hours: 150 ppm. TWA 10 hours: 710 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 950 mg/m³.</p> <p>CAL OSHA PEL (United States, 1/2025)</p>

Section 8. Exposure controls/personal protection

Aluminium powder (stabilized)

STEL 15 minutes: 950 mg/m³.
 STEL 15 minutes: 200 ppm.
 TWA 8 hours: 710 mg/m³.
 TWA 8 hours: 150 ppm.
OSHA PEL (United States, 5/2018)
 TWA 8 hours: 150 ppm.
 TWA 8 hours: 710 mg/m³.
OSHA PEL 1989 (United States, 3/1989)
 TWA 8 hours: 150 ppm.
 TWA 8 hours: 710 mg/m³.
 STEL 15 minutes: 200 ppm.
 STEL 15 minutes: 950 mg/m³.
ACGIH TLV (United States, 1/2025) [Butyl acetates]
 STEL 15 minutes: 150 ppm.
 TWA 8 hours: 50 ppm.

NIOSH REL (United States, 10/2020)
 TWA 10 hours: 10 mg/m³. Form: Total.
 TWA 10 hours: 5 mg/m³. Form: Respirable fraction.

CAL OSHA PEL (United States, 1/2025)
 TWA 8 hours: 5 mg/m³. Form: powder.

OSHA PEL (United States, 5/2018)
 TWA 8 hours: 15 mg/m³ (as Al). Form: Total dust.
 TWA 8 hours: 5 mg/m³ (as Al). Form: Respirable fraction.

OSHA PEL 1989 (United States, 3/1989)
 TWA 8 hours: 15 mg/m³ (as Al). Form: Dust.
 TWA 8 hours: 5 mg/m³ (as Al). Form: Respirable fraction.
 TWA 8 hours: 5 mg/m³ (as Al). Form: Pyrophoric.
 TWA 8 hours: 5 mg/m³ (as Al). Form: Welding fume.

ACGIH TLV (United States, 1/2025) [Aluminum, metal and insoluble compounds] A4.
 TWA 8 hours: 1 mg/m³. Form: Respirable fraction.

Biological exposure indices

Ingredient name	Exposure indices
acetone	ACGIH BEI (United States, 1/2025) BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Gas.
- Color** : Gray.
- Odor** : Characteristic. [Strong]
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: -97°C (-142.6°F)
- Fire point** : >200°C (>392°F)
- Evaporation rate** : Not available.
- Flammability** : Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Highly flammable in the presence of the following materials or conditions: heat.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** : Not available.
- Relative vapor density** : Not available.
- Relative density** : Not applicable.

Section 9. Physical and chemical properties

Density	: 0.8 g/cm ³
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Heat of combustion	: 26.52 kJ/g
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): >20.5 mm ² /s (>20.5 cSt)

Particle characteristics

Median particle size : Not applicable.

Aerosol product

Type of aerosol : Spray

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame).
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

butane

Result

Rat - Inhalation - LC50 Vapor

658000 mg/m³ [4 hours]

acetone

Rat - Oral - LD50

5800 mg/kg

Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor

n-butyl acetate

Rat - Oral - LD50

10768 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Other changes Liver - Other changes

Rabbit - Dermal - LD50

>17600 mg/kg

Rat - Male, Female - Inhalation - LC50 Vapor

>21 mg/l [4 hours]

OECD 403

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Skin corrosion/irritation

Product/ingredient name

acetone

Result

Rabbit - Skin - Mild irritantDuration of treatment/exposure: 24 hoursAmount/concentration applied: 500 mg**Rabbit - Skin - Mild irritant**Amount/concentration applied: 395 mg

Conclusion/Summary [Product] : Irritating to skin.

Serious eye damage/eye irritation

Product/ingredient name

acetone

Result

Human - Eyes - Mild irritantAmount/concentration applied: 186300 ppm**Rabbit - Eyes - Mild irritant**Amount/concentration applied: 10 uL**Rabbit - Eyes - Moderate irritant**Duration of treatment/exposure: 24 hoursAmount/concentration applied: 20 mg**Rabbit - Eyes - Severe irritant**Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Irritating to eyes.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
acetone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light arom.	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Naphtha (petroleum), hydrotreated light	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
n-butyl acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrotreated light	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: No specific data.
Ingestion	: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
butane	N/A	N/A	N/A	658	N/A
acetone	5800	N/A	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

acetone

Result

Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia magna*

10 mg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia pulex*

Age: <24 hours

8800 mg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia cucullata*

Age: 11 days

7460 mg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Daphnia - Water flea - *Daphnia cucullata*

Age: 11 days

7810 mg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Crustaceans - Aquatic sowbug - *Asellus aquaticus*

7550 mg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Section 12. Ecological information

Crustaceans - Scud - *Gammarus pulex*

6000 mg/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 28 days; Size: 19.2 mm; Weight: 0.076 g

7280 mg/l [96 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 33 days; Size: 22.6 mm; Weight: 0.159 g

8120 mg/l [96 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 32 days; Size: 18 mm; Weight: 0.087 g

6210 mg/l [96 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate

Age: <12 hours

8098 mg/l [48 hours]

Effect: Mortality

Acute - EC50 - Fresh water

Algae - Green algae - *Selenastrum sp.*

7200 mg/l [96 hours]

Effect: Population

Chronic - NOEC - Marine water

Algae - Green algae - *Ulva pertusa*

4.95 mg/l [96 hours]

Effect: Reproduction

Acute - EC50 - Marine water

Algae - Green algae - *Ulva pertusa*

20.565 mg/l [96 hours]

Effect: Reproduction

Chronic - NOEC - Marine water

Algae - Diatom - *Skeletonema costatum*

100 µl/l [72 hours]

Effect: Population

Chronic - NOEC - Marine water

Algae - Diatom - *Skeletonema costatum*

100 µl/l [96 hours]

Effect: Population

Chronic - NOEC - Marine water

Algae - Dinoflagellate - *Karenia brevis*

0.5 ml/l [96 hours]

Effect: Population

Acute - LC50 - Marine water

ISO

Crustaceans - Calanoid copepod - *Acartia tonsa* - Copepodid

4.42589 ml/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Crustaceans - Scud - *Gammarus pulex* - Juvenile (Fledgling, Hatchling, Weanling)

Size: 5 to 10 mm

11.26487 ml/l [48 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Fish - Rainbow trout, donaldson trout - *Oncorhynchus mykiss*

Age: 4 to 12 months; Size: 2 to 10 cm; Weight: 0.5 to 14 g

Section 12. Ecological information

8000 ppm [96 hours]

Effect: Mortality**Acute - LC50 - Fresh water**Fish - Guppy - *Poecilia reticulata*Age: 4 to 12 months; Size: 2 to 10 cm; Weight: 0.5 to 14 g

5600 ppm [96 hours]

Effect: Mortality**Chronic - NOEC - Fresh water**Crustaceans - Daphnia - *Daphniidae*

0.016 ml/l [21 days]

Effect: Population**Chronic - NOEC - Marine water**Fish - Threespine stickleback - *Gasterosteus aculeatus* - LarvaeAge: 7 days

5 µg/l [42 days]

Effect: Growth

n-butyl acetate

Acute - LC50 - Fresh waterFish - Fathead minnow - *Pimephales promelas*Age: 31 to 32 days; Size: 21.6 mm; Weight: 0.175 g

18 mg/l [96 hours]

Effect: Mortality**Acute - LC50 - Fresh water**Fish - Zebra danio - *Danio rerio*

62 mg/l [96 hours]

Effect: Mortality**Acute - LC50 - Marine water**Crustaceans - Brine shrimp - *Artemia salina*

32 mg/l [48 hours]

Effect: Mortality

Aluminium powder (stabilized)

Chronic - NOEC - Fresh waterAquatic plants - Coontail - *Ceratophyllum demersum*Weight: 3.5 g

9 mg/l [3 days]

Effect: Enzymes**Conclusion/Summary [Product]** : Not available.**Persistence and degradability**

Not available.

Conclusion/Summary [Product] : Not available.**Bioaccumulative potential**

Product/ingredient name	LogP _{ow}	BCF	Potential
propane	1.09	-	Low
butane	1.09	-	Low
acetone	-0.23	-	Low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	High
Naphtha (petroleum), hydrotreated light	2.2 to 5.2	10 to 2500	High
n-butyl acetate	2.3	-	Low

Mobility in soil**Soil/Water partition coefficient** : Not available.

Section 12. Ecological information

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetone (l)	67-64-1	Listed	U002

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	Aerosols	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

: **Reportable quantity** 33333.3 lbs / 15133.3 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

Limited quantity Yes.

Packaging instruction Exceptions: 306. Non-bulk: None. Bulk: None.

Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.

Special provisions N82

TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).

Explosive Limit and Limited Quantity Index 1

Passenger Carrying Road or Rail Index 75

Special provisions 80, 107

Mexico Classification

: **Special provisions** 63, 190, 277, 327, 344

IMDG

: **Emergency schedules** F-D, S-U

Special provisions 63, 190, 277, 327, 344, 381, 959

Section 14. Transport information

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.
Special provisions A145, A167, A802

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 311: n-butyl acetate

Clean Air Act (CAA) 112 regulated flammable substances: propane; butane

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : AEROSOLS - Category 1
 EYE IRRITATION - Category 2A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Composition/information on ingredients

Name	%	Classification
propane	≥10 - ≤30	FLAMMABLE GASES - Category 1A GASES UNDER PRESSURE - Compressed gas
butane	≥10 - ≤30	FLAMMABLE GASES - Category 1A GASES UNDER PRESSURE - Compressed gas
acetone	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light arom.	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

Section 15. Regulatory information

Naphtha (petroleum), hydrotreated light	≥3 - ≤7	(Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
n-butyl acetate	≥3 - ≤7	(Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
Aluminium powder (stabilized)	≥3 - ≤7	(Narcotic effects) - Category 3 FLAMMABLE SOLIDS - Category 1 SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Aluminium powder (stabilized)	7429-90-5	≥3 - ≤7
Supplier notification	Aluminium powder (stabilized)	7429-90-5	≥3 - ≤7

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts

: The following components are listed: PROPANE; BUTANE; ACETONE; BUTYL ACETATE; ALUMINUM

New York

: The following components are listed: Acetone; Butyl acetate

New Jersey

: The following components are listed: PROPANE; BUTANE; ACETONE; PETROLEUM DISTILLATES; n-BUTYL ACETATE; ALUMINUM

Pennsylvania

: The following components are listed: PROPANE; BUTANE; 2-PROPANONE; ACETIC ACID, BUTYL ESTER

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia

: All components are listed or exempted.

Canada

: All components are listed or exempted.

China

: All components are listed or exempted.

Eurasian Economic Union

: **Russian Federation inventory:** All components are listed or exempted.

Japan

: **Japan inventory (CSCL):** All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand

: All components are listed or exempted.

Philippines

: All components are listed or exempted.

Section 15. Regulatory information

Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: All components are listed or exempted.
Turkey	: All components are listed or exempted.
United States	: All components are active or exempted.
Viet Nam	: All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
AEROSOLS - Category 1 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	On basis of test data Calculation method Calculation method

History

Date of printing	: 2/3/2026
Date of issue/Date of revision	: ***
Date of previous issue	: 11/4/2025
Version	: 3.1

Key to abbreviations

: ATE = Acute Toxicity Estimate
: BCF = Bioconcentration Factor
: DOT = Department of Transportation
: GHS = Globally Harmonized System of Classification and Labelling of Chemicals
: IATA = International Air Transport Association
: IBC = Intermediate Bulk Container
: IMDG = International Maritime Dangerous Goods
: IMO = International Maritime Organization
: LogPow = logarithm of the octanol/water partition coefficient
: MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
: N/A = Not available
: SGG = Segregation Group
: TDG = Transportation of Dangerous Goods
: UN = United Nations

Section 16. Other information

References : Not available.

✔ Indicates information that has changed from previously issued version.

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