

# SAFETY DATA SHEET



## Anti-Seize Spray

### Section 1. Identification

GHS product identifier : Anti-Seize Spray  
Product code : 270000  
Product type : Aerosol.

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

Identified uses	
Aerosol product Corrosion inhibitor.Lubricating agents When using Anti-Seize on chrome-nickel steel, the formation of chromium(VI) can occur above 400°C.	
Uses advised against	Reason
Not applicable.	

Supplier's details : WEICON GmbH & Co. KG  
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Emergency telephone number : +1 202 464 2554 / TRANSPORT EMERGENCY CONTACT - USA (24h): Tel: +1 202 464 2554

### Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H222 - Extremely flammable aerosol.  
H280 - Contains gas under pressure; may explode if heated.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.

#### Precautionary statements

## Section 2. Hazards identification

- 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 - Pressurized container: Do not pierce or burn, even after use.  
P280 - Wear protective gloves. Wear eye or face protection.
- Response** : P363 - Wash contaminated clothing before reuse.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
butane	≥25 - ≤50	106-97-8
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	≥10 - <20	-
propane	≥10 - ≤25	74-98-6
calcium dihydroxide	≤5	1305-62-0
copper	≤3	7440-50-8
aluminium powder (stabilised)	≤3	7429-90-5
Benzenesulfonic acid, di-C10-18-alkyl derivs., calcium salts	≤1	93820-57-6

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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. 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. 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** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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 damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.

## Section 5. Fire-fighting measures

<b>Hazardous thermal decomposition products</b>	: Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
<b>Special protective actions for fire-fighters</b>	: 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.
<b>Special protective equipment for fire-fighters</b>	: 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

<b>For non-emergency personnel</b>	: 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: 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".
<b>Environmental precautions</b>	: 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

<b>Small spill</b>	: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	: 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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. 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.
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## Section 7. Handling and storage

**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** : 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. Protect from sunlight. 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
butane	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 800 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>ACGIH TLV (United States, 1/2021).</b> <b>[Butane] Explosive potential.</b> STEL: 1000 ppm 15 minutes.
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	None.
propane	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 1000 ppm 10 hours. TWA: 1800 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 1/2023). Oxygen Depletion [Asphyxiant]. Explosive potential.</b> <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 1800 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.
calcium dihydroxide	<b>ACGIH TLV (United States, 1/2023).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
copper	<b>ACGIH TLV (United States, 1/2023).</b> <b>[Copper Dusts and mists, as Cu]</b> TWA: 1 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Dust

## Section 8. Exposure controls/personal protection

	<p>and mist</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  <b>[Copper Dust and mists (as Cu)]</b>  TWA: 1 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: Dusts and Mists</p> <p><b>NIOSH REL (United States, 10/2020).</b>  TWA: 1 mg/m<sup>3</sup>, (as Cu) 10 hours. Form: Dusts and Mists</p> <p><b>OSHA PEL (United States, 5/2018).</b>  TWA: 1 mg/m<sup>3</sup> 8 hours. Form: Dusts and Mists</p> <p><b>ACGIH TLV (United States, 1/2023).</b>  <b>[Copper Fume]</b>  TWA: 0.2 mg/m<sup>3</sup> 8 hours. Form: Fume</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  <b>[Copper Fume (as Cu)]</b>  TWA: 0.1 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: Fume</p> <p><b>CAL OSHA PEL (United States, 5/2018).</b>  TWA: 0.1 mg/m<sup>3</sup>, (as Cu) 8 hours.</p>
aluminium powder (stabilised)	<p><b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 15 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Dust</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 5 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Pyrophoric</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 5 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Respirable fraction</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 5 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Welding fume</p> <p><b>NIOSH REL (United States, 10/2020).</b>  TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction</p> <p><b>NIOSH REL (United States, 10/2020).</b>  TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total</p> <p><b>OSHA PEL (United States, 5/2018).</b>  TWA: 5 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Respirable fraction</p> <p><b>OSHA PEL (United States, 5/2018).</b>  TWA: 15 mg/m<sup>3</sup>, (as Al) 8 hours. Form: Total dust</p> <p><b>ACGIH TLV (United States, 1/2021).</b>  <b>[Aluminum, metal and insoluble compounds]</b>  TWA: 1 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction</p>
Benzenesulfonic acid, di-C10-18-alkyl derivs., calcium salts	None.

### Biological exposure indices

No exposure indices known.

### Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, 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.

## Section 8. Exposure controls/personal protection

### Individual protection measures

- 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. Contaminated work clothing should not be allowed out of the workplace. 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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

### Appearance

- Physical state** : Aerosol.
- Color** : Gray.
- Odor** : Solvent
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Closed cup: Not applicable.
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 0.6%
- Vapor pressure** : 350 kPa (2625.2 mm Hg)
- Relative vapor density** : Not available.
- Relative density** : Not applicable.
- Density** : 0.72 g/cm<sup>3</sup> [20°C (68°F)]
- Solubility(ies)** :

## Section 9. Physical and chemical properties

Not available.

<b>Solubility in water</b>	: Not available.
<b>Miscible with water</b>	: No.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not available.
<b>Heat of combustion</b>	: 22.79 kJ/g
<b>Viscosity</b>	: Kinematic: 0.45 mm <sup>2</sup> /s (0.45 cSt)
<b>Flow time (ISO 2431)</b>	: Not available.
<b><u>Particle characteristics</u></b>	
<b>Median particle size</b>	: Not applicable.
<b><u>Aerosol product</u></b>	
<b>Type of aerosol</b>	: Spray

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: 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	Result	Species	Dose	Exposure
butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
calcium dihydroxide	LD50 Oral	Rat	7340 mg/kg	-

#### Acute toxicity estimates

Route	ATE value
Oral	27826.47 mg/kg

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
calcium dihydroxide	Eyes - Severe irritant	Rabbit	-	10 mg	-

#### Sensitization

Not available.

#### Mutagenicity



## Section 11. Toxicological information

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Category 3	-	Narcotic effects
calcium dihydroxide	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Name	Result
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
**Inhalation** : Adverse symptoms may include the following:  
 respiratory tract irritation  
 coughing  
**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
 stomach pains

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

## Section 11. Toxicological information

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
calcium dihydroxide	Acute LC50 33884.4 µg/l Fresh water	Fish - <i>Clarias gariepinus</i> - Fingerling	96 hours
copper	Acute EC50 1100 µg/l Fresh water	Aquatic plants - <i>Lemna minor</i>	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - <i>Daphnia longispina</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 16 µg/l Fresh water	Algae - <i>Chlorella pyrenoidosa</i> - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - <i>Plantae</i> - Exponential growth phase	72 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - <i>Amphipoda</i> - Adult	48 hours
	Acute LC50 7.56 µg/l Marine water	Fish - <i>Periophthalmus waltoni</i> - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - <i>Nitzschia closterium</i> - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - <i>Ceratophyllum demersum</i>	3 days
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - <i>Cambarus bartonii</i> - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
aluminium powder (stabilised)	Chronic NOEC 0.8 µg/l Fresh water	Fish - <i>Oreochromis niloticus</i> - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks
	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - <i>Ceratophyllum demersum</i>	3 days

### Persistence and degradability

## Section 12. Ecological information

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
butane	2.89	-	Low
propane	1.09	-	Low

### Mobility in soil









Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

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.

## 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	<input checked="" type="checkbox"/> AEROSOLS (butane, propane)	<input checked="" type="checkbox"/> Aerosols, flammable (butane, propane)
Transport hazard class(es)	2.1  	2.1  	2.1 	2.1  	2.1 
Packing group	-	-	-	-	-
Environmental hazards	<input checked="" type="checkbox"/> Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

**DOT Classification** : ☒ This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.  
**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

## Section 14. Transport information

<b>TDG Classification</b>	: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail. <b><u>Explosive Limit and Limited Quantity Index</u></b> 1 <b><u>Passenger Carrying Road or Rail Index</u></b> 75 <b><u>Special provisions</u></b> 80, 107
<b>Mexico Classification</b>	: <b><u>Special provisions</u></b> 63, 190, 277, 327, 344
<b>IMDG</b>	: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b><u>Emergency schedules</u></b> F-D, S-U <b><u>Special provisions</u></b> 63, 190, 277, 327, 344, 381, 959
<b>IATA</b>	: The environmentally hazardous substance mark may appear if required by other transportation regulations. <b><u>Quantity limitation</u></b> 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. <b><u>Special provisions</u></b> A145, A167, A802
<b>Special precautions for user</b>	: <b>Transport within user's premises:</b> 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.
<b>Transport in bulk according to IMO instruments</b>	: Not available.

## Section 15. Regulatory information

<b>U.S. Federal regulations</b>	: <b>TSCA 8(a) CDR Exempt/Partial exemption:</b> Not determined <b>Clean Water Act (CWA) 307:</b> copper; zinc oxide <b>Clean Air Act (CAA) 112 regulated flammable substances:</b> butane; propane
<b>Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)</b>	: Not listed
<b>Clean Air Act Section 602 Class I Substances</b>	: Not listed
<b>Clean Air Act Section 602 Class II Substances</b>	: Not listed
<b>DEA List I Chemicals (Precursor Chemicals)</b>	: Not listed
<b>DEA List II Chemicals (Essential Chemicals)</b>	: Not listed
<b><u>SARA 302/304</u></b>	
<b><u>Composition/information on ingredients</u></b>	
No products were found.	
<b>SARA 304 RQ</b>	: Not applicable.
<b><u>SARA 311/312</u></b>	
<b>Classification</b>	: FLAMMABLE AEROSOLS - Category 1 GASES UNDER PRESSURE - Compressed gas SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
<b><u>Composition/information on ingredients</u></b>	

## Section 15. Regulatory information

Name	%	Classification
butane	≥25 - ≤50	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	≥10 - <20	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
propane	≥10 - ≤25	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas
calcium dihydroxide	≤5	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
copper	≤3	ACUTE TOXICITY (oral) - Category 4
aluminium powder (stabilised)	≤3	FLAMMABLE SOLIDS - Category 1 SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 2
Benzenesulfonic acid, di-C10-18-alkyl derivs., calcium salts	≤1	SKIN SENSITIZATION - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	copper	7440-50-8	≤3
	Aluminium powder (stabilized)	7429-90-5	≤3
	zinc oxide	1314-13-2	≤3
<b>Supplier notification</b>	copper	7440-50-8	≤3
	Aluminium powder (stabilized)	7429-90-5	≤3
	zinc oxide	1314-13-2	≤3

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

<b>Massachusetts</b>	: The following components are listed: BUTANE; PROPANE; CALCIUM HYDROXIDE; COPPER; ALUMINUM; ZINC OXIDE FUME
<b>New York</b>	: The following components are listed: Copper
<b>New Jersey</b>	: The following components are listed: BUTANE; PROPANE; CALCIUM HYDROXIDE; COPPER; ALUMINUM; ZINC OXIDE
<b>Pennsylvania</b>	: The following components are listed: BUTANE; PROPANE; CALCIUM HYDROXIDE; COPPER FUME; ZINC OXIDE FUME

### 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.

## Section 15. Regulatory information

### 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

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: All components are listed or exempted.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

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

Health	/	3
Flammability		4
Physical hazards		3

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
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method

### History

## Section 16. Other information

Date of printing	: 5/15/2025
Date of issue/Date of revision	: 5/12/2025
Date of previous issue	: 2/19/2025
Version	: 2.2
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods 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 UN = United Nations

References : Not available.

▣ Indicates information that has changed from previously issued version.

### Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.