SAFETY DATA SHEET

Brass Spray

Section 1. Identification

GHS product identifier : Brass Spray

Product code : 111020

Other means of identification : Not available.

Color : Gold.-Orange.

Product type : Aerosol.

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

Identified uses

Aerosol product

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

e-mail address of person responsible for this SDS : msds@weicon.de

Emergency telephone number (with hours of operation) : +1 202 464 2554
TRANSPORT (24 Hours/Day): +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 : AEROSOLS - Category 1
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H222, H229 - Extremely flammable aerosol. Pressurized 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.

Response : Not applicable.

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
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
ethyl acetate	Acetic acid ethyl ester; Acetic acid, ethyl ester; Acetic ether; Ethyl ethanoate; Ethyl ester of acetic acid; Acetic ester; Blend, consisting of ethyl alcohol, ethyl acetate and aldehydes, higher alcohols and water; blend, consisting of ethyl alcohol, ethyl acetate and water; vinegar naphtha; acetoxyethane; ethyl acetate ester	≥10 - ≤30	CAS: 141-78-6
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
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	≥5 - ≤10	CAS: 64742-95-6

Section 3. Composition/information on ingredients

	DISTILLATE; SOLVENT, AROMATIC PETROLEUM		
copper	copper flakes; Copper, powder; Copper Fume (as Cu); Copper Dust and mists (as Cu); COPPER DUSTS AND MISTS; Copper metal fumes; Copper metal dusts; Copper, fume; Copper , dusts & mists; Copper concentrate; Copper metal	≥5 - ≤10	CAS: 7440-50-8
Isobutane	Propane, 2-methyl-; Propane, 2-methyl- (isobutane); 2-Methylpropane; Propane, 2-methyl; Methyl-2 propane; Trimethylmethane; 1,1-Dimethylethane	≥0.1 - ≤1	CAS: 75-28-5

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 : 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
acetone	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 250 ppm. TWA 10 hours: 590 mg/m³. **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. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 2400 mg/m³. **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. **ACGIH TLV (United States, 1/2025)** A4. TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm.
ethyl acetate	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 400 ppm. TWA 10 hours: 1400 mg/m³. **CAL OSHA PEL (United States, 1/2025)** TWA 8 hours: 1400 mg/m³. TWA 8 hours: 400 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 400 ppm. TWA 8 hours: 1400 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 400 ppm. TWA 8 hours: 1400 mg/m³. **ACGIH TLV (United States, 1/2025)** TWA 8 hours: 400 ppm. TWA 8 hours: 1440 mg/m³.
propane	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 1000 ppm. TWA 10 hours: 1800 mg/m³. **CAL OSHA PEL (United States, 1/2025)** TWA 8 hours: 1800 mg/m³. TWA 8 hours: 1000 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 1800 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 1000 ppm. TWA 8 hours: 1800 mg/m³. **ACGIH TLV (United States, 1/2025)** Oxygen depletion [asphyxiant] , Explosive potential.
butane	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 800 ppm. TWA 10 hours: 1900 mg/m³. **CAL OSHA PEL (United States, 1/2025)** TWA 8 hours: 1900 mg/m³. TWA 8 hours: 800 ppm. **OSHA PEL 1989 (United States, 3/1989)**

Section 8. Exposure controls/personal protection

	TWA 8 hours: 800 ppm. TWA 8 hours: 1900 mg/m³. **ACGIH TLV (United States, 1/2025) [Butane]** Explosive potential. STEL 15 minutes: 1000 ppm.
Solvent naphtha (petroleum), light arom.	**OSHA PEL 1989 (United States, 3/1989) [Petroleum distillates (Naphtha)]** TWA 8 hours: 400 ppm. TWA 8 hours: 1600 mg/m³.
copper	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 1 mg/m³ (as Cu). Form: Dusts and Mists. **CAL OSHA PEL (United States, 1/2025)** TWA 8 hours: 0.1 mg/m³ (as Cu). **OSHA PEL (United States, 5/2018)** TWA 8 hours: 0.1 mg/m³. Form: Fume. TWA 8 hours: 1 mg/m³. Form: Dusts and Mists. **OSHA PEL 1989 (United States, 3/1989) [Copper Fume (as Cu)]** TWA 8 hours: 0.1 mg/m³ (as Cu). Form: Fume. **OSHA PEL 1989 (United States, 3/1989) [Copper Dust and mists (as Cu)]** TWA 8 hours: 1 mg/m³ (as Cu). Form: Dusts and Mists. **ACGIH TLV (United States, 1/2025) [copper dusts and mists]** TWA 8 hours: 1 mg/m³ (as Cu). Form: Dust and mist. **ACGIH TLV (United States, 1/2025) [copper fume]** TWA 8 hours: 0.2 mg/m³. Form: Fume.
Isobutane	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 800 ppm. TWA 10 hours: 1900 mg/m³. **ACGIH TLV (United States, 1/2025) [Butane]** Explosive potential. STEL 15 minutes: 1000 ppm.

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 : Gold.-Orange.

Odor : Characteristic.

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: Not applicable.

Fire point : >400°C (>752°F)

Evaporation rate : Not available.

Flammability : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Flammable in the presence of the following materials or conditions: heat.

Lower and upper explosion limit/flammability limit : Lower: 2.2%
Upper: 15%

Vapor pressure : 740 kPa (5550.5 mm Hg)

Relative vapor density : Not available.

Relative density : Not applicable.

Section 9. Physical and chemical properties

Density : 0.76 g/cm³ [20°C (68°F)]

Solubility in water : Not available.

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Heat of combustion : 25.32 kJ/g

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

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	Result
acetone	**Rat - Oral - LD50** 5800 mg/kg Toxic effects: Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor
ethyl acetate	**Rat - Oral - LD50** 5620 mg/kg
butane	**Rat - Inhalation - LC50 Vapor** 658000 mg/m³ [4 hours]
Isobutane	**Rat - Inhalation - LC50 Vapor** 658000 mg/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result

Section 11. Toxicological information

acetone	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Mild irritant** Amount/concentration applied: 395 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
acetone	**Human - Eyes - Mild irritant** Amount/concentration applied: 186300 ppm **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 10 uL **Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

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.

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
acetone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
ethyl acetate	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 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

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.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

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)
Brass Spray	6666.7	N/A	N/A	N/A	N/A
acetone	5800	N/A	N/A	N/A	N/A
ethyl acetate	5620	N/A	N/A	N/A	N/A
butane	N/A	N/A	N/A	658	N/A
copper	500	N/A	N/A	N/A	N/A
Isobutane	N/A	N/A	N/A	658	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
acetone	**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** Crustaceans - Scud - *Gammarus pulex* 6000 mg/l [48 hours] Effect: Mortality

Section 12. Ecological information

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
8000 ppm [96 hours]
Effect: Mortality

Acute - LC50 - Fresh water

Section 12. Ecological information

	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* - Larvae Age: 7 days 5 µg/l [42 days] Effect: Growth
ethyl acetate	**Acute - LC50 - Fresh water** Daphnia - Water flea - *Daphnia cucullata* Age: 11 days 154 mg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Indian catfish - *Heteropneustes fossilis* Size: 14.16 cm; Weight: 25.54 g 212.5 mg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Algae - Green algae - *Selenastrum sp.* 2500 mg/l [96 hours] Effect: Population **Chronic - NOEC - Fresh water** Fish - Fathead minnow - *Pimephales promelas* - Embryo Age: <24 hours 75.6 mg/l [32 days] Effect: Mortality **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: ≤24 hours 2.4 mg/l [21 days] Effect: Mortality
copper	**Acute - LC50 - Marine water** Crustaceans - Scud Order - *Amphipoda* - Adult Size: 9 mm 0.072 µg/l [48 hours] Effect: Mortality **Chronic - NOEC - Marine water** Algae - Diatom - *Nitzschia closterium* - Exponential growth phase 2.5 µg/l [72 hours] Effect: Population **Chronic - NOEC - Fresh water** Fish - Nile tilapia - *Oreochromis niloticus* - Juvenile (Fledgling, Hatchling, Weanling) Weight: 8.3 g 0.8 µg/l [6 weeks] Effect: Biochemistry **Acute - LC50 - Marine water** Fish - Mudskipper - *Periophthalmus waltoni* - Adult 7.56 µg/l [96 hours] Effect: Mortality **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* 2 µg/l [21 days] Effect: Mortality **Acute - IC50 - Fresh water**

Section 12. Ecological information

Algae - Green algae - *Raphidocelis subcapitata* - Exponential growth phase
13 µg/l [72 hours]
Effect: Population

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
acetone	-0.23	-	Low
ethyl acetate	0.68	30	Low
propane	1.09	-	Low
butane	1.09	-	Low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	High
Isobutane	1.09	-	Low

Mobility in soil

Soil/Water partition coefficient : 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.

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetone (I)	67-64-1	Listed	U002
Ethyl acetate (I)	141-78-6	Listed	U112

Section 14. Transport information

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	AEROSOLES	AEROSOLS (propane, butane)	Aerosols, flammable (propane, butane)
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	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.
Reportable quantity 28571.4 lbs / 12971.4 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), 2.7 (Marine pollutant mark).
The marine pollutant mark is not required when transported by road or rail.
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 : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-D, S-U
Special provisions 63, 190, 277, 327, 344, 381, 959

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
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) 307: copper; Zinc powder - zinc dust (stabilized)

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

TSCA 12(b) - Chemical export notification

Name	One time notification		Annual notification		
	4	5	5(f)	6	7
Zinc powder - zinc dust (stabilized)	Not listed	Not listed	Not listed	Listed	Not listed

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
acetone	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
ethyl acetate	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
propane	≥10 - ≤30	FLAMMABLE GASES - Category 1A GASES UNDER PRESSURE - Compressed gas
butane	≥10 - ≤30	FLAMMABLE GASES - Category 1A GASES UNDER PRESSURE - Compressed gas
Solvent naphtha (petroleum), light arom.	≥5 - ≤10	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
copper	≥5 - ≤10	ACUTE TOXICITY (oral) - Category 4
Isobutane	≥0.1 - ≤1	FLAMMABLE GASES - Category 1A GASES UNDER PRESSURE - Compressed gas

SARA 313

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	copper Zinc powder - zinc dust (stabilized)	7440-50-8 7440-66-6	≥5 - ≤10 ≥1 - ≤5
Supplier notification	copper Zinc powder - zinc dust (stabilized)	7440-50-8 7440-66-6	≥5 - ≤10 ≥1 - ≤5

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: ACETONE; ETHYL ACETATE; PROPANE; BUTANE; COPPER; ZINC

New York : The following components are listed: Acetone; Ethyl acetate; Copper; Zinc

New Jersey : The following components are listed: ACETONE; ETHYL ACETATE; PROPANE; BUTANE; PETROLEUM DISTILLATES; COPPER; ZINC

Pennsylvania : The following components are listed: 2-PROPANONE; ACETIC ACID ETHYL ESTER; PROPANE; BUTANE; COPPER FUME; ZINC COMPOUNDS

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)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

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

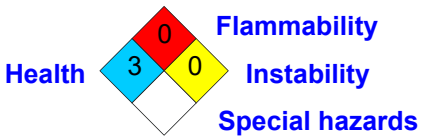
Hazardous Material Information System (U.S.A.)

Health	/	2
Flammability		4
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 : 2.1

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

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
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.