# **SAFETY DATA SHEET**

LV FINE BRIGHT SILVER

Section 1. Identifica	tion
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GHS product identifier	: LV FINE BRIGHT SILVER
Product code	: LV291
Other means of	: Not available.
identification	

Relevant identified uses of the substance or mixture and uses advised against Not applicable.

Supplier's details	:	ProLine Performance Products PO Box 1136 Olympia, WA 98507
Emergency telephone number (with hours of operation)	:	800-535-5053

### Section 2 Hazards identification

Section 2. Hazard	s 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 LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	<ul> <li>Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs.</li> </ul>
Precautionary statements	
Prevention	: Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

### Section 2. Hazards identification

Response	: IF exposed: Call a POISON CENTER or doctor. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
Storage	: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	: 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
	≥25 - ≤50 ≥10 - ≤25 ≤10 ≤5 ≤3 ≤0.3	98-56-6 67-64-1 79-20-9 110-43-0 123-86-4 872-50-4

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 as hazardous to health or the environment 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. If necessary, call a poison center or physician.
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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Flush contaminated skin with plenty of 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. Get medical attention. If necessary, call a poison center or physician. 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.

### Section 4. First aid measures

Most important symptoms/			
Potential acute health effe			
Eye contact	: Causes serious eye irritation.		
Inhalation	<ul> <li>Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.</li> </ul>		
Skin contact	: Causes damage to organs following a single exposure in contact with skin. Causes skin irritation.		
Ingestion	: Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.		
<u>Over-exposure signs/sym</u>	<u>ptoms</u>		
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 reduced fetal weight increase in fetal deaths skeletal malformations		
Skin contact	: Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations		
Ingestion	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations		
Indication of immediate me	dical attention and special treatment needed, if necessary		
Notes to physician	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.		
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 dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.

### Section 5. Fire-fighting measures

Specific hazards arising from the chemical	: Highly flammable liquid and vapor. 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.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides 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 : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from personnel entering. 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. If specialized clothing is required to deal with the spillage, take note of any information in For emergency responders . . Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency 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. 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. 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. 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

Protective measures :	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or
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### Section 7. Handling and storage

		any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
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 in a segregated and approved area. Store in original container protected 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. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. 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
4-chloro-a,a,a-trifluorotoluene	None.
acetone	ACGIH TLV (United States, 1/2023).
	TWA: 250 ppm 8 hours.
	STEL: 500 ppm 15 minutes.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 750 ppm 8 hours.
	TWA: 1800 mg/m <sup>3</sup> 8 hours.
	STEL: 1000 ppm 15 minutes.
	STEL: 2400 mg/m <sup>3</sup> 15 minutes.
	NIOSH REL (United States, 10/2020).
	TWA: 250 ppm 10 hours.
	TWA: 590 mg/m <sup>3</sup> 10 hours.
	OSHA PEL (United States, 5/2018).
	TWA: 1000 ppm 8 hours.
	TWA: 2400 mg/m <sup>3</sup> 8 hours.
	CAL OSHA PEL (United States, 5/2018).
	STEL: 1780 mg/m <sup>3</sup> 15 minutes.
	STEL: 750 ppm 15 minutes.
	C: 3000 ppm
	TWA: 1200 mg/m <sup>3</sup> 8 hours.
	TWA: 500 ppm 8 hours.
methyl acetate	ACGIH TLV (United States, 1/2023).
,	TWA: 200 ppm 8 hours.
	TWA: 606 mg/m <sup>3</sup> 8 hours.
	STEL: 250 ppm 15 minutes.
	STEL: 757 mg/m <sup>3</sup> 15 minutes.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 200 ppm 8 hours.
	TWA: 610 mg/m <sup>3</sup> 8 hours.
	STEL: 250 ppm 15 minutes.
	STEL: 760 mg/m <sup>3</sup> 15 minutes.
	NIOSH REL (United States, 10/2020).
	TWA: 200 ppm 10 hours.
	TWA: 610 mg/m <sup>3</sup> 10 hours.
	STEL: 250 ppm 15 minutes.
	STEL: 760 mg/m <sup>3</sup> 15 minutes.
	OSHA PEL (United States, 5/2018).
ate of issue/Date of revision : 6/12/2024	Date of previous issue : 2/19/2024 Version : 4.01 5.

# Section 8. Exposure controls/personal protection

N-Methyl pyrolidone       TWA: 200 ppm 8 hours. TWA: 610 mg/m <sup>1</sup> 8 hours.         TWA: 200 ppm 8 hours.       STEL: 760 mg/m <sup>1</sup> 15 minutes. TWA: 610 mg/m <sup>1</sup> 8 hours.         TWA: 200 ppm 8 hours.       TWA: 200 ppm 8 hours.         TWA: 200 ppm 8 hours.       TWA: 200 ppm 8 hours.         OSHA PEL (United States, 1/2023).       TWA: 200 ppm 8 hours.         OSHA PEL (United States, 1/2023).       TWA: 200 ppm 8 hours.         OSHA PEL (United States, 1/2020).       TWA: 465 mg/m <sup>2</sup> 8 hours.         TWA: 465 mg/m <sup>2</sup> 8 hours.       TWA: 465 mg/m <sup>2</sup> 8 hours.         TWA: 465 mg/m <sup>2</sup> 8 hours.       TWA: 465 mg/m <sup>2</sup> 8 hours.         TWA: 465 mg/m <sup>2</sup> 8 hours.       TWA: 465 mg/m <sup>2</sup> 8 hours.         TWA: 465 mg/m <sup>2</sup> 8 hours.       TWA: 465 mg/m <sup>2</sup> 8 hours.         TWA: 450 ppm 8 hours.       TWA: 450 mg/m <sup>2</sup> 8 hours.         TWA: 450 mg/m <sup>2</sup> 8 hours.       TWA: 450 mg/m <sup>2</sup> 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 50 ppm 16 minutes.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 16 minutes.       STEL: 200 ppm 16 minutes.         STEL: 200 ppm 16 minutes.       STEL: 300 ppm 16 minutes.         STEL: 300 ppm 16 minutes.       STEL: 300 ppm 16 minutes.         STEL: 500 ppm 16 minutes.       STEL: 500 ppm 16 minutes. <th></th> <th></th>		
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sTEL: 250 ppm 15 minutes.         TWA: 610 mg/m <sup>2</sup> 8 hours.         TWA: 200 ppm 8 hours.         TWA: 405 mg/m <sup>2</sup> 8 hours.         TWA: 405 mg/m <sup>2</sup> 8 hours.         TWA: 405 mg/m <sup>3</sup> 10 hours.         TWA: 400 ppm 8 hours.         TWA: 50 ppm 8 hours.         TWA: 100 mg/m <sup>3</sup> 15 minutes.         STEL: 900 mg/m <sup>3</sup> 15 minutes.		CAL OSHA PEL (United States, 5/2018).
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heptan-2-one       ACGIH TLV (United States, 1/2023), TWA: 200 ppm 8 hours, TWA: 233 mg/m 8 hours, TWA: 233 mg/m 8 hours, TWA: 233 mg/m 8 hours, TWA: 233 mg/m 8 hours, TWA: 100 ppm 8 hours, 		STEL: 250 ppm 15 minutes.
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n-butyl acetate       TWA: 100 ppm 8 hours.         TWA: 465 mg/m*8 hours.       TWA: 100 ppm 10 hours.         OSHA PEL (United States, 10/2020).       TWA: 100 ppm 8 hours.         TWA: 465 mg/m*10 hours.       OSHA PEL (United States, 5/2018).         TWA: 465 mg/m*10 hours.       TWA: 465 mg/m*8 hours.         OSHA PEL (United States, 5/2018).       TWA: 465 mg/m*8 hours.         TWA: 465 mg/m*8 hours.       TWA: 235 mg/m*8 hours.         CAL OSHA PEL (United States, 5/2018).       TWA: 236 mg/m*8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 710 mg/m*8 hours.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 16 minutes.         STEL: 200 ppm 16 hours.       TWA: 710 mg/m*10 hours.         TWA: 710 mg/m*10 hours.       TWA: 710 mg/m*10 hours.         STEL: 200 ppm 15 minutes.       STEL: 300 ppm 16 minutes.         STEL: 300 ppm 16 hours.       TWA: 710 mg/m*10 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         STEL: 300 ppm 15 minutes.       STEL: 300 ppm 16 hours. </td <td></td> <td></td>		
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NIOSH REL (United States, 10/2020).         TWA: 100 ppm 10 hours.         TWA: 465 mg/m <sup>3</sup> 10 hours.         TWA: 405 mg/m <sup>3</sup> 8 hours.         TWA: 100 ppm 8 hours.         TWA: 235 mg/m <sup>3</sup> 8 hours.         TWA: 245 mg/m <sup>3</sup> 8 hours.         TWA: 50 ppm 8 hours.         TWA: 150 ppm 8 hours.         TWA: 150 ppm 8 hours.         TWA: 150 ppm 8 hours.         STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.         NIOSH REL (United States, 10/2020).         TWA: 150 ppm 8 hours.         STEL: 200 ppm 15 minutes.         TWA: 150 ppm 8 hours.         CAL OSHA PEL (United States, 5/2018).         STEL: 200 ppm 15 minutes.         TWA: 150 ppm 15 minutes.         STEL: 200 ppm 15 minutes.		
N-Methyl pyrolidone       TWA: 100 ppm 10 hours. TWA: 465 mg/m <sup>2</sup> 10 hours.         N-Methyl pyrolidone       OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 405 mg/m <sup>2</sup> 8 hours.         n-butyl acetate       OSHA PEL (United States, 5/2018). TWA: 235 mg/m <sup>2</sup> 8 hours. TWA: 50 ppm 8 hours.         n-butyl acetate       OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 710 mg/m <sup>2</sup> 8 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m <sup>3</sup> 15 minutes.         NIOSH REL (United States, 1/2020). TWA: 150 ppm 16 hours. STEL: 950 mg/m <sup>3</sup> 15 minutes.         STEL: 950 mg/m <sup>3</sup> 15 minutes.         STEL: 950 mg/m <sup>3</sup> 16 minutes.         STEL: 950 ppm 15 minutes.         STEL: 950 ppm 15 minutes.         TWA: 100 mg/m <sup>3</sup> 8 hours.         STEL: 200 ppm 15 minutes.         STEL: 200 mg/m <sup>3</sup> 15 minutes. <td></td> <td></td>		
n-butyl acetateTWA: 466 mg/m² 10 hours. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 405 mg/m² 8 hours. TWA: 235 mg/m² 8 hours. TWA: 150 ppm 8 hours. TWA: 150 ppm 8 hours. STEL: 200 ppm 16 minutes. STEL: 200 ppm 8 hours. TWA: 150 ppm 8 hours. TWA: 150 ppm 8 hours. STEL: 200 ppm 16 minutes. STEL: 200 ppm 16 minutes. 		
N-Methyl pyrrolidoneOSHA PEL (United States, 5/2018). TWA: 145 mg/m³ 8 hours. TWA: 455 mg/m³ 8 hours. TWA: 235 mg/m³ 8 hours. TWA: 235 mg/m³ 8 hours. TWA: 50 ppm 8 hours. TWA: 50 ppm 8 hours. TWA: 50 ppm 8 hours. STEL: 200 ppm 15 minutes. STEL: 500 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. STEL: 500 ppm 15 minutes. TWA: 710 mg/m³ 8 hours. TWA: 710 mg/m³ 8 hours. TWA: 50 ppm 8 hours. TWA: 50 ppm 8 hours. STEL: 200 ppm 15 minutes. STEL: 200 ppm 15 minutes. TWA: 50 ppm 8 hours. STEL: 200 ppm 15 minutes. STEL: 200 ppm 8 hours. STEL: 200 ppm 8 hours. STEL: 200 ppm 8 hours. STEL: 200 ppm 15 minutes. STEL: 200 ppm 8 hours.N-Methyl pyrrolidoneOARS WEEL (United States, 4/2022). Absorbed through skin. TWA: 15 ppm 8 hours. STEL: 200 mg/m³ 15 minutes. STEL: 200 mg/m³ 15 minute		
n-butyl acetate       TWA: 405 pmg/n <sup>3</sup> 8 hours.         CAL OSHA PEL (United States, 5/2018), TWA: 50 pm 8 hours.         TWA: 150 ppm 16 minutes.         STEL: 200 ppm 15 minutes.         STEL: 200 ppm 16 hours.         TWA: 150 ppm 10 hours.         TWA: 150 ppm 10 hours.         TWA: 150 ppm 10 hours.         STEL: 200 ppm 15 minutes.         STEL: 200 ppm 16 minutes.         STEL: 200 ppm 16 minutes.         STEL: 200 ppm 16 minutes.         STEL: 200 ppm 15 minutes.         TWA: 710 mg/m <sup>3</sup> 10 hours.         TWA: 710 mg/m <sup>3</sup> 8 hours.         TWA: 710 mg/m <sup>3</sup> 8 hours.         CAL OSHA PEL (United States, 5/2018).         STEL: 200 ppm 15 minutes.         TWA: 150 ppm 8 hours.         TWA: 150 ppm 8 hours.         TWA: 150 ppm 8 hours.         STEL: 200 pm 15 minutes.         TWA: 150 ppm 8 hours.         STEL: 200 ppm 15 minutes.         TWA: 150 ppm 8 hours.         STEL: 120 mg/m <sup>3</sup> 15 mi		
n-butyl acetate       TWA: 465 mg/m <sup>2</sup> 8 hours.         rWA: 235 mg/m <sup>2</sup> 8 hours.       TWA: 235 mg/m <sup>2</sup> 8 hours.         rWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         rWA: 150 ppm 8 hours.       TWA: 150 ppm 8 hours.         rWA: 150 ppm 8 hours.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         NIOSH REL (United States, 10/2020).       TWA: 150 ppm 10 hours.         TWA: 150 ppm 8 hours.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         STEL: 350 ppm 15 minutes.       STEL: 350 ppm 8 hours.         CAL OSHA PEL (United States, 1/2023). [Butyl acetates]       STEL: 150 ppm 15 minutes.         STEL: 500 ppm 15 minutes.       TWA: 150 ppm 8 hours.         CAL OSHA PEL (United States, 5/2018).       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       TWA: 150 ppm 8 hours.         CAL OSHA PEL (United States, 5/2018).       STEL: 300 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       STEL: 300 ppm 15 minutes.         STEL: 300 ppm 15 minutes.       STEL: 300 ppm 8 hours.         CAL OSHA PEL (United States, 4/2022).       Absorbed through skin.         TWA: 150 ppm 8 hours.       STEL: 30 ppm 15 minutes.		
Image: constraint of the state is a state in the state is a s		
n-butyl acetate       TWA: 235 mg/m³ 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 710 mg/m³ 8 hours.       TWA: 710 mg/m³ 8 hours.         TWA: 710 mg/m³ 8 hours.       STEL: 200 ppm 15 minutes.         STEL: 900 mg/m³ 15 minutes.       STEL: 900 mg/m³ 16 hours.         TWA: 710 mg/m³ 10 hours.       TWA: 710 mg/m³ 10 hours.         TWA: 710 mg/m³ 10 hours.       TWA: 710 mg/m³ 10 hours.         STEL: 900 mg/m³ 15 minutes.       STEL: 900 mg/m³ 15 minutes.         OSHA PEL (United States, 10/2020).       TWA: 710 mg/m³ 10 hours.         TWA: 710 mg/m³ 10 hours.       STEL: 200 ppm 15 minutes.         STEL: 900 mg/m³ 15 minutes.       STEL: 900 mg/m³ 15 minutes.         OSHA PEL (United States, 1/2023). [Butyl acetates]       STEL: 150 ppm 8 hours.         CAL OSHA PEL (United States, 5/2018).       STEL: 950 mg/m³ 15 minutes.         TWA: 710 mg/m³ 8 hours.       STEL: 950 mg/m³ 15 minutes.         TWA: 150 ppm 8 hours.       STEL: 950 mg/m³ 15 minutes.         STEL: 950 mg/m³ 15 minutes.       STEL: 950 mg/m³ 15 minutes.         STEL: 950 mg/m³ 15 minutes.       STEL: 950 mg/m³ 15 minutes.         TWA: 150 ppm 8 hours.       STEL: 200 ppm 15 minutes.         STEL: 950 mg/m³ 15 minutes.       STEL: 950 mg/m³ 15 minutes.         STEL: 120 mg/m³ 8 hours.       STEL: 120 mg/m³ 15 minutes. </td <td></td> <td></td>		
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n-butyl acetate       OSHA PEL 1989 (United States, 3/1989).         TWA: 150 ppm 8 hours.       TWA: 710 mg/m³ 8 hours.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         NIDSH REL (United States, 10/2020).       TWA: 710 mg/m³ 16 minutes.         TWA: 150 ppm 10 hours.       TWA: 710 mg/m³ 16 minutes.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         STEL: 205 mg/m³ 16 minutes.       STEL: 200 ppm 15 minutes.         STEL: 205 mg/m³ 16 hours.       TWA: 150 ppm 8 hours.         TWA: 150 ppm 16 minutes.       STEL: 360 mg/m³ 16 minutes.         STEL: 200 ppm 15 minutes.       TWA: 150 ppm 16 minutes.         STEL: 100 mg/m³ 8 hours.       TWA: 50 ppm 8 hours.         TWA: 50 ppm 8 hours.       TWA: 50 ppm 8 hours.         TWA: 710 mg/m³ 8 hours.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       TWA: 50 ppm 8 hours.         TWA: 150 ppm 8 hours.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 15 minutes.       TWA: 50 ppm 8 hours.         STEL: 200 ppm 15 minutes.       STEL: 200 ppm 15 minutes.         STEL: 200 ppm 16 minutes.       TWA: 150 ppm 8 hours.         STEL: 200 ppm 16 minutes.       STEL: 200 ppm 16 minutes.         STEL: 200 ppm 16 minutes.       STEL: 200 ppm 16 minutes.         STEL: 30 ppm 8 hours.		TWA: 235 mg/m <sup>3</sup> 8 hours.
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TWA: 4 mg/m <sup>3</sup> 8 hours.		Absorbed through skin.
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### Section 8. Exposure controls/personal protection

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 meas	<u>ires</u>
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. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
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 antistatic 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.

# Section 9. Physical and chemical properties

Date of issue/Date of revision	: 6/12/2024	Date of previous issue	: 2/19/2024	Version : 4.01	7/13
Lower and upper explosive (flammable) limits	Lower: 0.9 Upper: 16				
Flammability (solid, gas)	: Not availa				
Evaporation rate	: Not availa	ble.			
Flash point	: Closed cu	: Closed cup: 19.999°C (68°F)			
Boiling point	: 55 to 139.	: 55 to 139.1°C (131 to 282.4°F)			
Melting point	: Technicall	y not possible to measure			
рН	: Not applic	able.			
Odor threshold	: Not availa	ble.			
Odor	: Not availa	ble.			
Color	: Aluminum				
Physical state	: Liquid.				
<u>Appearance</u>					

### Section 9. Physical and chemical properties

	•	
Vapor pressure	: 4.3 kPa (32.4 mm Hg)	
Vapor density	: Not available.	
Density	: 1.137 g/cm <sup>3</sup>	
Solubility(ies)	4	
Media cold water		Result Soluble
Solubility in water	: Not available.	
Partition coefficient: n- octanol/water	: Not applicable.	
Auto-ignition temperature	: 393°C (739.4°F)	
Decomposition temperature	: Not applicable.	
Viscosity	: Not available.	
Flow time (ISO 2431)	: Not available.	

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). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.			
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials			
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products shou not be produced.	ld		

### Section 11. Toxicological information

#### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
4-chloro-α,α,α-trifluorotoluene	LD50 Oral	Rat	13 g/kg	-
acetone	LC50 Inhalation Vapor	Rat	21 mg/l	4 hours
	LD50 Dermal	Rabbit	2001 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
methyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
-	LD50 Oral	Rat	>5 g/kg	-
heptan-2-one	LC50 Inhalation Vapor	Rat	16.8 mg/l	4 hours
	LD50 Dermal	Rabbit	10332 mg/kg	-
	LD50 Oral	Rat	1600 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapor	Rat	21.1 mg/l	4 hours
-	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
N-Methyl pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-

### Section 11. Toxicological information

1	-				1
Product/ingredient name	Result	Species	Score	Exposure	Observation
acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
				mg	
methyl acetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-
				mg	
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
				mg	
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	
heptan-2-one	Skin - Mild irritant	Rabbit	-	24 hours 14	-
				mg	
N-Methyl pyrrolidone	Eyes - Moderate irritant	Rabbit	-	100 mg	-

#### **Sensitization**

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### **Classification**

Product/ingredient name	OSHA	IARC	NTP
4-chloro- $\alpha$ , $\alpha$ , $\alpha$ -trifluorotoluene	-	2B	-

#### **Reproductive toxicity**

Not available.

#### **Teratogenicity**

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
4-chloro-α,α,α-trifluorotoluene	Category 3	-	Respiratory tract irritation
acetone	Category 3	-	Narcotic effects
methyl acetate	Category 1	-	-
	Category 3		Narcotic effects
heptan-2-one	Category 3	-	Narcotic effects
n-butyl acetate	Category 3	-	Narcotic effects
N-Methyl pyrrolidone	Category 3	-	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

#### Information on the likely : Not available.

#### routes of exposure Potential acute health effects

# Section 11. Toxicological information

	•
Eye contact	: Causes serious eye irritation.
Inhalation	<ul> <li>Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.</li> </ul>
Skin contact	: Causes damage to organs following a single exposure in contact with skin. Causes skin irritation.
Ingestion	: Causes damage to organs following a single exposure if swallowed. 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 reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

#### 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	1	Not available.
<u>Long term exposure</u>		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Potential chronic health eff	ect	<u>s</u>
Not available.		
General	:	No known significant effects or critical hazards.
Carcinogenicity	:	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	1	May damage the unborn child.
<b>Developmental effects</b>	:	No known significant effects or critical hazards.
Fertility effects	:	May damage fertility.

### Section 11. Toxicological information

Numerical measures of toxicity

#### Acute toxicity estimates

Route

Oral Dermal Inhalation (vapors) ATE value

37669.16 mg/kg 17859.44 mg/kg 395.53 mg/l

### Section 12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses waterways.

### 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

	DOT Classification	TDG Classification	Mexico Classification	IMDG	ATA
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3		3
Packing group	Ш	П	II	II	П
Environmental hazards	No.	No.	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional inform DOT Classificati TDG Classificati	ion : <u>Repo</u> sibility shipp (repo ion : Prod	bed in quantities less ortable quantity) trans uct classified as per f	than the product rep portation requiremer the following sections	g [4707.3 gal / 17819. ortable quantity are n hts. s of the Transportation	ot subject to the RQ
IMDG		ds Regulations: 2.18- marine pollutant marl	· · ·	n transported in sizes	of ≤5 L or ≤5 kg.

 Date of issue/Date of revision
 : 6/12/2024
 Date of previous issue
 : 2/19/2024
 Version
 : 4.01
 11/13

### Section 14. Transport information

ΙΑΤΑ	:	The environmentally hazardous substance mark may appear if required by other transportation regulations.
Special precautions for user	:	<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.

#### Transport in bulk according : Not available. to IMO instruments

The actual shipping description for this product may vary based several factors including, but not limited to, the volume of material, size of the container, mode of transport and use of exemptions or exceptions found in the applicable regulations. The information provided in Section 14 is one possible shipping description for this product. Consult your shipping specialist or supplier for appropriate assignment information.

### Section 15. Regulatory information

Clean Air Act Section 112 : Listed (b) Hazardous Air Pollutants (HAPs)

SARA 304 RQ	: 15686414.8 lbs / 7121632.3 kg [1654649.3 gal / 6263528.9 L]
<u>SARA 311/312</u>	
Classification	<ul> <li>FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</li> </ul>

#### SARA 313

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

#### Inventory list

Canada

: At least one component is not listed.

United States : All components are listed or exempted.

### Section 16. Other information

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

Health	*	4
Flammability		3
Physical hazards		0

### Section 16. Other information

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.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

<u>History</u>	
Date of printing	: 6/12/2024
Date of issue/Date of revision	: 6/12/2024
Date of previous issue	: 2/19/2024
Version	: 4.01
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 = International Air Transport Association IBC = 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

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.