SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA HCS 2024 and Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended

Issuing Date 03-Nov-2025 **Revision date** 03-Nov-2025 **Revision Number** 1

1. Identification

Product identifier

Product Name Copper Naphthenate Treated Wood

Other means of identification

Synonyms CU-Nap treated wood

Recommended use of the chemical and restrictions on use

Recommended use Railroad ties
Lumber
Poles
Timber

Restrictions on use None known

Details of the supplier of the safety data sheet

Manufacturer Address
Stella-Jones Corporation
1000 Cliff Mine Road Suite 500
Pittsburgh, PA 15275
Phone: 412-325-0202
Fax: 800-424-9300

Stella-Jones Corporation
1640 East Marc
Tacoma, WA 98421
Phone: 253-572-3033

Emergency telephone number

Emergency telephone CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

2. Hazard(s) identification

Classification of the substance or mixture

Combustible dust	Yes
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Category 3 Target organ effects: Respiratory irritation.	

Label elements

Danger

Hazard statements
May form combustible dust concentrations in air.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Avoid breathing dust.
In case of inadequate ventilation wear respiratory protection.
Contaminated work clothing should not be allowed out of the workplace.
Use only outdoors or in a well-ventilated area.
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
Eyes
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 and attention.
Skin
IF ON SKIN: Wash with plenty of water and soap.
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice and attention.
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed.
Precautionary Statements - Disposal
Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Hazards classified under paragraph (d)(1)(ii) of 1910.1200
No information available.

Other information
Toxic to aquatic life with long lasting effects. This product may be regulated, have exposure limits or other information identified as the following: Wood dusts-hard wood, Wood dust, all soft and hard woods, Wood dusts (all other wood dusts), Wood dusts, birch, mahogany, teak, walnut, Mineral spirits (64475-85-0).

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Synonyms CU-Nap treated wood

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Wood/Wood Dust	-	80 - 100	-	-
Fuels, diesel, no. 2	68476-34-6	10 - 30	-	-
Copper naphthenate	1338-02-9	1 - 5	-	-

Chemical Additions
The above values may vary slightly due to the variability of treatment and the natural variability of wood.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact DO NOT rub until skin is free of sawdust and preservative material. If wood splinters are injected under skin, get medical attention immediately. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.

Ingestion May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Erythema (skin redness). May cause redness and tearing of the eyes. Burning sensation.

Effects of Exposure May cause cancer.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam.

Large Fire Water spray, fog or regular foam.

Unsuitable extinguishing media None known based on information supplied.

Specific hazards arising from the chemical Explosion risk: Avoid generation of dust. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. May cause sensitization by inhalation. Product is or contains a sensitizer. May cause sensitization by skin contact. Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance.

Hazardous combustion products Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Prevent dust cloud. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Methods for cleaning up Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Avoid prolonged or repeated contact with skin. Dry powders can build static electricity charges when subjected to the friction of transfer and

mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing dust. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. When possible, conduct dust-generating activities outdoors to avoid indoor accumulations of airborne dust from treated wood. Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. Do not use in direct contact with aluminum. Use hot-dip galvanized, stainless steel or other fasteners, hardware and sheet products as recommended by the hardware manufacturer. Regular cleaning of equipment, work area and clothing is recommended.

General hygiene considerations Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended. Take off contaminated clothing and wash it before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store outdoors. While at the job site, cover with plastic tarps, allowing for adequate air circulation. Avoid excessive heat and ignition sources. Store away from incompatible materials. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Wood/Wood Dust -	TWA: 10 mg/m³ (inhalable particles, recommended) TWA: 3 mg/m³ (respirable particles, recommended)	TWA: 15 mg/m³ (total dust) TWA: 5 mg/m³ (respirable fraction)	TWA: 1 mg/m³
Fuels, diesel, no. 2 68476-34-6	TWA: 100 mg/m³ total Hydrocarbons inhalable fraction and vapor pSk	-	-
Copper naphthenate 1338-02-9	TWA: 1 mg/m³ Cu dust and mist	-	TWA: 1 mg/m³; Cu dust and mist IDLH: 100 mg/m³ Cu dust and mist

Chemical name	Alberta	British Columbia	Ontario	Quebec
Fuels, diesel, no. 2 68476-34-6	TWA: 100 mg/m³;	TWA: 100 mg/m³; inhalable; inhalable aerosol and vapour Sk	TWA: 100 mg/m³; inhalable fraction and vapor dSk	TWAEV: 100 mg/m³; inhalable fraction and vapour Sd

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Fuels, diesel, no. 2	TWA: 100 mg/m³; inhalable fraction and	TWA: 100 mg/m³; inhalable fraction and	TWA: 100 mg/m³; inhalable fraction and	TWA: 100 mg/m³; inhalable fraction and

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
	vapor pSk	vapor pSk	vapor pSk	vapor pSk

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Fuels, diesel, no. 2	TWA: 100 mg/m^3; vapour STEL: 150 mg/m^3; vapour Sk	TWA: 100 mg/m^3; inhalable fraction and vapor	TWA: 100 mg/m^3; vapour STEL: 150 mg/m^3; vapour pSd	-

Note See section 16 for terms and abbreviations.
Other information on limit values Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Biological occupational exposure limits

Appropriate engineering controls

Engineering controls Showers, eyewash stations, and ventilation systems. Apply technical measures to comply with the occupational exposure limits.
Provide local exhaust ventilation. Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable leather work gloves. When handling treated wood, wear chemical resistant gloves.

Skin and body protection Wear appropriate chemical resistant clothing. When handling treated wood: Wear washable or disposable coveralls or long-sleeved shirt and long pants.

Respiratory protection When sawing and machining treated wood, wear a dust mask. If the applicable TLVs and/or PELs are exceeded, use canister or cartridge respirators, which are MSHA/NIOSH-approved, with high-efficiency particulate filters.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance
Physical state Solid
Color Green, Blue, Gray, Natural color
Odor (includes odor threshold) No information available

Property	Values	Remarks • Method
Melting point / freezing point		Not applicable
Boiling point (or initial boiling point or boiling range)		Not applicable
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits	40 g/m³	
Flash point		Not applicable
Autoignition temperature		No data available
Decomposition temperature		No data available
SADT (°C)		No data available
pH		No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		Not applicable
Dynamic viscosity		Not applicable
Solubility		No data available
Water solubility	Insoluble	
Partition coefficient n-octanol/water (log value)		No data available
Vapor pressure (includes evaporation rate)		Not applicable
Evaporation rate		Not applicable
Density and/or relative density	42 - 52 lb/ft³	
Bulk density		No data available
Liquid Density	Not applicable	No data available
Relative vapor density		Not applicable
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

Other information

Molecular weight	No information available
VOC content	No information available
Softening point	No information available

Information with regard to physical hazard classes

Explosives	
Explosive properties	No information available
Oxidizing properties	No information available

10. Stability and reactivity

Reactivity Combustible dust.

Chemical stability MAY FORM COMBUSTIBLE DUST- AIR MIXTURE.

Possibility of hazardous reactions Dust can form an explosive mixture with air.

Conditions to avoid Excessive heat. Heating in air. Generation/formation of dust. Incompatible materials.

Incompatible materials Strong acids.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause sensitization in susceptible persons. (based on components).

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Causes skin irritation. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Specific test data for the substance or mixture is not available. May cause additional effects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Erythema (skin redness). May cause redness and tearing of the eyes. Burning sensation.

Acute toxicity

Numerical measures of toxicity

The following ATE values have been calculated for the mixture:

ATEmix (oral)	> 5,000 mg/kg
ATEmix (dermal)	> 5,000 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Fuels, diesel, no. 2	-	> 2000 mg/kg (Rabbit)	= 3.6 mg/L (Rat) 4 h = 5.4 mg/L (Rat) 4 h
Copper naphthenate	= 2 g/kg (Rat)	> 2000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer. Untreated wood dust or saw dust: The International Agency for Research on Cancer (IARC)classifies untreated wood dust as a Group I human carcinogen. The classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures of untreated wood dust. Epidemiological studies have been reported on carcinogenic risks of employment in the furniture making industry, the carpentry industry, and the lumber and sawmill industry. IARC has reviewed these studies and reports that there is sufficient evidence that nasal carcinomas have been caused by employment in

the furniture-making industry where the excess risk is associated with exposure to untreated wood dust or sawdust from hardwood species. IARC concluded that epidemiological data are not sufficient to make a definite assessment of the carcinogenic risk of employment as a carpenter or worker in a lumber mill or sawmill.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Wood/Wood Dust -	-	Group 1 - Carcinogenic to humans	Known human carcinogen	Present
Fuels, diesel, no. 2 68476-34-6	A3 - Confirmed animal carcinogen (with unknown relevance to humans)	Group 3 - Not classifiable as to its carcinogenicity to humans	-	-
Copper naphthenate 1338-02-9	-	Group 2A - Probably carcinogenic to humans	-	Present

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects Chronic exposure to wood dusts can result in pneumonitis, and coughing, wheezing, fever and the other signs and symptoms associated with chronic bronchitis.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Aquatic ecotoxicity

Component Information

Chemical name	Fish	Crustacea	Algae/aquatic plants	Toxicity to microorganisms
Fuels, diesel, no. 2	LC50: =21mg/L (96h, Rainbow Trout)	-	-	-

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of contents in accordance with federal, state and local regulations. Treated wood should not be burned in open fires or in stoves, fireplaces or residential boilers, because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and federal regulations.
Contaminated packaging	Dispose of in accordance with federal, state and local regulations.
California waste information	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories
Contact supplier for inventory compliance status

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Copper naphthenate - 1338-02-9	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances

Copper naphthenate 1338-02-9	-	X	-	-

CAA (Clean Air Act)
This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Copper naphthenate 1338-02-9	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA **Health hazards** 2 **Flammability** 1 **Instability** 0 **Special hazards** -
HMIS **Health hazards** 2 * **Flammability** 0 **Physical hazards** 0 **Personal protection** X
Chronic Hazard Star Legend ** = Chronic Health Hazard*
Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Key or legend to abbreviations and acronyms used in the safety data sheet
List may include phrases which are not applicable to this product

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency

GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NTP	National Toxicology Program (United States)
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma

Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Key literature references and sources for data used to compile the SDS
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
U.S. Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

Issuing Date 03-Nov-2025

Revision date 03-Nov-2025

Revision Note Initial Release.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet