

SAFETY DATA SHEET

Section 1. Identification

Product identifier VANLUBE® 829
Product code 53319
Chemical identity 1,3,4-thiadiazole-2(3H)-thione,5,5-dithiobis
Other means of identification 5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione
Product type Powder.
Material uses Lubricant Additive

Supplier/Manufacturer Vanderbilt Chemicals, LLC
30 Winfield Street
Norwalk, CT 06855
1-203-853-1400

Emergency telephone number Chemtrec: 1-800-424-9300
Outside US: +1-703-527-3887

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 COMBUSTIBLE DUSTS
SKIN SENSITIZATION - Category 1B

GHS label elements

Hazard pictograms



Signal word

Warning

Hazard statements

May cause an allergic skin reaction.
May form combustible dust concentrations in air.

Precautionary statements

Prevention

Wear protective gloves. Avoid breathing dust or mist. Contaminated work clothing must not be allowed out of the workplace.

Response

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

Storage

Not applicable.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.

Section 2. Hazard(s) identification

Hazards not otherwise classified None known.

Section 3. Composition and ingredient information

Substance/mixture Mixture
Chemical identity 1,3,4-thiadiazole-2(3H)-thione,5,5-dithiobis
Other means of identification 5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione

Ingredient name	CAS number	% by weight
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione	72676-55-2	97 - 99
petroleum process oil, <3.0% DMSO extractable material	64742-52-5	1 - 3

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.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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 irritation occurs.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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 Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. 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 adverse health effects persist or are severe. 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

Section 4. First aid measures

Eye contact	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	May cause an allergic skin reaction.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: irritation redness
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data.

Indication of immediate medical 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. 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	In case of fire, use water spray (fog), foam, dry chemical or CO ₂ .
Unsuitable extinguishing media	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

Specific hazards arising from the chemical

Hazardous thermal decomposition products	May form explosible dust-air mixture if dispersed. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
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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 5. Fire-fighting measures

Remark(s) Dust suspended in air in critical proportions and in the presence of an ignition source presents an explosion hazard. As with any dry material, pouring or allowing to free-fall or to be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or of any flammable materials which may come in contact with the material or its container.

Dust Explosion Data

- Dust explosion category: Classified as St1 class dust (Weak explosion characteristic).
- Maximum pressure of explosion (Pmax)(bar): $8.0 \pm 10\%$
- Minimum ignition energy (dust cloud)(E min)(mJ): $10 < MIE < 30$, Est. = 23
- Dust-specific constant (Kst) (bar. m/s): $173 \pm 12\%$

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. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. 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** Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** 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. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and

Section 7. Handling and storage

Advice on general occupational hygiene

bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

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. 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 and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione petroleum process oil, <3.0% DMSO extractable material	None. OSHA PEL (United States) TWA: 5 mg/m ³ . ACGIH TLV (United States) STEL: 10 mg/m ³ . NIOSH REL (United States, 10/2020) [OIL MIST MINERAL] TWA 10 hours: 5 mg/m ³ . Form: Mist. STEL 15 minutes: 10 mg/m ³ . Form: Mist.

Appropriate engineering controls

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

Environmental exposure controls

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

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls and personal protection

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: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles. Recommended: 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. Recommended: lab coat

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.

Personal protective equipment (Pictograms)



Section 9. Physical and chemical properties

Appearance

Physical state	Solid. [Powder.]
Color	Yellow.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point	153°C (307.4°F)
Boiling point	Not available.
Flash point	Not applicable.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not applicable.
Vapor pressure	Not available.
Vapor density	Not applicable.
Density	2.09 g/cm ³

Section 9. Physical and chemical properties

Relative density 2.09

Solubility(ies)

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water Not available.

Partition coefficient: n-octanol/water Not applicable.

Auto-ignition temperature Not applicable.

Decomposition temperature Not available.

SADT Not available.

Viscosity Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): 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 the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.

Incompatible materials Reactive or incompatible with the following materials:
oxidizing materials

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

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione petroleum process oil, <3.0% DMSO extractable material	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	2.18 mg/l (Based on tests of similar materials)	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg (Based on tests of similar materials)	-
	LD50 Oral	Rat	>5000 mg/kg (Based on tests of similar materials)	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
petroleum process oil, <3.0% DMSO extractable material	Eyes - Not irritant (Based on tests of similar materials)	Rabbit	-	-	-
	Skin - Not irritant (Based on tests of similar materials)	Rabbit	-	-	-

Conclusion/Summary

Skin

5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione: Non-irritating to the skin. (Rabbit)

Eyes

5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione: Non-irritating to the eyes. (Rabbit)

Sensitization

Product/ingredient name	Route of exposure	Species	Result
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione	skin	Mouse	Sensitizing
petroleum process oil, <3.0% DMSO extractable material	skin	Guinea pig	Not sensitizing (Based on tests of similar materials)

Mutagenicity

Product/ingredient name	Test	Experiment	Result
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Positive
	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 487	Experiment: In vitro Subject: Mammalian-Animal	Negative
petroleum process oil, <3.0% DMSO extractable material	OECD 471	Experiment: In vitro Subject: Bacteria	Positive (Based on tests of similar materials)
	OECD 474	Experiment: In vivo	Negative (Based on

Section 11. Toxicological information

Subject: Mammalian-Animal

tests of similar materials)

Carcinogenicity

Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione	-	-	-	Rat	Oral: 300 mg/kg	47 days

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact

May be harmful in contact with skin. May cause an allergic skin reaction.

Ingestion

May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

Adverse symptoms may include the following:
irritation
redness

Inhalation

Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact

Adverse symptoms may include the following:
irritation
redness

Ingestion

No specific data.

Section 11. Toxicological information

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.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione	Sub-acute NOAEL Oral	Rat	1000 mg/kg	14 days

General Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	2551.02 mg/kg
Dermal	2500 mg/kg

Other information

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione	Acute EC10 9.4 mg/l	Algae	72 hours
	Acute EC10 3.1 mg/l	Micro-organism	3 hours
	Acute EC50 20 mg/l	Algae	72 hours
	Acute EC50 3 mg/l	Daphnia	48 hours
	Acute EC50 >454 mg/l	Fish	96 hours
	Acute NOEC 1 mg/l	Micro-organism	3 hours
	Acute EC50 >10000 mg/l (Based on tests of similar materials)	Daphnia	48 hours
petroleum process oil, <3.0% DMSO extractable material	Acute LC50 >100 mg/l (Based on tests of similar materials)	Fish	96 hours

Section 12. Ecological information

	Acute NOEL >100 mg/l (Based on tests of similar materials)	Algae	72 hours
	Acute NOEL >1000 mg/l (Based on tests of similar materials)	Daphnia	48 hours
	Acute NOEL >100 mg/l (Based on tests of similar materials)	Fish	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione petroleum process oil, <3.0% DMSO extractable material	OECD 301B	0 % - Not readily - 28 days	-	-
	-	2 to 4 % - Not readily - 28 days (Based on tests of similar materials)	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
5,5'-dithiobis-1,3,4-thiadiazole-2(3H)-thione petroleum process oil, <3.0% DMSO extractable material	-	-	Not readily
	-	-	Not readily (Based on tests of similar materials)

Bioaccumulative potential

Not available.

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. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (5,5'-dithiobis-1,3,4-thiadiazole-2 (3H)-thione)	9	III	 	Remarks Marine pollutant
IMDG Class	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (5,5'-dithiobis-1,3,4-thiadiazole-2 (3H)-thione)	9	III	 	Remarks Marine pollutant
IATA-DGR Class	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (5,5'-dithiobis-1,3,4-thiadiazole-2 (3H)-thione)	9	III	 	-

PG* : Packing group

Section 15. Regulatory information

U.S. Federal regulations

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

TSCA 12(b) - Chemical export notification

Not applicable.

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

Clean Air Act Section 602 Class I Substances Not listed

Clean Air Act Section 602 Class II Substances Not listed

DEA List I Chemicals (Precursor Chemicals) Not listed

DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304

Composition/information on ingredients

Validation date:

4/1/2026

Date of previous issue:

5/28/2019

12/14

Section 15. Regulatory information

No products were found.

SARA 304 RQ Not applicable.

SARA 311/312

Classification COMBUSTIBLE DUSTS
SKIN SENSITIZATION - Category 1B

Composition/information on ingredients

Name	%	Classification
5,5'-dithiobis-1,3,4-thiadiazole-2 (3H)-thione	97 - 99	SKIN SENSITIZATION - Category 1B

State regulations

Massachusetts The following components are listed: OIL MIST, MINERAL
New York None of the components are listed.
New Jersey None of the components are listed.
Pennsylvania None of the components are listed.
California Prop. 65 None of the components are listed.

Inventory list

Australia All components are listed or exempted.
Canada All components are listed or exempted.
China All components are listed or exempted.
Japan All components are listed or exempted.
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.
United States All components are active or exempted.

Section 16. Any other relevant information

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

Health	/	2
Flammability		1
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.

Section 16. Any other relevant information

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



History

Date of printing	4/1/2026
Date of issue/Date of revision	4/1/2026
Date of previous issue	5/28/2019
Version	6

Key to abbreviations

ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

References

Not available.

Information contact

Vanderbilt Global Services, LLC
Corporate Risk Management
1-203-295-2143

Visit www.vanderbiltchemicals.com for more information.

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