

SAFETY DATA SHEET

GHS
United States

Section 1. Product and company identification

Product name	VANLUBE® W-324	<u>In case of emergency</u>
Code	51155	1-203-853-1400
Supplier/Manufacturer	Vanderbilt Chemicals, LLC 30 Winfield Street Norwalk, CT 06855	Chemtrec: 1-800-424-9300 Outside US: +1-703-527-3887
Synonym	dialkylammonium tungstate in oil	
Material uses	Lubricant additives	
Product type	Liquid.	

Section 2. Hazards identification

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

Classification of the substance or mixture SKIN SENSITIZATION - Category 1A

GHS label elements

Hazard pictograms



Signal word Warning

Hazard statements May cause an allergic skin reaction.

Precautionary statements

Prevention Wear protective gloves: > 8 hours (breakthrough time): neoprene. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.

Response IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage Not applicable.

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	% by weight
amines, bis(C11-14-branched and linear alkyl), tungstates petroleum process oil, <3.0% DMSO extractable material	1159919-46-6 64742-52-5	30 - 60 40 - 70

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.
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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	May cause an allergic skin reaction.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	No specific data.
Inhalation	No specific data.
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

Section 4. First aid measures

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill Stop leak if without risk. Move containers from spill area. 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.

Section 6. Accidental release measures

Large spill

Stop leak if without risk. Move containers from spill area. 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). 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 vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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 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. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
petroleum process oil, <3.0% DMSO extractable material	<p>ACGIH TLV (United States, 6/2013). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist</p> <p>ACGIH TLV (United States). STEL: 10 mg/m³</p> <p>OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours.</p>

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

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

Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures

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

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. 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. > 8 hours (breakthrough time): neoprene

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

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Personal protective equipment (Pictograms)



Section 9. Physical and chemical properties

Appearance

Physical state	Liquid.
Color	Straw to Black.
Odor	Not available.
Odor threshold	Not available.
pH	6.5 to 6.9 (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Melting point	<-80°C (<-112°F) (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Boiling point	Not available.
Flash point	Closed cup: >140°C (>284°F) [Pensky-Martens.]
Burning time	Not applicable.
Burning rate	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	0.0000005 kPa (0.00000375 mm Hg) [room temperature] (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Vapor density	Not available.
Density	1.05 g/cm ³ [25°C (77°F)]
Relative density	1.05
Solubility	Insoluble in the following materials: cold water.
Solubility in water	0.00000948 g/l (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Partition coefficient: n-octanol/water	>8 (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Auto-ignition temperature	349 to 352°C (660.2 to 665.6°F) (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Decomposition temperature SADT	>250°C (>482°F) (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Viscosity	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	No specific data.
Incompatible materials	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
petroleum process oil, <3.0% DMSO extractable material	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
amines, bis(C11-14-branched and linear alkyl), tungstates	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Not available.

Conclusion/Summary

Skin

Amines, bis(C11-14-branched and linear alkyl), tungstates: Non-irritating to the skin based on data from in vitro skin irritation test using a human skin model. The skin irritation potential was tested through topical application for 15 minutes, after which a 44 hour post-incubation period was allowed.

Eyes

Amines, bis(C11-14-branched and linear alkyl), tungstates: Non-irritating to the eye based on data from the Bovine Corneal Opacity and Permeability Test (BCOP). The eye irritation potential was tested through topical application for 10 minutes (+ or - 1 minute), after which an in vitro irritancy score (IVIS) of 2.6 was given.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
amines, bis (C11-14-branched and linear alkyl), tungstates	skin	Mouse	Sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
amines, bis (C11-14-branched and linear alkyl), tungstates	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

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.

Potential acute health effects

Section 11. Toxicological information

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	May cause an allergic skin reaction.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

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

Short term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Long term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

Not available.

General	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
amines, bis (C11-14-branched and linear alkyl), tungstates	Acute EC50 0.00088 mg/l	Algae	72 hours
	Acute EC50 0.019 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Acute NOEC 0.00015 mg/l	Algae	72 hours
	Acute NOEL 100 mg/l	Fish	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
amines, bis (C11-14-branched and linear alkyl), tungstates	OECD 301B	31 % - Not readily - 14 days	23.1 mg/l	Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
amines, bis (C11-14-branched and linear alkyl), tungstates	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
amines, bis (C11-14-branched and linear alkyl), tungstates	>8	-	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Other adverse effects No known significant effects or critical hazards.

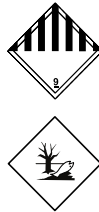
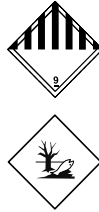
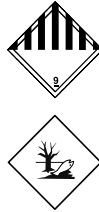
Section 13. Disposal considerations

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.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

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	UN3082	Environmentally hazardous substance, liquid, n.o.s. (amines, bis(C11-14-branched and linear alkyl), tungstates)	9	III		Remarks Marine pollutant
IMDG Class	UN3082	Environmentally hazardous substance, liquid, n.o.s. (amines, bis(C11-14-branched and linear alkyl), tungstates)	9	III		Remarks Marine pollutant
IATA-DGR Class	UN3082	Environmentally hazardous substance, liquid, n.o.s. (amines, bis(C11-14-branched and linear alkyl), tungstates)	9	III		Remarks Marine pollutant

PG* : Packing group

Section 15. Regulatory information

[United States inventory \(TSCA 8b\)](#) All components are listed or exempted.

[U.S. Federal regulations](#)

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

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](#)

Section 15. Regulatory information

No products were found.

SARA 304 RQ Not applicable.

SARA 311/312

Classification SKIN SENSITIZATION - Category 1A

Composition/information on ingredients

Name	%	Classification
amines, bis(C11-14-branched and linear alkyl), tungstates	30 - 60	SKIN SENSITIZATION - Category 1A

State regulations

Massachusetts

The following components are listed: OIL MIST, MINERAL

New York

None of the components are listed.

New Jersey

The following components are listed: MINERAL OIL (UNTREATED and MILDLY TREATED)

Pennsylvania

None of the components are listed.

California Prop. 65

None of the components are listed.

International regulations

Australia inventory (AICS)

Not determined.

Canada inventory

At least one component is not listed in DSL but all such components are listed in NDSL.

China inventory (IECSC)

Not determined.

Europe inventory

At least one component is not listed in EINECS but all such components are listed in ELINCS.

Please contact your supplier for information on the inventory status of this material.

EINECS: European Inventory. This product contains the following chemical(s) for which one or more Pre-Market Notifications have been filed. Should you wish to export products containing this product into an EC country, contact Product Risk Manager at Vanderbilt Global Services, LLC at 203-295-2143 for more information.

Chemical name: amines, bis(C11-14-branched and linear alkyl), tungstates
CAS no. 1159919-46-6

Japan inventory (ENCS)

Not determined.

Korea inventory (KECI)

All components are listed or exempted.

Should you wish to export products containing this product into Korea, contact Product Risk Manager at Vanderbilt Global Services, LLC at 203-295-2143 for more information.

New Zealand Inventory of Chemicals (NZIoC)

Not determined.

Philippines inventory (PICCS)

Not determined.

Taiwan Chemical Substances Inventory (TCSI)

All components are listed or exempted.

Section 16. Other information

Hazardous Material Identification 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. 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.)



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.

History

Date of printing	9/20/2019
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Version	2.04

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.

Notice to reader

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Section 16. Other information