

# SAFETY DATA SHEET

 GHS  
 United States

## Section 1. Product and company identification

<b>Product name</b>	<b>VANLUBE® 289</b>	<a href="#"><u>In case of emergency</u></a>
<b>Code</b>	50490	1-203-853-1400
<b>Supplier/Manufacturer</b>	Vanderbilt Chemicals, LLC 30 Winfield Street Norwalk, CT 06855	Chemtrec: 1-800-424-9300 Outside US: +1-703-527-3887
<b>Synonym</b>	Not available.	
<b>Material uses</b>	Lubricant additives	
<b>Product type</b>	Liquid.	

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
<b>Classification of the substance or mixture</b>	Not classified.  Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 100%
<b><u>GHS label elements</u></b>	
<b>Signal word</b>	No signal word.
<b>Hazard statements</b>	No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>	
<b>Prevention</b>	Not applicable.
<b>Response</b>	Not applicable.
<b>Storage</b>	Not applicable.
<b>Disposal</b>	Not applicable.
<b>Hazards not otherwise classified</b>	None known.

## Section 3. Composition/information on ingredients

**Substance/mixture**                      Mixture

Ingredient name	CAS number	% by weight
amide borate complex	-	85 - 95
petroleum process oil, <3.0% DMSO extractable material	64742-52-5	5 - 15

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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.
<b>Skin contact</b>	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	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.
<b>Specific treatments</b>	No specific treatment.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	None known.

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

## Section 5. Fire-fighting measures

### Hazardous thermal decomposition products

Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
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. 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.

#### Large spill

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

#### 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.

## Section 7. Handling and storage

### 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.

When stored at low temperatures some solidification may occur. The product may be re-liquified by heating to 60 - 80°C and mixing prior to use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
petroleum process oil, <3.0% DMSO extractable material	<p><b>ACGIH TLV (United States, 3/2012).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>NIOSH REL (United States, 1/2013).</b> TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist</p> <p><b>ACGIH TLV (United States).</b> STEL: 10 mg/m<sup>3</sup></p> <p><b>OSHA PEL (United States, 6/2010).</b> TWA: 5 mg/m<sup>3</sup> 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.

### 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. 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.

##### 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

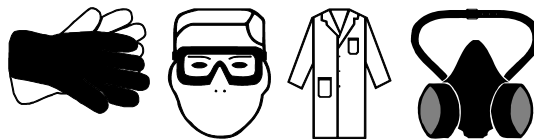
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls/personal protection

### 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. Recommended: Vapor and dust respirator.

### Personal protective equipment (Pictograms)



## Section 9. Physical and chemical properties

### Appearance

Physical state	Liquid.
Color	Clear gold to amber.
Odor	Mineral Oil
Odor threshold	Not available.
pH	Not available.
Melting point	-24.3°C (-11.7°F)
Boiling point	Not available.
Flash point	Closed cup: 175.2°C (347.4°F) [Pensky-Martens.]
Burning time	Not applicable.
Burning rate	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Density	0.9883 g/cm <sup>3</sup> [15.6°C (60.1°F)]
Relative density	0.9851
Solubility	Insoluble in the following materials: cold water.
Solubility in water	<0.0109 g/l
Partition coefficient: n-octanol/water	>4.69
Auto-ignition temperature	375°C (707°F)
Decomposition temperature	>350°C (>662°F)
SADT	Not available.
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.

## Section 10. Stability and reactivity

<b>Conditions to avoid</b>	No specific data.
<b>Incompatible materials</b>	No specific data.
<b>Hazardous decomposition products</b>	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
VANLUBE® 289	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-

#### Irritation/Corrosion

Not available.

#### Conclusion/Summary

<b>Skin</b>	Non-irritating to the skin. (Rabbit)
<b>Eyes</b>	Non-irritating to the eyes. (Rabbit)

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
VANLUBE® 289	skin	Mouse	Not sensitizing

#### Mutagenicity

Product/ingredient name	Test	Experiment	Result
VANLUBE® 289	OECD 474	Experiment: In vivo	Negative
	OECD 471	Subject: Mammalian-Animal Subject: Bacteria	Negative

**Conclusion/Summary** Under OECD Guideline No. 473 "In vitro Mammalian Chromosome Aberration Test", VANLUBE® 289 induced structural chromosome aberrations in V79 cells (Chinese hamster cell line) in vitro. Therefore, VANLUBE® 289 is considered to be clastogenic in this chromosome aberration test in the presence of S9 mix.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

## Section 11. Toxicological information

### 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: Dermal, Inhalation.

### Potential acute health effects

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	May be harmful in contact with skin.
<b>Ingestion</b>	May be harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

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

#### Short term exposure

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Not available.

#### Long term exposure

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Not available.

#### Potential chronic health effects

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
VANLUBE® 289	Sub-acute LD50 Oral	Rat	>1000 mg/kg	28 days

<b>General</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

### Numerical measures of toxicity

## Section 11. Toxicological information

### Acute toxicity estimates

Not available.

### Other information

Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
VANLUBE® 289	NOEC >1000 mg/l	Micro-organism	3 hours
	Acute EC50 >100 mg/l	Algae	72 hours
	Acute EC50 87 mg/l	Daphnia	24 hours
	Acute EC50 56 mg/l	Daphnia	48 hours
	Acute LC50 42 mg/l	Fish	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
VANLUBE® 289	OECD 301 F	81 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
VANLUBE® 289	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
VANLUBE® 289	>4.69	-	high

### Mobility in soil

#### Soil/water partition coefficient (K<sub>oc</sub>)

Not available.

#### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. 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 13. Disposal considerations

## 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	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

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) PAIR: DIETHANOLAMINE

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

TSCA 8(d) H and S data reporting: DIETHANOLAMINE: 1989

### [SARA 302/304](#)

#### [Composition/information on ingredients](#)

No products were found.

SARA 304 RQ Not applicable.

### [SARA 311/312](#)

Classification Not applicable.

#### [Composition/information on ingredients](#)

No products were found.

### [State regulations](#)

Massachusetts	None of the components are listed.
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.

### [International regulations](#)

[Australia inventory \(AICS\)](#) All components are listed or exempted.

[Canada inventory](#) All components are listed or exempted.

[China inventory \(IECSC\)](#) All components are listed or exempted.

## Section 15. Regulatory information

### 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: amide borate complex

### Japan inventory (ENCS)

All components are listed or exempted.

### Korea inventory (KECI)

All components are listed or exempted.

### New Zealand Inventory of Chemicals (NZIoC)

All components are listed or exempted.

### Philippines inventory (PICCS)

All components are listed or exempted.

### 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

5/16/2019

## Section 16. Other information

<b>Validation date</b>	5/16/2019
<b>Date of previous issue</b>	5/8/2019
<b>Version</b>	4
<b>Key to abbreviations</b>	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](http://www.vanderbiltchemicals.com) for more information.

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