



BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 7/9/2014 Revision date: 2/1/2023 Supersedes: 6/12/2017 Version: 5.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)
Product code : DLM-1315

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Cambridge Isotope Laboratories, Inc.
50 Frontage Rd
01810
ANDOVER, MA, 01810
USA
T 1-800-322-1174
cilsales@isotope.com - www.isotope.com

1.4. Emergency telephone number

Emergency number : 1-703-741-5970
Chemtrec 1-800-424-9300 24 hours

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Substances and mixtures which in contact with water emit flammable gases Category 1	H260	In contact with water releases flammable gases which may ignite spontaneously
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Carcinogenicity Category 2	H351	Suspected of causing cancer (Dermal, Inhalation, oral)
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor
H260 - In contact with water releases flammable gases which may ignite spontaneously
H302 - Harmful if swallowed

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Precautionary statements (GHS US)	<p>H315 - Causes skin irritation H318 - Causes serious eye damage H335 - May cause respiratory irritation H351 - Suspected of causing cancer (Dermal, Inhalation, oral)</p> <p>: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks P223 - Do not allow contact with water. P231+P232 - Handle under inert gas. Protect from moisture. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof electrical, lighting, ventilating equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P261 - Avoid breathing fume, mist, spray, vapors. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, face protection, protective clothing, protective gloves. P301+P312 - If swallowed: Call a doctor if you feel unwell. P302+P352 - If on skin: Wash with plenty of water. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a doctor. P312 - Call a doctor if you feel unwell. P321 - Specific treatment (see Hazardous component(s) for labeling on this label). P330 - Rinse mouth. P332+P313 - If skin irritation occurs: Get medical advice/attention. P335+P334 - Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical to extinguish. P402+P404 - Store in a dry place. Store in a closed container. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.</p>
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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	GHS US classification
Tetrahydrofuran unlabeled	CAS-No.: 109-99-9	98.14	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335
BORANE-D3 (D, 98%)	CAS-No.: 13763-62-7	1.86	Flam. Liq. 2, H225 Water-react. 1, H260 Skin Irrit. 2, H315 Eye Irrit. 2A, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area. Suspected of causing cancer (if inhaled, in contact with skin, if swallowed).
First-aid measures after inhalation	: If not breathing, give artificial respiration. Get medical advice/attention if you feel unwell. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash off with soap and plenty of water. Consult a physician. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Central nervous system depression, Cough, chest pain, Difficulty in breathing, Exposure to high airborne concentrations can cause anesthetic effects. The chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/effects	: Suspected of causing cancer (in contact with skin, if inhaled, if swallowed).
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide.

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5.2. Specific hazards arising from the chemical

- Fire hazard : Highly flammable liquid and vapor. In contact with water releases flammable gases which may ignite spontaneously.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Use personal protective equipment as required. Avoid breathing dust, vapors, mist, spray. Evacuate unnecessary personnel. Evacuate danger area. Ensure adequate air ventilation. Special attention should be given to low areas/pits where flammable vapors can accumulate.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Do not discharge the product into the environment.

6.3. Methods and material for containment and cleaning up

- For containment : 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. 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 or vermiculite or diatomaceous earth and place in container for disposal according to local regulations. 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. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, fume, gas, mist, spray, vapors, Aerosols. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Wash hands, forearms and face thoroughly after handling.

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7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof ventilating equipment.
Storage conditions	: Store refrigerated (-5°C to 5°C). Protect from light.
Incompatible materials	: Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm USA. ACGIH Threshold Limit Values (TLV)
ACGIH OEL STEL [ppm]	100 ppm USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	Central Nervous System impairment,Upper Respiratory Tract irritation,Kidney damage,Confirmed animal carcinogen with unknown relevance to humans,Danger of cutaneous absorption
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	590 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. The value in mg/m ³ is approximate.
OSHA PEL TWA [2]	200 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants.
OSHA PEL STEL [1]	735 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL STEL [2]	250 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL C	590 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL C [ppm]	200 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	590 mg/m ³ USA. NIOSH Recommended Exposure Limits
NIOSH REL TWA [ppm]	200 ppm USA. NIOSH Recommended Exposure Limits
NIOSH REL STEL	735 mg/m ³ USA. NIOSH Recommended Exposure Limits
NIOSH REL STEL [ppm]	250 ppm USA. NIOSH Recommended Exposure Limits
BORANE-D3 (D, 98%) (13763-62-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm USA. ACGIH Threshold Limit Values (TLV)
ACGIH OEL STEL [ppm]	100 ppm USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	Central Nervous System impairment,Upper Respiratory Tract irritation,Kidney damage,Confirmed animal carcinogen with unknown relevance to humans,Danger of cutaneous absorption
TETRAHYDROFURAN UNLABELED (109-99-9)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm USA. ACGIH Threshold Limit Values (TLV)

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TETRAHYDROFURAN UNLABELED (109-99-9)	
ACGIH OEL STEL [ppm]	100 ppm USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	Central Nervous System impairment, Upper Respiratory Tract irritation, Kidney damage, Confirmed animal carcinogen with unknown relevance to humans, Danger of cutaneous absorption
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	590 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. The value in mg/m ³ is approximate.
OSHA PEL TWA [2]	200 ppm USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants.
OSHA PEL STEL [1]	735 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL STEL [2]	250 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL C	590 mg/m ³ California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL C [ppm]	200 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	590 mg/m ³ USA. NIOSH Recommended Exposure Limits
NIOSH REL TWA [ppm]	200 ppm USA. NIOSH Recommended Exposure Limits
NIOSH REL STEL	735 mg/m ³ USA. NIOSH Recommended Exposure Limits
NIOSH REL STEL [ppm]	250 ppm USA. NIOSH Recommended Exposure Limits

8.2. Appropriate engineering controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Respiratory protection of the dependent type.

Hand protection:
Wear suitable protective clothing and gloves
Eye protection:
Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection:
Choose body protection according to the amount and concentration of the dangerous substance at the work place. Handle with gloves. Wear suitable protective clothing
Respiratory protection:
When appropriate, use NIOSH/CEN approved respirator.

Personal protective equipment symbol(s):



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid, clear.
Color	: Colorless
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: ether-like odor
Odor threshold	: No data available
pH	: No data available
Melting point	: -108 °C (-162.4 °F)
Freezing point	: No data available
Boiling point	: 65 – 67 °C (149.0 - 152.6 °F)
Flash point	: -17 °C (1.4 °F) - closed cup
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: 152 hPa (114.0 mmHg) at 15.0 °C (59.0 °F)
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 0.89 g/cm ³
Molecular mass	: 72.11 g/mol
Solubility	: Water: 100 %
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: 321 °C (610 °F)
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: 1.8 – 11.8 % (V)
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapor is explosive with air above.

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Direct sunlight.

10.5. Incompatible materials

No additional information available

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10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)

LD50 oral rat	2880 mg/kg
LC50 Inhalation - Rat [ppm]	21000 ppm 3 h
ATE US (oral)	1681.272 mg/kg body weight

TETRAHYDROFURAN UNLABELED (109-99-9)

LD50 oral rat	1650 mg/kg
LD50 dermal	> 2000 mg/kg - Rat
LC50 Inhalation - Rat	14.7 mg/l - 6h; Remarks: Material may be irritating to mucous membranes and upper respiratory tract.
ATE US (oral)	1650 mg/kg body weight
ATE US (vapors)	14.7 mg/l/4h
ATE US (dust, mist)	14.7 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

TETRAHYDROFURAN UNLABELED (109-99-9)

pH	Ca. 7
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Serious eye damage/irritation : Causes serious eye damage.

TETRAHYDROFURAN UNLABELED (109-99-9)

pH	Ca. 7
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Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer (Dermal, Inhalation, oral).
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.

TETRAHYDROFURAN UNLABELED (109-99-9)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

TETRAHYDROFURAN UNLABELED (109-99-9)

Viscosity, kinematic	0.518 mm ² /s at 25 °C (77 °F); 0.403 mm ² /s at 50 °C (122 °F)
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Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Central nervous system depression, Cough, chest pain, Difficulty in breathing, Exposure to high airborne concentrations can cause anesthetic effects. The chemical, physical, and toxicological properties have not been thoroughly investigated.
Symptoms/effects	: Suspected of causing cancer (in contact with skin, if inhaled, if swallowed).
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)	
LC50 - Fish [1]	2160 mg/l Pimephales promelas (fathead minnow) - 96 h
ErC50 algae	3700 mg/l Algae - 192 h
TETRAHYDROFURAN UNLABELED (109-99-9)	
LC50 - Fish [1]	2160 mg/l - Pimephales promelas (fathead minnow)- 96 h
EC50 - Crustacea [1]	382 mg/l - Daphnia magna (Water flea)- 24 h
ErC50 algae	3700 mg/l Growth inhibition IC50 - Algae - 192 h

12.2. Persistence and degradability

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)	
Persistence and degradability	Biodegradability Remarks: Expected to be biodegradable.
TETRAHYDROFURAN UNLABELED (109-99-9)	
Biodegradation	(OECD Test Guideline 301); Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

12.3. Bioaccumulative potential

TETRAHYDROFURAN UNLABELED (109-99-9)	
Partition coefficient n-octanol/water (Log Pow)	0.46

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : Disposal must be done according to official regulations.

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SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA No	: UN3399
UN-No. (TDG)	: UN3399
UN-No. (IMDG)	: 3399
UN-No. (IATA)	: 3399

14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Organometallic substance, liquid, water-reactive, flammable
Proper Shipping Name (TDG)	: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Proper Shipping Name (IMDG)	: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Proper Shipping Name (IATA)	: Organometallic substance, liquid, water-reactive, flammable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	: 4.3 (3)
Hazard labels (DOT)	: 4.3, 3



TDG

Transport hazard class(es) (TDG)	: 4.3 (3)
Hazard labels (TDG)	: 4.3, 3



IMDG

Transport hazard class(es) (IMDG)	: 4.3 (3)
Hazard labels (IMDG)	: 4.3, 3



IATA

Transport hazard class(es) (IATA)	: 4.3 (3)
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Hazard labels (IATA) : 4.3, 3



14.4. Packing group

Packing group (DOT) : I
Packing group (TDG) : I
Packing group (IMDG) : I
Packing group (IATA) : I

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN3399
DOT Special Provisions (49 CFR 172.102) : T13 - 6 mm Normal..... Prohibited
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
TP7 - The vapor space must be purged of air by nitrogen or other means.
TP36 - For material assigned this portable tank special provision, portable tanks used to transport such material may be equipped with fusible elements in the vapor space of the portable tank
TP47 - The 2.5 year internal examination may be waived or substituted by other test methods or inspection procedures specified by the competent authority or its authorized body, provided that the portable tank is dedicated to the transport of the organometallic substances to which this tank special provision is assigned. However this examination is required when the conditions of §180.605(f) are met.
W31 - Non-bulk packagings must be hermetically sealed.
DOT Packaging Non Bulk (49 CFR 173.xxx) : 201
DOT Packaging Bulk (49 CFR 173.xxx) : 244
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 1 L
DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other : 13 - Keep as dry as reasonably practicable,40 - Stow "clear of living quarters",52 - Stow "separated from" acids,148 - In addition: from flammable gases and flammable liquids when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained.

TDG

UN-No. (TDG) : UN3399

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TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.
ERAP Index	: 1000
Explosive Limit and Limited Quantity Index	: 0
Excepted quantities (TDG)	: E0
Passenger Carrying Ship Index	: Forbidden
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: Forbidden
Emergency Response Guide (ERG) Number	: 138
IMDG	
Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P402
Packing provisions (IMDG)	: PP31
Tank instructions (IMDG)	: T13
Tank special provisions (IMDG)	: TP2, TP7, TP36, TP41
EmS-No. (Fire)	: F-G - FIRE SCHEDULE Golf - WATER-REACTIVE SUBSTANCES
EmS-No. (Spillage)	: S-N - SPILLAGE SCHEDULE November - SUBSTANCES REACTING VIGOROUSLY WITH WATER
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW2, H1
Segregation (IMDG)	: SG26, SG35, SG72
Flash point (IMDG)	: '
Properties and observations (IMDG)	: Flammable liquid. Reacts violently with moisture, water and acids evolving flammable gas.
MFAG-No	: 138
IATA	
PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: 494
CAO max net quantity (IATA)	: 1L
Special provision (IATA)	: A3, A803
ERG code (IATA)	: 4FW

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)

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SECTION 15: Regulatory information

15.1. US Federal regulations

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
BORANE-D3 (D, 98%)	13763-62-7	Not present	-	
TETRAHYDROFURAN UNLABELED	109-99-9	Not present	-	

BORANE-D3 (D, 98%) (13763-62-7)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard

TETRAHYDROFURAN UNLABELED (109-99-9)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)
Listed on the Canadian DSL (Domestic Substances List)

BORANE-D3 (D, 98%) (13763-62-7)
Listed on the Canadian DSL (Domestic Substances List)

TETRAHYDROFURAN UNLABELED (109-99-9)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)
CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)

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15.3. US State regulations

BORANE-D3 (D, 98%) (1 MOLAR IN THF) (+0.005M NABD4)

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
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Component	State or local regulations
BORANE-D3 (D, 98%)(13763-62-7)	U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - New Jersey - Right to Know Hazardous Substance List
TETRAHYDROFURAN UNLABELED(109-99-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Revision date

: 02/01/2023

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of H-phrases	
H225	Highly flammable liquid and vapor
H260	In contact with water releases flammable gases which may ignite spontaneously
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H351	Suspected of causing cancer

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.