

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations SDS ID: 9112511 Issue date: 5/1/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification	
Product form Substance name CAS-No. Product code Formula Synonyms Other means of identification 1.2. Recommended use and restrictions or	 Substance 2,2-Dimethylpropylmagnesium choride, 1M in DEE 13132-23-5 9112-5-11 C5H11CIMg Neopentylmagnesium chloride, 1M in DEE MFCD00061550
Use of the substance/mixture	: Laboratory chemicals
	Manufacture of substances Scientific research and development
1.3. Supplier	
SynQuest Laboratories, Inc. Inc.	
P.O. Box 309 Alachua, FL, Alachua, 32615	
United States of America	
T (386) 462-0788 - F (386) 462-7097	
info@synquestlabs.com - www.synquestlabs.com	
1.4. Emergency telephone number	

Emergency number

: (844) 523-4086 (3E Company - Account 10069)

SECTION 2: Hazard(s) identification

2.1. Classification of the subst	tance or mixture
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GHS US classification

Unstable explosives	H200	Unstable explosive
Flammable liquids Category 2	H225	Highly flammable liquid and vapor
1 0,	HZZ3	Fighty harmable liquid and vapor
Substances and mixtures which in contact with water emit flammable	H261	In contact with water releases flammable gas
gases Category 2		
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Skin corrosion/irritation Category 1	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Carcinogenicity Category 2	H351	Suspected of causing cancer
Specific target organ toxicity - Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Specific target organ toxicity – Single exposure, Category 3,	H335	May cause respiratory irritation
Respiratory tract irritation		
Full text of H statements : see section 16		

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2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)

Signal word (GHS US) Hazard statements (GHS US)

Precautionary statements (GHS US)



- : H200 Unstable explosive
 - H225 Highly flammable liquid and vapor
 - H261 In contact with water releases flammable gas
 - H302 Harmful if swallowed
 - H314 Causes severe skin burns and eye damage
 - H318 Causes serious eye damage
 - H335 May cause respiratory irritation
 - H336 May cause drowsiness or dizziness
- H351 Suspected of causing cancer
- : 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.
 - 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/ventilating/lighting equipment
 - P242 Use only non-sparking tools.
 - P243 Take precautionary measures against static discharge.
 - P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 - P264 Wash skin 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 protective gloves/protective clothing/eye protection/face protection.
- P301+P312 If swallowed: Call a POISON CENTER or doctor/ physician if you feel unwell
- P301+P330+P331 If swallowed: rinse mouth. Do NOT induce vomiting.
- 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 POISON CENTER or doctor/ physician
- P321 Specific treatment (see supplemental first aid instructions on this label) P330 - Rinse mouth.
- P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. P363 - Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish P372 Explosion risk in case of fire.
- P373 DO NOT fight fire when fire reaches explosives.
- P380 Evacuate area.
- P401 Store in accordance with local regulations on explosives.
- 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 an approved waste disposal plant

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2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Reacts violently with water. May form explosive peroxides.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	GHS US classification
2,2-Dimethylpropylmagnesium choride, 1M in DEE	CAS-No.: 13132-23-5	13 – 23	Unst. Expl., H200 Flam. Liq. 2, H225 Water-react. 2, H261 Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 Carc. 2, H351 STOT SE 3, H336 STOT SE 3, H335
Diethyl ether	CAS-No.: 60-29-7	77 – 87	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336 STOT SE 3, H335

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

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures	
4.1. Description of first aid measures	
First-aid measures general	: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Move the affected personnel away from the contaminated area.
First-aid measures after inhalation	 Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Get immediate medical advice/attention.
First-aid measures after skin contact	: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get immediate medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get immediate medical advice/attention.
4.2. Most important symptoms and eff	fects (acute and delayed)
Symptoms/effects	: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.
Symptoms/effects after inhalation	: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures 5.1. Suitable (and unsuitable) extinguishing media		
5.2. Specific hazards arising from th	e chemical	
Fire hazard Explosion hazard	 Thermal decomposition generates: Carbon oxides. Hydrogen chloride. Magnesium oxide. Risk of explosion if heated under confinement. Use water spray or fog for cooling exposed containers. May form flammable/explosive vapor-air mixture. 	
5.3. Special protective equipment an	nd precautions for fire-fighters	
Firefighting instructions Protection during firefighting	 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection". 	

SECTION 6: Accidental release measures 6.1. Personal precautions, protective equipment and emergency procedures		
6.1.1. For non-emergency personnel		
Emergency procedures	: Only qualified personnel equipped with suitable protective equipment may intervene.	
6.1.2. For emergency responders		
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".	
Emergency procedures	: Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level. Consider the risk of potentially explosive atmospheres. Eliminate every possible source of ignition.	

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
For containment	: Stop leak if safe to do so. Dike for recovery or absorb with appropriate material.	
Methods for cleaning up	: Take up large spills with pump or vacuum and finish with dry chemical absorbent. Use explosion- proof equipment. Take up small spills with dry chemical absorbent. Sweep or shovel spills into appropriate container for disposal. Ventilate area.	
Other information	: For disposal of solid materials or residues refer to section 13 : "Disposal considerations".	
6.4. Reference to other sections		

No additional information available

6.2. Environmental precautions

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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 Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe fumes, mist, spray, vapors. Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from ignition sources (including static discharges). Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools. Hygiene measures Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or : smoke when using this product. Always wash hands after handling the product. 7.2. Conditions for safe storage, including any incompatibilities : Comply with applicable regulations. May form explosive peroxides. Dry residue is explosive. **Technical measures** Storage conditions Keep container closed when not in use. Keep away from ignition sources. Keep contents under · inert gas. Moisture sensitive. Incompatible materials Refer to Section 10 on Incompatible Materials. Maximum storage period 6 months Test for peroxide formation at six month intervals and before distiallation. Storage area Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,2-Dimethylpropylmagnesium choride, 1M in DEE (13132-23-5)		
No additional information available		
Diethyl ether (60-29-7)		
USA - ACGIH - Occupational Exposur	e Limits	
Local name	Ethyl ether	
ACGIH OEL TWA [ppm]	400 ppm	
ACGIH OEL STEL [ppm]	500 ppm	
Remark (ACGIH)	CNS impair; URT irr	
USA - OSHA - Occupational Exposure Limits		
Local name	Ethyl ether	
OSHA PEL TWA [1]	1200 mg/m ³	
OSHA PEL TWA [2]	400 ppm	
USA - IDLH - Occupational Exposure Limits		
IDLH [ppm]	1900 ppm (10% LEL)	

Appropriate engineering controls

: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

protective gloves. 29 CFR 1910.138: Hand Protection

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Eye protection:

Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection

Personal protective equipment symbol(s):



Other information:

Safety shoes. 29 CFR 1910.136: Foot Protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	 Mixture contains one or more component(s) which have the following colour(s): Clear 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:
	Sweet
Odor threshold	: No data available
pH Malting point	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: -40 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.771 g/ml
Molecular mass	: 130.9 g/mol
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
9.2. Other information	
Refractive index	: 1.4822 (@ 20 °C)

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SECTION 10: Stability and reactivity 10.1. Reactivity No additional information available 10.2. Chemical stability The product is stable at normal handling and storage conditions. May form explosive peroxides. 10.3. Possibility of hazardous reactions Reacts violently with water. 10.4. Conditions to avoid Keep away from heat, sparks and flame. Moisture.

10.5. Incompatible materials

Alcohols. Bases. Strong oxidizing agents. Water.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of fire, see Section 5.

SECTION 11: Toxicological information	on
11.1. Information on toxicological effects	
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation)	: Harmful if swallowed. : Not classified : Not classified
Diethyl ether (60-29-7)	
LD50 oral rat	1215 mg/kg
LD50 dermal rabbit	20 ml/kg
LC50 Inhalation - Rat [ppm]	32000 ppm/4h
ATE US (oral)	1215 mg/kg body weight
ATE US (gases)	32000 ppmV/4h
Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness. May cause respiratory irritation.
2,2-Dimethylpropylmagnesium choride, 1	M in DEE (13132-23-5)
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
Diethyl ether (60-29-7)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Viscosity, kinematic	: No data available
Symptoms/effects	: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.
Symptoms/effects after inhalation	: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

SECTION 12: Ecological information

12.1. Toxicity	
Diethyl ether (60-29-7)	
LC50 - Fish [1]	2560 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential		
Diethyl ether (60-29-7)		
Partition coefficient n-octanol/water (Log Pow)	0.82 (at 23 °C)	
12.4. Mobility in soil		

No additional information available

12.5. Other adverse effects

No additional information available

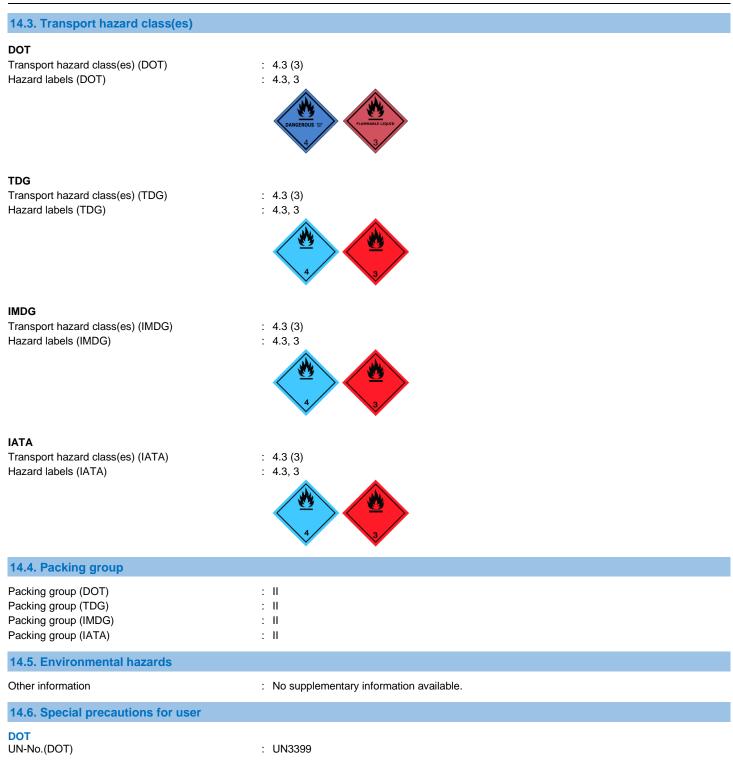
SECTION 14: Transport information

SECTION 13: Disposal considerations	3
13.1. Disposal methods	
Waste treatment methods Product/Packaging disposal recommendations Additional information	 Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. Dispose of contents/container in accordance with licensed collector's sorting instructions. Recycle the material as far as possible.

14.1. UN number	
DOT NA No UN-No. (TDG) UN-No. (IMDG) UN-No. (IATA)	: UN3399 : UN3399 : 3399 : 3399
14.2. UN proper shipping name	
Proper Shipping Name (DOT) Proper Shipping Name (TDG) Proper Shipping Name (IMDG) Proper Shipping Name (IATA)	 Organometallic substance, liquid, water-reactive, flammable

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DOT Packaging Exceptions (49 CFR 173.xxx) : None DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 243 DOT Quantity Limitations Passenger aircraft/rail (49 : 1 L CFR 173.27) : 5 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. TDG UN-No. (TDG) : UN3399	DOT Special Provisions (49 CFR 172.102)	:	 IB1 - Authorized IBCs: Metal (31A, 31B and 31N). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle. T7 - 4 178.274(d)(2) Normal
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 243 DOT Quantity Limitations Passenger aircraft/rail (49 : 1 L CFR 173.27) : 5 L DOT Vessel Stowage Location : 5 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. UNNo. (TDG) : UN3399 TDG Special Provisions : 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on a small means of containment following the shipping name in accordance with clause 3.6(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, on a small means of containment when Canadian law for domestic transport or an international transport prohibits the disclosure of the technical: a) UN1544, ALKALOID SALTS, DUIN, N.O.S. o' UN1440, ALKALOID SALTS, LIQUID, N.O.S.; d) UN3248, MEDICINE, LIQUID, FLAMMABLE,			W31 - Non-bulk packagings must be hermetically sealed.
DOT Packaging Bulk (49 CFR 173.xxx) : 243 DOT Quantity Limitations Passenger aircraft/riail (49) : 1 L CFR 173.27) : 5 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. TDG UN-No. (TDG) : UN3399 TDG Special Provisions : 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, 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: a) UN1544, ALKALOID SALTS, SOLID, N.O.S; o) UN3140, ALKALOIDS, SOLID, N.O.S; o) UN3140, ALKALOIDS, SOLID, N.O.S; o) UN3248, MEDICINE, LIQUID, FLAMMABLE,			
DOT Quantity Limitations Passenger aircraft/rail (49 : 1 L CFR 173.27) DOT Quantity Limitations Cargo aircraft only (49 : 5 L CFR 175.75) 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 passenger 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 ligases and flammable liquids when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained. TDC UN309 : UN3399 TDG Special Provisions : 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on a small means of containment following the shipping name in accordance with clause 3.5(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, on a small means of containment when Canadian law for domestic transport or an isensport or an asmall means of containment when Canadian law for domestic transport or an asmall means of containment when Canadian law for domestic transport or an isensport or an asmall means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical. J UN1454, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; or UN31			
CFR 173.27) 5 L DOT Quantity Limitations Cargo aircraft only (49 : 5 L CFR 175.75) 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 UN3399 TDG Special Provisions 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(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 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: a) UN1451, MEDICINE, LIQUID, TOXIC, N.O.S; c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, SOLID, N.O.S; b) UN14248, MEDICINE, LIQUID, TOXIC, N.O.S; c) UN340, ALKALOID SALTS, LIQUI			
CFR 175.75) 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 passenger or one passenger pre 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 : UN3399 : 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(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) 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: a) UN1544, ALKALOID SALTS, SOLID, N.O.S.; o) UN3140, ALKALOIDS, SOLID, N.O.S; b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; o) UN3140, ALKALOIDS, SOLID, N.O.S; b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; o) UN3140, ALKALOIDS, SOLID, N.O.S; b)	CFR 173.27)		
 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. 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 TDG Special Provisions 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(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. 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: a) UN1544, ALKALOID SALTS, SOLID, N.O.S; o) UN1804, ALKALOID SALTS, LIQUID, N.O.S; o) UN18248, MEDICINE, LIQUID, FLAMMABLE, 	DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	5 L
 "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 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(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) 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: 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; d) UN3248, MEDICINE, LIQUID, FLAMMABLE, 	DOT Vessel Stowage Location	:	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
 UN-No. (TDG) UN3399 TDG Special Provisions 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(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) 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: a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; d) UN3248, MEDICINE, LIQUID, FLAMMABLE, 	DOT Vessel Stowage Other	:	"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
 UN-No. (TDG) UN3399 TDG Special Provisions 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(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) 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: a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; d) UN3248, MEDICINE, LIQUID, FLAMMABLE, 	TDG		
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"Food and Drugs Act".	TDG Special Provisions		be shown, in parentheses, on the shipping document following the shipping name in accordance with clause $3.5(1)(c)(i)(A)$ 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) 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: 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 e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act".
	ERAP Index Explosive Limit and Limited Quantity Index		
Excepted quantities (TDG) : E2	Excepted quantities (TDG) Passenger Carrying Ship Index	:	E2

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Passenger Carrying Road Vehicle or Passenger	: 5 L
Carrying Railway Vehicle Index	
Emergency Response Guide (ERG) Number	: 138
IMDG	
Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 500 ml
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
Packing provisions (IMDG)	: PP31
IBC packing instructions (IMDG)	: IBC01
Tank instructions (IMDG)	: T7
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
Properties and observations (IMDG)	: Flammable liquid. Reacts violently with moisture, water and acids evolving flammable gas.
ΙΑΤΑ	
PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 493
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 494
CAO max net quantity (IATA)	: 5L
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

SECTION 15: Regulatory information			
15.1. US Federal regulations			
All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:			
2,2-Dimethylpropylmagnesium choride, 1M in DEE	CAS-No. 13132-23-5	13 – 23%	
Diethyl ether (60-29-7)			
CERCLA RQ	100 lb		
15.2. International regulations			
CANADA			
Diethyl ether (60-29-7)			

Listed on the Canadian DSL (Domestic Substances List)

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EU-Regulations

Diethyl ether (60-29-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Diethyl ether (60-29-7)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Diethyl ether(60-29-7)	U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Full text of H-phrases		
H200	Unstable explosive	
H224	Extremely flammable liquid and vapor	
H225	Highly flammable liquid and vapor	
H261	In contact with water releases flammable gas	
H302	Harmful if swallowed	
H314	Causes severe skin burns and eye damage	
H315	Causes skin irritation	
H318	Causes serious eye damage	
H319	Causes serious eye irritation	
H335	May cause respiratory irritation	
H336	May cause drowsiness or dizziness	
H351	Suspected of causing cancer	

NFPA health hazard

: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

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NFPA fire hazard	: 3 - Liquids and solids (including finely divided suspended solids) that can
NFPA reactivity	 be ignited under almost all ambient temperature conditions. 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.
NFPA specific hazard	: W - Materials that react violently or explosively with water.
Hazard Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB IC)
Physical	1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
Safety Data Sheet (SDS), USA	

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.