

Issue Date 08-Apr-2019

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Version 1

1. IDENTIFICATION

Product identifier

Product Name Herbicides

Other means of identification

Product Code PEO-123

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use For Laboratory Use Only.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

 NSI Lab Solutions, Inc.
 7212 ACC Blvd.
 Raleigh, NC 27617

Manufacturer Address

 NSI Lab Solutions, Inc.
 7212 ACC Blvd.
 Raleigh, NC 27617

Emergency telephone number

Company Phone Number 800-234-7837

FAX 919-789-3019

Website www.nsilabsolutions.com

E-mail address nsi@nsilabsolutions.com

Emergency Telephone 919-349-7322

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Hazard statements

H315: Causes skin irritation

H225: Highly flammable liquid and vapor



Appearance Clear, colorless liquid	Physical state Liquid	Odor No information available
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Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ ventilating / lighting/ equipment.
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see supplemental first aid on this label).
 If skin irritation occurs: Get medical advice/attention
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 Wash contaminated clothing before reuse
 In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Repeated exposure may cause skin dryness or cracking.

Other Information

May be harmful if swallowed. May be harmful if inhaled

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No.	Weight-%
Methyl tert-butyl ether	1634-04-4	99

Refer to Certificate of Analysis for exact percentage concentration.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Inhalation Remove to fresh air.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Consult a physician, if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms The most important known symptoms and effects are described in Section 2 and/or Section 11.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Carbon oxides.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge May be ignited by heat, sparks or flames.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. For precautions, see Section 2.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials No information available. Bases, oxidizing agents, reducing agents, Acetone reacts violently with phosphorous oxychloride.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl tert-butyl ether 1634-04-4	TWA: 50 ppm	-	-

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Avoid contact with eyes.
- Skin and body protection** Wear protective gloves and protective clothing.
- Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	No information available
Appearance	Clear, colorless liquid	Odor threshold	No information available
Color	Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	-94 °C -137 °F	
Boiling point / boiling range	56 °C 133 °F (at 760 mm Hg)	
Flash point	-16.99 °C 1.42 °F	Closed Cup
Evaporation rate	No information available	No information available
Flammability (solid, gas)	No information available	No information available
Flammability Limit in Air		
Upper flammability limit:	13% (V)	
Lower flammability limit:	2% (V)	
Vapor pressure	No information available	No information available
Vapor density	No information available	No information available
Relative density	No information available	No information available
Water solubility	Miscible in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	465.0 °C 869.0 °F	
Decomposition temperature	No information available	No information available
Kinematic viscosity	No information available	No information available
Dynamic viscosity	No information available	No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

No information available. Bases, oxidizing agents, reducing agents, Acetone reacts violently with phosphorous oxychloride.

Hazardous Decomposition Products

No information available.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	No data available
Inhalation	No data available.
Eye contact	No data available.
Skin contact	No data available.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl tert-butyl ether 1634-04-4	= 2963 mg/kg (Rat)	= 10000 mg/kg (Rabbit)	= 85 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	2,992.90
ATEmix (dermal)	10,101.00
ATEmix (inhalation-dust/mist)	85.90

12. ECOLOGICAL INFORMATION

Ecotoxicity

1 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Methyl tert-butyl ether 1634-04-4	800: 72 h Desmodesmus subspicatus mg/L EC50 184: 96 h Pseudokirchneriella subcapitata mg/L EC50	672: 96 h Pimephales promelas mg/L LC50 flow-through 929: 96 h Pimephales promelas mg/L LC50 static 100: 96 h Brachydanio rerio mg/L LC50 semi-static 887: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	542: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

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

Contaminated packaging

Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl tert-butyl ether 1634-04-4	-	-	-	-

Chemical Name	California Hazardous Waste Status
Methyl tert-butyl ether 1634-04-4	-

14. TRANSPORT INFORMATION

DOT

Not regulated
Proper shipping name Methyl tert-butyl ether
Hazard Class 3
Packing Group II
Reportable Quantity (RQ)

IATA

UN/ID no. 2398
Proper shipping name Methyl tert-butyl ether
Hazard Class 3
Packing Group II

IMDG

UN/ID no. 2398
 Proper shipping name Methyl tert-butyl ether
 Hazard Class 3
 Packing Group II
 EmS-No.

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL/NDSL Complies
 EINECS/ELINCS Complies
 ENCS Complies
 IECS Complies
 KECL Complies
 PICCS Complies
 AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECS - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product, as supplied, does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

Chemical Name	California Proposition 65
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Methyl tert-butyl ether 1634-04-4	-
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U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Methyl tert-butyl ether 1634-04-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 2	Flammability 3	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 2	Flammability 3	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	* = Chronic Health Hazard			

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 Revision Note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet