



since 1895

Material Safety Data Sheet

NFPA	WHMIS	PPE	Transport Symbol
			<p style="text-align: center;">Not Regulated</p>

Preparation Date 08-Dec-2006

Revision Date 06-Apr-2011

Revision Number 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Energizer LO
Product Code 7826
UN-No Not available

Contact Manufacturer
 The Garland Company, Inc.
 3800 East 91st. Street
 Cleveland, Ohio 44105-2197
 Ph: (800) 762-8225 Fax: (216) 641-0633

Garland Canada, Inc.
 1296 Martin Grove Rd.
 Toronto, Ontario M9W 4X3
 Ph: (416)747-7995 Fax: (416)747-1980

Emergency Telephone Number 1-800-762-8225 (24 Hrs.)

2. HAZARDS IDENTIFICATION

Emergency Overview

Combustible material

Appearance Black.

Physical State Liquid.

Odor Petroleum distillates.

Mexico - Grade Moderate risk, Grade 2

Potential Health Effects

Principle Routes of Exposure Skin contact, Eye contact, Inhalation, Ingestion.

Acute Effects**Eyes**

Avoid contact with eyes. Moderately irritating to the eyes.

Skin

Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by skin contact.

Inhalation

Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Ingestion

Harmful if swallowed. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Main Symptoms

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Aggravated Medical Conditions Liver disorders. Kidney disorders. Skin disorders. Central nervous system.

Interactions with Other Chemicals No information available.

Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Ethyl Benzene	100-41-4	0.1 - 1	1
Hydrous Alumino Silicate	12174-11-7	1 - 5	1
Xylene	1330-20-7	0.1 - 1	1
Silica, crystalline	14808-60-7	< 0.1	1
Toluene diisocyanate	26471-62-5	1 - 5	1
Hydrogen sulfide	7783-06-4	< 0.1	1
Petroleum Asphalt	8052-42-4	10 - 30	1
Cumene	98-82-8	0.1 - 1	1

4. FIRST AID MEASURES

General Advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Remove from exposure, lie down.

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Remove from exposure, lie down. Call a physician immediately.

Skin Contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation

Move to fresh air. Call a physician immediately.

Ingestion

Do not induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

Notes to Physician

Treat symptomatically.

Protection of First-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Foam. Dry powder. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Hazardous Combustion Products Carbon monoxide, Carbon dioxide (CO₂), Hydrocarbons.

Explosion Data

Sensitivity to mechanical impact	No
Sensitivity to static discharge	Yes

Specific Hazards Arising from the Chemical

Combustible material. Keep product and empty container away from heat and sources of ignition.

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. Standard procedure for chemical fires.

NFPA

Health 2

Flammability 2

Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for Containment Contain with inert absorbent material

Methods for Cleaning Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other Information Not applicable

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Do not breathe vapors or spray mist. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in an area containing flame proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage Keep in properly labeled containers. Keep tightly closed in a dry and cool place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico
Ethyl Benzene	TWA: 100 ppm STEL: 125 ppm	TWA: 100 ppm TWA: 435 mg/m ³	STEL: 540 mg/m ³ STEL: 125 ppm TWA: 100 ppm TWA: 435 mg/m ³	STEL: 125 ppm STEL: 545 mg/m ³ TWA: 100 ppm TWA: 435 mg/m ³
Xylene	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 435 mg/m ³	STEL: 650 mg/m ³ STEL: 150 ppm TWA: 100 ppm TWA: 435 mg/m ³	STEL: 150 ppm STEL: 655 mg/m ³ TWA: 435 mg/m ³ TWA: 100 ppm
Silica, crystalline	TWA: 0.025 mg/m ³		TWA: 0.10 mg/m ³	TWA: 0.1 mg/m ³
Toluene diisocyanate	TWA: 0.005 ppm STEL: 0.02 ppm		CEV: 0.02 ppm CEV: 0.8 µmol/m ³ TWA: 0.005 ppm TWA: 0.2 µmol/m ³	
Hydrogen sulfide	TWA: 10 ppm STEL: 15 ppm	Ceiling: 20 ppm	STEL: 15 ppm STEL: 21 mg/m ³ TWA: 10 ppm TWA: 14 mg/m ³	STEL: 15 ppm STEL: 21 mg/m ³ TWA: 10 ppm TWA: 14 mg/m ³
Petroleum Asphalt	TWA: 0.5 mg/m ³		TWA: 0.5 mg/m ³	STEL: 10 mg/m ³ TWA: 5 mg/m ³
Cumene	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m ³ Skin	TWA: 245 mg/m ³ TWA: 50 ppm Skin	STEL: 365 mg/m ³ STEL: 75 ppm TWA: 50 ppm TWA: 245 mg/m ³

Chemical Name	NIOSH IDLH
Ethyl Benzene	800 ppm
Silica, crystalline	50 mg/m ³
Hydrogen sulfide	100 ppm
Cumene	900 ppm

IDLH: Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Tightly fitting safety goggles. Safety glasses with side-shields.

Skin Protection Long sleeved clothing. Chemical resistant apron. Impervious butyl rubber gloves.

Lightweight protective clothing. Antistatic boots.

Respiratory Protection Wear a positive-pressure supplied-air respirator.

Hygiene Measures

When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black
Odor	Petroleum distillates
Physical State	Liquid
pH	Not available
Flash Point	> 105°F / > 41°C
Method	Tag closed cup

9. PHYSICAL AND CHEMICAL PROPERTIES

Autoignition Temperature	Not available	
Boiling Point/Range	No data available	
Freezing Point	Not available	
Flammability Limits in Air	Lower Not available	Upper Not available
Explosive Properties	Not available	
Oxidizing Properties	Not available	
Evaporation Rate	No data available	
Vapor Pressure	No data available	
Vapor Density	>1 @ Air = 1	
Specific Gravity	1.13	
Solubility	Not available	
Water Solubility	Not available	
Volatiles	13%	
VOC Content	204 g/L	

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions. Hazardous polymerization does not occur.
Conditions to Avoid	Heat, flames and sparks. Heating in air.
Incompatible Materials	No materials to be especially mentioned.
Hazardous Decomposition Products	Carbon oxides.
Possibility of Hazardous Reactions	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl Benzene	3500 mg/kg Rat	15354 mg/kg Rabbit	17.2 mg/L Rat 4 h
Xylene	4300 mg/kg Rat	1700 mg/kg Rabbit	5000 ppm Rat 4 h
Silica, crystalline	500 mg/kg Rat		
Toluene diisocyanate	3360 mg/kg Rat	10000 mg/kg Rabbit	0.1 mg/L Rat 4 h 13.9 ppm Rat 4 h 66 ppm Rat 1 h
Petroleum naphtha, light aromatic	8400 mg/kg Rat	2000 mg/kg Rabbit	3400 ppm Rat 4 h 5.2 mg/L Rat 4 h
Hydrogen sulfide			0.701 mg/L Rat 4 h 0.99 mg/L Rat 1 h
Petroleum Asphalt	5000 mg/kg Rat	2000 mg/kg Rabbit	
Cumene	1400 mg/kg Rat	3160 mg/kg Rabbit	
1,2,4-Trimethylbenzene	3400 mg/kg Rat	3160 mg/kg Rabbit	18 g/m ³ Rat 4 h

Chronic Toxicity

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA	Mexico
Ethyl Benzene	A3	Group 2B		X	
Hydrous Alumino Silicate		Group 2B		X	
Silica, crystalline	A2	Group 1	Known	X	
Toluene diisocyanate		Group 2B	Reasonably Anticipated	X	

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Ethyl Benzene

Freshwater Algae Data

Selenastrum capricornutum EC50=4.6 mg/L (72 h)

Selenastrum capricornutum EC50>438 mg/L (96 h)

Microtox Data

Photobacterium phosphoreum EC50=9.68 mg/L (30 min)

Nitrosomonas EC50=96 mg/L (24 h)

Water Flea Data

Daphnia magna EC50 1.8 - 2.4 mg/L (48 h)

Xylene

Microtox Data

Photobacterium phosphoreum EC50=0.0084 mg/L (24 h)

Water Flea Data

Gammarus lacustris LC50=0.6 mg/L (48 h)

water flea EC50=3.82 mg/L (48 h)

Petroleum naphtha, light aromatic

Water Flea Data

Daphnia magna EC50=6.14 mg/L (48 h)

Hydrogen sulfide

Water Flea Data

Gammarus pseudolimnaeus EC50=0.022 mg/L (96 h)

Cumene

Freshwater Algae Data

Selenastrum capricornutum EC50=2.6 mg/L (72 h)

Microtox Data

Photobacterium phosphoreum EC50=0.89 mg/L (5 min)

Photobacterium phosphoreum EC50=1.10 mg/L (15 min)

Photobacterium phosphoreum EC50=1.48 mg/L (30 min)

Dicranophorus forcipatus EC50=172 mg/L (24 h)

Water Flea Data

water flea EC50=0.6 mg/L (48 h)

1,2,4-Trimethylbenzene

Water Flea Data

Daphnia magna EC50=6.14 mg/L (48 h)

Persistence/Degradability

Not available

Bioaccumulation/ Accumulation Not available
Mobility in Environmental Media Not available

Ethyl Benzene
log Pow = 3.118

Xylene
log Pow = 2.77 - 3.15

Hydrogen sulfide
log Pow = 0.45

Petroleum Asphalt
log Pow = 6

Cumene
log Pow = 3.55

1,2,4-Trimethylbenzene
log Pow = 3.63

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Should not be released into the environment. It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations.

Contaminated Packaging Clean container with water. Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number D001

Chemical Name	RCRA
Toluene diisocyanate - 26471-62-5	waste number U223
Hydrogen sulfide - 7783-06-4	waste number U135

14. TRANSPORT INFORMATION

DOT Not Regulated

TDG

Proper Shipping Name Flammable liquid, n.o.s
Hazard Class 3
UN-No 1993
Packing Group III
Description Flammable liquid, n.o.s. (Methyl n-amyl ketone, Methyl isoamyl ketone)

MEX Not regulated

ICAO

Proper Shipping Name Flammable liquid, n.o.s
Hazard Class 3

14. TRANSPORT INFORMATION

UN-No 1993
Packing Group III
Description Flammable liquid, n.o.s. (Methyl n-amyl ketone, Methyl isoamyl ketone)

IATA

Proper Shipping Name Flammable liquid, n.o.s.
Hazard Class 3
UN-No 1993
Packing Group III
Description Flammable liquid, n.o.s. (Methyl n-amyl ketone, Methyl isoamyl ketone)

IMDG/IMO

Proper Shipping Name Flammable liquid, n.o.s.
Hazard Class 3
UN-No 1993
Packing Group III
Description Flammable liquid, n.o.s. (Methyl n-amyl ketone, Methyl isoamyl ketone)

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
Ethyl Benzene	X	X	-	X	-	X	X	X	X	X
Hydrous Alumino Silicate	X	X	-	-	-	-	X	-	X	X
Xylene	X	X	-	X	-	X	X	X	X	X
Silica, crystalline	X	X	-	X	-	X	X	X	X	X
Toluene diisocyanate	X	X	-	X	-	X	X	X	X	X
Petroleum naphtha, light aromatic	X	X	-	X	-	-	X	X	X	X
Hydrogen sulfide	X	X	-	X	-	X	X	X	X	X
Petroleum Asphalt	X	X	-	X	-	-	X	X	X	X
Cumene	X	X	-	X	-	X	X	X	X	X
1,2,4-Trimethylbenzene	X	X	-	X	-	X	X	X	X	X

TSCA Complies
DSL Complies
NDSL Complies
EINECS Does not Comply
ELINCS Does not Comply
ENCS Does not Comply
CHINA Complies
KECL Does not Comply
PICCS Complies
AICS Complies

USA**Federal Regulations**

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	SARA 313 - Threshold Values
Ethyl Benzene (CAS #: 100-41-4)	0.1%
Xylene (CAS #: 1330-20-7)	1.0%
Toluene diisocyanate (CAS #: 26471-62-5)	0.1%
Cumene (CAS #: 98-82-8)	1.0%
1,2,4-Trimethylbenzene (CAS #: 95-63-6)	1.0%

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name

Ethyl Benzene (CAS #: 100-41-4)

Xylene (CAS #: 1330-20-7)

Cumene (CAS #: 98-82-8)

State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	Category	Type
Ethyl Benzene	100-41-4	Carcinogen	
Hydrous Alumino Silicate	12174-11-7	Carcinogen	
Silica, crystalline	14808-60-7	Carcinogen	
Toluene diisocyanate	26471-62-5	Carcinogen	

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethyl Benzene	X	X	X	X	X
Xylene	X	X	X	X	X
Silica, crystalline	X	X	X		X
Toluene diisocyanate	X		X		
Hydrogen sulfide	X	X	X		X
Petroleum Asphalt	X	X	X		X
Cumene	X	X	X	X	X
1,2,4-Trimethylbenzene	X	X	X	X	

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B3 Combustible liquid

D2B Toxic materials

Chemical Name	NPRI
Toluene diisocyanate	X
Hydrogen sulfide	X

Chemical Name	NPRI
Cumene	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Preparation Date 08-Dec-2006**Revision Date** 06-Apr-2011**Revision Summary** Not available

Disclaimer

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of MSDS