

1. Identification

Product identifier EP™ 2500 Flow Improver
Other means of identification None.
Recommended use Flow Improver.
Recommended restrictions Other uses are not recommended unless an assessment demonstrates potential exposures will be controlled.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer LiquidPower Specialty Products Inc.
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2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Specific target organ toxicity, repeated exposure Category 2 (kidneys)
Environmental hazards Hazardous to the aquatic environment, long-term hazard Category 3
OSHA defined hazards Not classified.
Label elements



Signal word Warning
Hazard statement May cause damage to organs (kidneys) through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.
Precautionary statement
Prevention Do not breathe mist or vapor. Avoid release to the environment.
Response Get medical advice/attention if you feel unwell.
Storage Store away from incompatible materials.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Ethylene glycol	107-21-1	10 - <20
C11-C15 hydrocarbon solvent*	Proprietary*	7 - 13
Sodium lauryl sulfate	151-21-3	0.5 - 1.5

Surfactant

Chemical name	Common name and synonyms	CAS number	%
Alcohol ethoxylate 1*		Proprietary*	1 - 5
Alcohol ethoxylate 2*		Proprietary*	1 - 5
C12-C14 secondary alcohol ethoxylate*		84133-50-6	1 - 5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments

Total alcohol ethoxylate concentration <6%.

All concentrations are in percent by weight. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation

Get medical attention if discomfort persists. Move to fresh air.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Treat symptomatically. Symptoms may be delayed.

General information

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Alcohol resistant foam. Powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not breathe mist or vapor. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
C11-C15 hydrocarbon solvent*	TWA	200 mg/m3	Non-aerosol.
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
	TWA	50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
C11-C15 hydrocarbon solvent*	TWA	100 mg/m3

US. Workplace Environmental Exposure Level (WEEL) Guides

Surfactant	Type	Value
Alcohol ethoxylate 1	TWA	10 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

C11-C15 hydrocarbon solvent* (CAS Proprietary*)

Danger of cutaneous absorption

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Skin protection

Other

Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection

In case of accident and/or inadequate ventilation, use respiratory protection with organic vapor cartridge.

Thermal hazards

Not applicable.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color White.

Odor Mild.

Odor threshold Not available.

pH 6 - 9

Melting point/freezing point -9.4 °F (-23 °C)

Initial boiling point and boiling range 222.8 °F (106 °C)

Flash point >200 °F / >93.4 °C

Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	24 mmHg @ 25 °C
Vapor density	< 1
Relative density	0.96 - 1.02 (25°C / 77°F)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	110 cP 511 s-1 (Non-Newtonian) @ 25 °C / @ 77 °F
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Under normal conditions of intended use, this material does not pose a risk to health. However: Ingestion of ethylene glycol may result in nausea, vomiting, abdominal cramps, blindness, liver damage, irritation, reproductive effects, nerve damage, convulsions, edema of the lung, cardiopulmonary effects (metabolic acidosis), pneumonia and kidney failure which could result in death. The single lethal dose of ethylene glycol for humans is about 100 ml. Inhalation of high levels of vapors or mists for prolonged periods of time may also result in toxic effects.

Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation. Prolonged exposure may cause chronic effects.
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Information on toxicological effects

Acute toxicity	May be harmful if swallowed.
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Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
Acute		
Dermal		
LD50	Rabbit	9530 mg/kg
Oral		
LD50	Rat	5.89 g/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Skin sensitization	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Germ cell mutagenicity	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Carcinogenicity	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
IARC Monographs. Overall Evaluation of Carcinogenicity	Not listed.
NTP Report on Carcinogens	Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	Not listed.
Reproductive toxicity	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Specific target organ toxicity - single exposure	No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).
Specific target organ toxicity - repeated exposure	May cause damage to organs (kidneys) through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged exposure may cause chronic effects.
Further information	Ingestion of ethylene glycol may result in nausea, vomiting, abdominal cramps, blindness, liver damage, irritation, reproductive effects, nerve damage, convulsions, edema of the lung, cardiopulmonary effects (metabolic acidosis), pneumonia and kidney failure which could result in death. The single lethal dose for humans is about 100 ml. Inhalation of high levels of vapors or mists for prolonged periods of time may also result in toxic effects.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components	Species	Test Results
Sodium lauryl sulfate (CAS 151-21-3)		
Aquatic		
<i>Acute</i>		
Crustacea	LC50 Water flea (Daphnia magna)	8.4 - 11 mg/l, 48 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
Ethylene glycol (CAS 107-21-1)	-1.36
Sodium lauryl sulfate (CAS 151-21-3)	1.6

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Waste material from this product should not be exposed to waste streams or sumps containing any concentration of hydrocarbon. This will cause formation of gelled substances that may plug pipes.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

DOT BULK

BULK

UN number	NA3082
UN proper shipping name	Other regulated substances, liquid, n.o.s. (Ethylene glycol RQ = 5000 lbs)
Transport hazard class(es)	
Class	9
Label(s)	9
Packing group	III
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, T2, TP1
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

C11-C15 hydrocarbon solvent* (CAS Proprietary*)	Listed.
Ethylene glycol (CAS 107-21-1)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) All components are listed on or exempt from the U.S. EPA TSCA Inventory List.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethylene glycol	107-21-1	10 - <20

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethylene glycol (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

C11-C15 hydrocarbon solvent* (CAS Proprietary*)

Ethylene glycol (CAS 107-21-1)

US. New Jersey Worker and Community Right-to-Know Act

C11-C15 hydrocarbon solvent* (CAS Proprietary*)

Ethylene glycol (CAS 107-21-1)

US. Pennsylvania Worker and Community Right-to-Know Law

C11-C15 hydrocarbon solvent* (CAS Proprietary*)

Ethylene glycol (CAS 107-21-1)

US. Rhode Island RTK

C11-C15 hydrocarbon solvent* (CAS Proprietary*)

Ethylene glycol (CAS 107-21-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	09-February-2018
Revision date	27-December-2021
Version #	05
Further information	NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA ratings**List of abbreviations**

LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.

Disclaimer

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