SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Trade name or designation of the mixture
LP™ Winter Flow Improver
Registration number
If a registration number is not given, the substance is exempt from registration
Synonyms
None.
Issue date
19-April-2017
Version number
02
Revision date
22-May-2020
Supersedes date
19-April-2017

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses
Flow Improver.
Uses advised against
Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

1.3. Details of the supplier of the safety data sheet
Only Representative of a non-Community Manufacturer
Penman Consulting bvba
Address
Avenue des Arts 10
B-1210 Brussels
Belgium
Telephone
+32(0)2 305 0698
E-mail
pcbvba02@penmanconsulting.com

Manufacturer
LiquidPower Specialty Products Inc.
Address
One BriarLake Plaza
2000 W Sam Houston Pkwy S
Suite 400
Houston, TX 77042
Telephone
1.713.339.8703 or 1.800.897.2774
E-mail
SDS@LiquidPower.com
Website
www.LiquidPower.com

1.4. Emergency telephone number
CHEMTREC UK
+(44)-870-8200418 & 1 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended
This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary
Low hazard under normal conditions.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Hazard pictograms
None.
Signal word
None.
Hazard statements
The mixture does not meet the criteria for classification.

Precautionary statements
Prevention
Observe good industrial hygiene practices.
Response
Wash hands after handling.
Storage
Store away from incompatible materials.

Disposal
Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information
None.

2.3. Other hazards
This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
The components are not hazardous or are below required disclosure limits.

SECTION 4: First aid measures

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

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

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed
Direct contact with eyes may cause temporary irritation.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards
No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media
None known.

5.2. Special hazards arising from the substance or mixture
Closed containers can burst violently when heated, due to excess pressure build-up.

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

Special protective equipment for firefighters
Move containers from fire area if you can do it without risk.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Keep unnecessary personnel away.

For emergency responders
Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material 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.

Never return spills to original containers for re-use.

6.4. Reference to other sections
For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid prolonged exposure. Ensure adequate ventilation. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)
Flow Improver.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>UK. EH40 Workplace Exposure Limits (WELs) Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane -1,2 -diol (CAS 57-55-6)</td>
<td>TWA</td>
<td>474 mg/m³</td>
<td>Total vapour and particulates.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Particulate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 ppm</td>
<td>Total vapour and particulates.</td>
</tr>
</tbody>
</table>

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

Recommended monitoring procedures
Follow standard monitoring procedures.

Derived no effect levels (DNELs)
Not available.

Predicted no effect concentrations (PNECs)
Not available.

Exposure guidelines
Follow standard monitoring procedures.

8.2. Exposure controls

Appropriate engineering controls
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

General information
Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection
Risk of contact: Wear approved safety goggles. Eye protection should meet standard EN 166.

Skin protection
- Hand protection
Use suitable protective gloves if risk of skin contact. Neoprene, butyl rubber, nitrile or Viton gloves are recommended.
- Other
If prolonged or repeated contact is likely, chemical resistant clothing is recommended.

Respiratory protection
In case of inadequate ventilation or when the product is heated, use suitable respiratory equipment with gas filter (type A2).

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

Hygiene measures
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. Discard contaminated clothing and footwear that cannot be cleaned.

Environmental exposure controls
Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Liquid.
- Colour: White.

Odour
Mild.

Odour threshold
Not available.

pH
10 - 12.3

Melting point/freezing point
-10 °C (14 °F)

Initial boiling point and boiling range
105 °C (221 °F)

Flash point
Not applicable.

Evaporation rate
Same as water.

Flammability (solid, gas)
Not applicable.
Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not applicable.

Flammability limit - upper (%)
Not applicable.

Vapour pressure
23.8 mmHg (25°C)

Vapour density
< 1 (Air = 1)

Relative density
0.84 - 0.97 (15.6°C / 60°F)

Solubility(ies)
Disperses completely.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
50 - 200 cP @ 511s-1 (Non-Newtonian) (25°C)

Explosive properties
Not explosive.

Oxidising properties
Not oxidising.

9.2. Other information
No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Material is stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid
Contact with incompatible materials. Extreme temperatures.

10.5. Incompatible materials
Strong oxidising agents.

10.6. Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information
No adverse effects are expected.

Information on likely routes of exposure

Inhalation
No adverse effects due to inhalation are expected.

Skin contact
No adverse effects due to skin contact are expected.

Eye contact
Direct contact with eyes may cause temporary irritation.

Ingestion
May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms
Exposure may cause temporary irritation, redness, or discomfort.

11.1. Information on toxicological effects

Acute toxicity
Not expected to be acutely toxic.

Skin corrosion/irritation
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).

Serious eye damage/eye irritation
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).

Respiratory sensitisation
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 sensitisation
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).

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
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).

Aspiration hazard
Not an aspiration hazard.

Mixture versus substance information
The product is a mixture.

Other information
None known.

SECTION 12: Ecological information

12.1. Toxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
This product is water soluble and may disperse in soil.

12.5. Results of PBT and vPvB assessment
This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. 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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Residual waste
Dispose of 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.

EU waste code
16 03 06
This material, if discarded as produced, would not be considered as hazardous waste pursuant to Directive 2008/98/EC on hazardous waste, and directive 75/442/EEC on waste.

This code has been assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste generators/producers are responsible for assessing the actual process used when generating the waste and it's contaminants in order to assign the proper waste disposal code.

Disposal methods/information
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. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Special precautions
Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR
14.1. - 14.6.: Not regulated as dangerous goods.

RID
14.1. - 14.6.: Not regulated as dangerous goods.

ADN
14.1. - 14.6.: Not regulated as dangerous goods.

IATA
14.1. - 14.6.: Not regulated as dangerous goods.

IMDG
14.1. - 14.6.: Not regulated as dangerous goods.

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. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
  Not listed.
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
  Not listed.
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
  Not listed.

Authorisations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended
  Not listed.

Restrictions on use

- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
  Not listed.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended
  Not listed.

Other EU regulations

- Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
  Not listed.

Other regulations

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

List of abbreviations

TWA: Time weighted average.

References

- HSDB® - Hazardous Substances Data Bank
- IARC Monographs. Overall Evaluation of Carcinogenicity
- EPA: AQUIRE database

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

None.

Training information

Follow training instructions when handling this material.

Disclaimer

LiquidPower Specialty Products Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.