# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

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|---|---|
| **Identification of the substance/preparation** | **RP™ II Flow Improver** |
| **Use of the substance/preparation** | Flow Improver. |
| **Version No.** | 05 |
| **CAS No.** | Mixture |
| **Manufacturer** | |
| **Manufacturer** | LiquidPower Specialty Products Inc. |
| **Address** | 2103 CityWest Blvd.<br>Suite 1400<br>Houston, TX 77042 |
| **Telephone** | 1.713.339.8703 or 1.800.897.2774 |
| **e-mail** | SDS@LiquidPower.com |
| **Website** | www.LiquidPower.com |
| **Emergency telephone** | +1 703.527.3887 (USA)<br>+1 800.424.9300 (USA) |

## 2. HAZARDS IDENTIFICATION

This preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

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| **Classification** | Xi;R36, R52/53 |
| **Physical hazards** | Not classified as a physical hazard. |
| **Health hazards** | Irritating to eyes. |
| **Environmental hazards** | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS No. | Percent | EC-No. | Classification |
|---|---|---|---|---|
| Alcohols, C7-9-iso-, C8-rich | 68526-83-0 | 35 - 45 | 271-231-4 | Xi;R36/38, R52/53 |
| Octan-1-ol | 111-87-5 | 2 - 10 | 203-917-6 | Xi;R36, R52/53 |

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

## 4. FIRST-AID MEASURES

| | |
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| **Inhalation** | If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. 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** | Flush eyes with water as a precaution. Get medical attention if irritation develops and persists. |
| **Ingestion** | Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately. |
| **General advice** | 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

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| **Suitable extinguishing media** | Water spray. Alcohol resistant foam. Powder. Carbon dioxide (CO2). |
| **Extinguishing media which must not be used for safety reasons** | Do not use water jet as an extinguisher, as this will spread the fire. |
| **Unusual fire & explosion hazards** | None known. |
| **Specific hazards** | During fire, gases hazardous to health may be formed. |
| **Special protective equipment for fire-fighters** | 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. |
| **Hazardous combustion products** | Carbon monoxide and carbon dioxide. During fire, gases hazardous to health may be formed. |

## 6. ACCIDENTAL RELEASE MEASURES

**Containment procedures** Refer to attached safety data sheets and/or instructions for use. Use water spray to reduce vapours or divert vapour cloud drift. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

**Personal precautions** Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

**Environmental precautions** Avoid release to the environment. Refer to special instructions/safety data sheets. Contact local authorities in case of spillage to drain/aquatic environment. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**Methods for cleaning up** Should not be released into the environment. Prevent product from entering drains. Do not allow material to contaminate ground water system.

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. For waste disposal, see section 13 of the SDS.

## 7. HANDLING AND STORAGE

**Handling** Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment.

**Storage** Use appropriate container to avoid environmental contamination. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits**

**Kenya. OELs. Recommended Limit for Hazardous Chemical Substances (Occupational Safety and Health Act CAP. 514; The Factories and Other Places of Work Rules, May 2007)**

| Components | Type | Value | Form |
|---|---|---|---|
| Propane -1,2 -diol (CAS 57-55-6) | TWA | 470 mg/m3 | Total vapour and particulates. |
| | | 10 mg/m3 | Particulate. |
| | | 150 ppm | Total vapour and particulates. |

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

**Recommended monitoring procedures**

**Additional exposure data** Not available.

**Engineering measures** 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. General ventilation normally adequate. Provide eyewash station.

**Personal protective equipment**

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

**Hand protection** Nitrile, butyl rubber or Viton (fluoroelastomers) gloves are recommended.

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

**Skin and body protection** Normal work clothing (long sleeved shirts and long pants) is recommended.

**General** Use personal protective equipment as required.

**Environmental exposure controls** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels. Environmental manager must be informed of all major releases.

**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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| **Appearance** | |
| **Physical state** | Liquid. |
| **Form** | Liquid. |
| **Colour** | White. |
| **Odour** | Sweet, pungent. |
| **pH** | Property has not been measured. |
| **Melting point/freezing point** | < -40 °C (< -40 °F) |
| **Boiling point, initial boiling point, and boiling range** | 185 °C (365 °F) |
| **Flash point** | 83 °C (181.4 °F) |
| **Auto-ignition temperature** | Property has not been measured. |
| **Combustion characteristics (solid, gas)** | Not applicable. |
| **Vapour pressure** | 1 mmHg (37.8°C) |
| **Vapour density** | < 1 (Air = 1) |
| **Evaporation rate** | Less than water. |
| **Solubility(ies)** | |
| **Solubility (water)** | Negligible in water. |
| **Partition coefficient (n-octanol/water)** | Property has not been measured. |
| **Decomposition temperature** | Property has not been measured. |
| **Viscosity** | 150 cP 511s-1 (Non-Newtonian) (25 °C) |
| **Other data** | |
| **Explosive limit - lower ( %)** | Property has not been measured. |
| **Explosive limit – upper (%)** | Property has not been measured. |
| **Kinematic viscosity** | Property has not been measured. |
| **Relative density** | > 0.83 - < 0.91 (25°C / 77°F) |

## 10. STABILITY AND REACTIVITY

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| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Conditions to avoid** | Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| **Hazardous decomposition products** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. |
| **Stability** | Material is stable under normal conditions. |
| **Materials to avoid** | Strong oxidising agents. |
| **Hazardous polymerisation** | No dangerous reaction known under conditions of normal use. |

## 11. TOXICOLOGICAL INFORMATION

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| **Acute toxicity** | Not expected to be acutely toxic. |
| **Routes of exposure** | Inhalation. Skin contact. Eye contact. |
| **Toxicological information** | Occupational exposure to the substance or mixture may cause adverse effects. |
| **Chronic toxicity** | None known. |
| **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). |
| **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). |
| **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). |
| **Reproductivity** | 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). |
| **Epidemiology** | No epidemiological data is available for this product. |

**Human experience** No data available.

**Further information** None known.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological data**

| Components | | Species | Test Results |
|---|---|---|---|
| Alcohols, C7-9-iso-, C8-rich (CAS 68526-83-0) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Algae | ErC50 | Pseudokirchnerella subcapitata | 23 mg/l, 72 h |
| Crustacea | LC50 | Daphnia magna | 31.8 mg/l, 48 h |
| Fish | LC50 | Pimephales promelas | 14 mg/l, 96 h |
| *Chronic* | | | |
| Crustacea | EC10 | Ceriodaphnia dubia | 0.28 mg/l, 6 day |
| Fish | EC10 | Pimephales promelas | > 0.28 mg/l, 33 day |
| Octan-1-ol (CAS 111-87-5) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | >= 12.3 - <= 13.4 mg/l, 96 hours |

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Environmental effects** Harmful to aquatic organisms.

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

**Bioaccumulation** The product is not expected to bioaccumulate.

**Bioaccumulative potential**

**Octanol/water partition coefficient log Kow**

Octan-1-ol (CAS 111-87-5) 3

**Mobility** Expected to have low mobility in soil and sediments with adsorption being the predominant physical process.

**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** 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.

**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

**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

**Labelling**

**Symbol(s)**

Irritant

| | |
|---|---|
| **R-phrase(s)** | R36 Irritating to eyes.<br>R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| **S-phrase(s)** | S23 Do not breathe gas/fumes/vapour/spray.<br>S25 Avoid contact with eyes.<br>S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>S60 This material and its container must be disposed of as hazardous waste.<br>S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets. |

## 16. OTHER INFORMATION

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|---|---|
| **Wording of the R-phrases in sections 2 and 3** | R36 Irritating to eyes.<br>R36/38 Irritating to eyes and skin.<br>R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | 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).

| | |
|---|---|
| **Recommended use** | Use in accordance with supplier’s recommendations. |
| **Recommended restrictions** | Other uses are not recommended unless an assessment demonstrates potential exposures will be controlled. |
| **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. |
| **Issue date** | 13-February-2018 |
| **Revision date** | 19-April-2024 |