

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product identifier : **HONDA POWER STEERING FLUID**

Product Use : Power Steering Fluid .

Chemical Family : Mixture.

Manufacturer part no. : M2714HC

Supplier's name and address: **Radiator Specialty Co., of Canada**
1711 Aimco Blvd.
Mississauga, ON, Canada
L4W 1H7

Manufacturer's name and address:
Refer to Supplier

Information Telephone # : (905) 625-9117 (Monday - Friday, 8 AM - 4 PM)

24 Hr. Emergency Tel # : 613-996-6666 (CANUTEC)

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR).
WHMIS classification:
Class B3 (Combustible Liquids);
Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
Class D2B (Materials Causing Other Toxic Effects, Toxic Material).
Labelling: Phrases recommended to appear on a supplier label, can be found in Section 15.
WHMIS symbols required on a supplier label:



Emergency Overview : Oily liquid. Clear amber liquid. Petroleum odour.
WARNING! Combustible liquid and vapour. Harmful if inhaled. May be harmful or fatal if swallowed in large amounts. May be an aspiration hazard. May cause skin irritation. May cause respiratory irritation. Contains material which may cause cancer, based on animal data.
Contains material that may be harmful in the environment.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. If higher concentrations are inhaled, additional symptoms may include coughing, shortness of breath, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Skin : May cause mild to moderate irritation.

Eyes : May cause mild eye irritation.

Ingestion : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Product may present an aspiration hazard, if ingested in large amounts, causing life-threatening lung injury. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

Effects of long-term (chronic) exposure

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Overexposure to sprays or mists may cause chemical pneumonitis (inflammation of lung tissue).

Carcinogenic status : Possible cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: Contains material that may be harmful in the environment. See Section 12 for more environmental information.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt.%
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	60.00 - 100.00
Distillates (petroleum), acid-treated heavy naphthenic	64742-18-3	7.00 - 13.00
Solvent naphtha (petroleum), light aromatic	64742-95-6	1.00 - 5.00
Chlorinated paraffin	61788-76-9	0.10 - 1.00

SECTION 4 - FIRST AID MEASURES

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Consult a physician.
- Skin contact** : Remove contaminated clothing. Wash affected areas with soap and water. If irritation persists, seek prompt medical attention.
- Eye contact** : Immediately flush eye(s) with plenty of water. If irritation persists, seek prompt medical attention.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES**Fire hazards/conditions of flammability**

- : Combustible liquid and vapour. Will ignite when exposed to heat, flame and other sources of ignition. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Product may float, and be re-ignited at the water's surface. Vapours may be heavier than air and may collect in confined and low-lying areas.

Oxidizing properties : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

- : Not expected to be sensitive to mechanical impact. May be sensitive to static discharge.

Suitable extinguishing media : Dry chemical, foam, carbon dioxide and water fog. Do not use water jet, as this may spread burning material.

Special fire-fighting procedures/equipment

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products

- : Carbon oxides; Nitrogen oxides (NOx); Hydrogen chloride gas; Phosgene; Chlorine; Polycyclic aromatic hydrocarbons; Sulphur oxides; Phosphorus compounds; Other unidentified organic compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : Do not use combustible absorbents, such as sawdust.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapours, fumes, or mists. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flames. Use proper bonding and grounding techniques when transferring liquid. Avoid contact with incompatible materials. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Incompatible materials** : Strong oxidizing agents.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m ³ (As 'Oil mist, mineral') (inhalable)	N/Av	5 mg/m ³ (As 'Oil mist, mineral')	N/Av
Distillates (petroleum), acid-treated heavy naphthenic	5 mg/m ³ (As 'Oil mist, mineral')	N/Av	5 mg/m ³ (As 'Oil mist, mineral')	N/Av
Solvent naphtha (petroleum), light aromatic	N/Av	N/Av	N/Av	N/Av
Chlorinated paraffin	N/Av	N/Av	N/Av	N/Av

- Ventilation and engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
- Skin protection** : Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. Wear resistant clothing and boots.
- Eye / face protection** : Safety glasses with side-shields or chemical splash goggles.
- Other protective equipment** : An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid breathing vapours, fumes, or mists. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, smoke or use cosmetics while working with this product. Remove and wash contaminated clothing before re-use. Wash with soap and water after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Oily liquid. **Appearance** : Clear amber liquid.
- Odour** : Petroleum odour. **Odour threshold** : N/Av
- pH** : N/Av
- Boiling point** : 240.6°C **Specific gravity** : 0.86
- Melting/Freezing point** : N/Av **Coefficient of water/oil distribution** : N/Av
- Vapour pressure (mmHg @ 20° C / 68° F)** : 0.008 **Solubility in water** : Insoluble.
- Vapour density (Air = 1)** : 4.3 **Evaporation rate (n-Butyl acetate = 1)** : < 1
- Volatile organic Compounds (VOC's)** : N/Av **Volatiles (% by weight)** : N/Av
- Flash point** : > 65.6°C
- Flash point Method** : TCC **Auto-ignition temperature** : N/Av

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|--|------------------------------|--|-----------------|
| Lower flammable limit (% by vol.) | : N/Av | Upper flammable limit (% by vol.) | : N/Av |
| Flame Projection Length | : N/Av | Flashback observed | : N/Av |
| Absolute pressure of container | : N/Av | Viscosity | : 128 cp @ 25°C |
| General Information | : No additional information. | | |

Section 10: STABILITY AND REACTIVITY

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed.
- Hazardous polymerization** : Hazardous polymerization does not occur.
- Conditions to avoid** : Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.
- Materials To Avoid And Incompatibility** : Strong oxidizing agents
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

- Target organs** : Eyes, skin, respiratory system, central nervous system, liver and kidneys.
- Routes of exposure** : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES
- Irritancy** : Mild to moderate skin irritant. Mild eye irritant
- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

<u>Ingredients</u>	<u>LC₅₀(4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Distillates (petroleum), hydrotreated heavy naphthenic	> 5 mg/L (mist)	> 5000 mg/kg	> 2000 mg/kg
Distillates (petroleum), acid-treated heavy naphthenic	N/Av	> 5000 mg/kg	> 2000 mg/kg
Solvent naphtha (petroleum), light aromatic	> 17.7 mg/L (vapour)	8400 mg/kg	> 3160 mg/kg
Chlorinated paraffin	N/Av	N/Av	N/Av

- Carcinogenic status** : This product contains Chlorinated paraffin. Chlorinated paraffin is classified as carcinogenic by IARC (Group 2B). No other components are classified as carcinogenic by IARC, ACGIH, OSHA or NTP.
Use caution when pouring this material. This product can generate a complex mixture of airborne material during heating or in a fire. This combustion material can include carcinogenic polycyclic aromatic hydrocarbons.
- Reproductive effects** : Not expected to cause reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : Not expected to be mutagenic in humans.
- Epidemiology** : None known or reported by the manufacturer.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : None known or reported by the manufacturer.
- other important hazards** : CNS depression may result from extreme exposures.
- Conditions aggravated by overexposure** : Pre-existing skin, eye and respiratory disorders.

SECTION 12 - ECOLOGICAL INFORMATION

- Ecotoxicity** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. This product contains the following substance which may also be hazardous for the environment: Solvent naphtha (petroleum), light aromatic; Chlorinated paraffins.
- See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 5000 mg/L (Rainbow trout)	N/Av	None.
Distillates (petroleum), acid-treated heavy naphthenic	64742-18-3	> 1000 mg/L (Rainbow trout) (Read-across)	N/Av	None.
Solvent naphtha (petroleum), light aromatic	64742-95-6	9.2 mg/L (Rainbow trout)	N/Av	None.
Chlorinated paraffin	61788-76-9	N/Av	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L (Daphnia magna)	N/Av	None.
Distillates (petroleum), acid-treated heavy naphthenic	64742-18-3	> 1000 mg/L (Daphnia magna) (QSAR)	N/Av	None.
Solvent naphtha (petroleum), light aromatic	64742-95-6	6.16 mg/L (Daphnia magna)	N/Av	None.
Chlorinated paraffin	61788-76-9	0.3 - 11.1 mg/L/24hr (Daphnia magna)	0.005 - 0.05 mg/L	10

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L/96hr (Green algae)	N/Av	None.
Distillates (petroleum), acid-treated heavy naphthenic	64742-18-3	> 1000 mg/L/72hr (Green algae) (Read-across)	N/Av	None.
Solvent naphtha (petroleum), light aromatic	64742-95-6	N/Av	N/Av	None.
Chlorinated paraffin	61788-76-9	0.043 - 3.7 mg/L/96hr (Green algae)	0.012 mg/L/96hr	10

Mobility : No data is available on the product itself.

Persistence : No data is available on the product itself.
 Contains the following chemicals which are considered to be inherently biodegradable: Solvent naphtha (petroleum), light aromatic; Distillates (petroleum), hydrotreated heavy naphthenic .
 Contains the following chemicals which are not readily biodegradable: Chlorinated paraffins.

Bioaccumulation potential : No data is available on the product itself. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	> 20	N/Av
Distillates (petroleum), acid-treated heavy naphthenic (CAS 64742-18-3)	3.9 - 6 (calculated)	N/Av
Solvent naphtha (petroleum), light aromatic (CAS 64742-95-6)	2.1 - 6 (calculated)	10 - 2500 (calculated)
Chlorinated paraffin (CAS 61788-76-9)	> 6	7800 (Fish) (Read-across)

Other Adverse Environmental 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

Handling for Disposal : Handle waste according to recommendations in Section 7. Do not cut, weld, drill or grind on or near this container. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Methods of Disposal : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	Not regulated	None	
TDG Additional information	None.				

SECTION 15 - REGULATORY INFORMATION

Labelling:

WARNING! Combustible liquid and vapour. Harmful if inhaled. Harmful if absorbed through the skin. May cause skin irritation. May cause respiratory irritation. May be harmful or fatal if swallowed in large amounts. May be an aspiration hazard. Contains material which may cause cancer, based on animal data.

PRECAUTIONS: Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flames. Use proper bonding and grounding techniques when transferring liquid. Avoid contact with incompatible materials. Wash thoroughly after handling. Store in a cool, dry, well ventilated area, away from heat and ignition sources.

FIRST AID: If inhaled, move to fresh air. If breathing stops, provide artificial respiration. Get medical attention if symptoms persist. For skin contact, flush with water for at least 15 minutes, while removing contaminated clothing. If irritation persists, seek prompt medical attention. For eye contact, flush with running water for at least 15 minutes. If irritation persists, seek prompt medical attention. If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

Refer To Material Safety Data Sheet for further information.

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.


SECTION 16 - OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 CNS: Central Nervous System
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 LC: Lethal Concentration
 LD: Lethal Dose

MSHA: Mine Safety and Health Administration
 N/Ap: Not Applicable
 N/Av: Not Available
 NIOSH: National Institute of Occupational Safety and Health
 NOEC: No observable effect concentration
 NTP: National Toxicology Program
 OECD: Organisation for Economic Co-operation and Development
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 RTECS: Registry of Toxic Effects of Chemical Substances
 STEL: Short Term Exposure Limit
 TCC: Tagliabue Closed Cup
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016.
- 2. International Agency for Research on Cancer Monographs, searched 2016.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2016 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2016.

<p><u>Prepared for:</u> Radiator Specialty Co. of Canada 1711 Aimco Blvd. Mississauga, ON, Canada, L4W 1H7 Telephone: 905-625-9117 (Mon. - Fri., 8 AM - 4 PM) Please direct all enquiries to Radiator Specialty.</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

DISCLAIMER OF LIABILITY

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Revision Information

: (M)SDS sections updated:
12. ECOLOGICAL INFORMATION.

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