

## MATERIAL SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION

**Product identifier** : **SYNTHETIC POWER STEERING FLUID**

**Product Use** : Power Steering Fluid .

**Chemical Family** : Mixture.

**Manufacturer part no.** : M2712SC

**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 not a WHMIS controlled product in Canada. It does not meet any of the criteria for a controlled product provided in Part IV of the Controlled Products Regulations (CPR).



**Emergency Overview** : Green liquid. Petroleum odour. Caution! Harmful or fatal if swallowed. May be an aspiration hazard. Can enter the lungs and cause damage. Contact with eyes or skin may cause mild irritation. Fumes from heated product or mists may irritate respiratory tract.

### 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. Overexposure to sprays or mists may cause chemical pneumonitis (inflammation of lung tissue).

*Skin* : May cause slight irritation.

*Eyes* : May cause slight irritation.

*Ingestion* : May cause irritation to the mouth, throat and stomach. May cause nausea, vomiting, and diarrhea. May be an aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.

#### Effects of long-term (chronic) exposure

: Prolonged skin contact may defat the skin and produce dermatitis.

**Carcinogenic status** : See TOXICOLOGICAL INFORMATION, Section 11.

**Additional health hazards** : See TOXICOLOGICAL INFORMATION, Section 11.

#### Potential environmental effects

: See ECOLOGICAL INFORMATION, Section 12.

### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>Wt.%</u>
1-Decene, dimer, hydrogenated	68649-11-6	50.00 - 70.00
Lubricating oils (petroleum)	72623-86-0	10.00 - 30.00
Paraffinic petroleum distillate	64742-65-0	< 10.0
White mineral oil, light paraffinic	92062-35-6	< 10.0
VI Improver (Polymer)	68171-50-6	< 5.0

Note: This product is not a WHMIS controlled product in Canada.

**SECTION 4 - FIRST AID MEASURES**

- Inhalation** : If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. Obtain medical attention if symptoms develop and persist.
- 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** : Seek immediate medical attention/advice. Do not induce vomiting. Never give anything by mouth to an unconscious person.
- Notes For Physician** : Treat symptomatically.

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

- : Not flammable under normal conditions of use. Product may float, and be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Oxidizing properties** : None known.

**Explosion data: Sensitivity to mechanical impact / static discharge**

- : Not expected to be sensitive to mechanical impact or 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); Sulphur oxides; Phosphorus compounds; Polycyclic aromatic hydrocarbons; Other unidentified organic compounds.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

- Personal precautions** : Wear suitable 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.
- Spill response/cleanup** : Ventilate area of release. Remove all sources of ignition. 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** : None known.

**SECTION 7 - HANDLING AND STORAGE**

- Safe Handling procedures** : Use with adequate ventilation. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep containers closed when not in use.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Keep away from direct sunlight. Keep away from incompatibles. Inspect periodically for damage or leaks.
- 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****Exposure Limits**

<b><u>Ingredients</u></b>	<b><u>ACGIH TLV</u></b>		<b><u>OSHA PEL</u></b>	
	<b><u>TWA</u></b>	<b><u>STEL</u></b>	<b><u>PEL</u></b>	<b><u>STEL</u></b>
1-Decene, dimer, hydrogenated	N/Av	N/Av	N/Av	N/Av
Lubricating oils (petroleum)	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av
Paraffinic petroleum distillate	N/Av	N/Av	N/Av	N/Av
White mineral oil, light paraffinic	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av
VI Improver (Polymer)	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. Depending on conditions of use, an impervious apron should be worn.

**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 vapors or mists. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse. Wash hands thoroughly after using this product, and before eating, drinking or smoking.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	: Liquid.	<b>Appearance</b>	: dark green
<b>Odour</b>	: Petroleum odour.	<b>Odour threshold</b>	: N/Av
<b>pH</b>	: N/Av		
<b>Boiling point</b>	: 298.8°C	<b>Specific gravity</b>	: 0.83
<b>Melting/Freezing point</b>	: N/Av	<b>Coefficient of water/oil distribution</b>	: N/Av
<b>Vapour pressure (mmHg @ 20° C / 68° F)</b>	: N/Av	<b>Solubility in water</b>	: Insoluble.
<b>Vapour density (Air = 1)</b>	: N/Av	<b>Evaporation rate (n-Butyl acetate = 1)</b>	: N/Av
<b>Volatile organic Compounds (VOC's)</b>	: N/Av	<b>Volatiles (% by weight)</b>	: N/Av
<b>Flash point</b>	: > 150°C		
<b>Flash point Method</b>	: Cleveland Open Cup	<b>Auto-ignition temperature</b>	: N/Av
<b>Lower flammable limit (% by vol.)</b>	: N/Av	<b>Upper flammable limit (% by vol.)</b>	: N/Av
<b>Flame Projection Length</b>	: N/Av	<b>Flashback observed</b>	: N/Av
<b>Absolute pressure of container</b>	: N/Av	<b>Viscosity</b>	: N/Av
<b>General Information</b>	: No additional information.		

**Section 10: STABILITY AND REACTIVITY**

<b>Stability and reactivity</b>	: Stable under the recommended storage and handling conditions prescribed.
<b>Hazardous polymerization</b>	: Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	: Avoid heat and open flame. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.
<b>Materials To Avoid And Incompatibility</b>	: 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 and digestive system.**Routes of exposure** : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES**Irritancy** : Slightly irritating.**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>	<b>LC<sub>50</sub>(4hr)</b> <u>inh, rat</u>	<b>LD<sub>50</sub></b>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
1-Decene, dimer, hydrogenated	N/Av	> 5 mL/kg	> 3000 mg/kg
Lubricating oils (petroleum)	> 2180 mg/m <sup>3</sup> (mist)	> 5000 mg/kg	> 2000 mg/kg
Paraffinic petroleum distillate	> 5 mg/L (mist)	> 5000 mg/kg	> 5000 mg/kg
White mineral oil, light paraffinic	N/Av	> 5000 mg/kg	N/Av
VI Improver (Polymer)	N/Av	N/Av	N/Av

**Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, 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** : None known or reported by the manufacturer.**Conditions aggravated by overexposure**

: Pre-existing skin, eye and respiratory disorders.

**SECTION 12 - ECOLOGICAL INFORMATION****Ecotoxicity** : No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

See the following tables for individual ingredient ecotoxicity data.

**Ecotoxicity data:**

<u>Ingredients</u>	<b>CAS No</b>	<b>Toxicity to Fish</b>		
		<b>LC50 / 96h</b>	<b>NOEC / 21 day</b>	<b>M Factor</b>
1-Decene, dimer, hydrogenated	68649-11-6	N/Av	N/Av	None.
Lubricating oils (petroleum)	72623-86-0	> 5000 mg/L (Rainbow trout)	N/Av	None.
Paraffinic petroleum distillate	64742-65-0	> 100 mg/L (Fathead minnow)	N/Av	None.
White mineral oil, light paraffinic	92062-35-6	> 10 000 mg/L (Bluegill sunfish)	N/Av	None.
VI Improver (Polymer)	68171-50-6	N/Av	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
1-Decene, dimer, hydrogenated	68649-11-6	N/Av	N/Av	None.
Lubricating oils (petroleum)	72623-86-0	> 1000 mg/L (Daphnia magna)	N/Av	None.
Paraffinic petroleum distillate	64742-65-0	> 10 000 mg/L (Daphnia magna)	10 mg/L (NOEL)	None.
White mineral oil, light paraffinic	92062-35-6	N/Av	N/Av	None.
VI Improver (Polymer)	68171-50-6	N/Av	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
1-Decene, dimer, hydrogenated	68649-11-6	N/Av	N/Av	None.
Lubricating oils (petroleum)	72623-86-0	N/Av	N/Av	None.
Paraffinic petroleum distillate	64742-65-0	> 1000 mg/L/96hr (Green algae)	> 100 mg/L/72hr (Green algae)	None.
White mineral oil, light paraffinic	92062-35-6	N/Av	N/Av	None.
VI Improver (Polymer)	68171-50-6	N/Av	N/Av	None.

**Mobility** : No data is available on the product itself.

**Persistence** : No data is available on the product itself.

**Bioaccumulation potential** : No data is available on the product itself.

**Other Adverse Environmental effects**

: No data is available on the product itself.

### SECTION 13 - DISPOSAL CONSIDERATIONS

**Handling for Disposal** : Handle waste according to recommendations in Section 7.

**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:

This product is not a WHMIS controlled product in Canada. As such, this product does not require a WHMIS Supplier label.

#### Canadian Information:

Canadian Environmental Protection Act (CEPA): All ingredients listed appear on the Domestic Substances List (DSL) except: White mineral oil, light paraffinic.

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  
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/Av: 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  
TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
TLV: Threshold Limit Values  
TWA: Time Weighted Average  
WHMIS: Workplace Hazardous Materials Identification System  
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**References**

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2013.  
2. International Agency for Research on Cancer Monographs, searched 2013.  
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2013 (Chempendium, HSDB and RTECs).  
4. Material Safety Data Sheets from manufacturer.  
5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2013.

**Prepared for:**

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**MSDS Preparation Date (mm/dd/yyyy)**

: 08/09/2007

**SYNTHETIC POWER STEERING FLUID**

M2712SC

MSDS Revision Date (mm/dd/yyyy): 07/26/2013

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**MSDS Revision Date (mm/dd/yyyy)**

: 07/26/2013

**Revision No.**

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**Revision Information**

: (M)SDS sections updated:  
8. EXPOSURE CONTROLS / PERSONAL PROTECTION (Exposure Limit Values);  
12. ECOLOGICAL INFORMATION.

**END OF DOCUMENT**