

## MATERIAL SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION

**Product identifier** : **LIQUID WRENCH PENETRANT**

**Product Use** : Multi-purpose penetrating oil (aerosol).

**Chemical Family** : Mixture.

**Manufacturer part no.** : L106C, L112C, L112/6C

**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, 9AM - 5PM)

**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 A (Pressurized containers);
- Class B5 (Flammable Aerosols);
- 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** : Aerosol of dark liquid. Petroleum odour.  
 WARNING! Flammable aerosol. Contents under pressure. Harmful if inhaled. May cause nausea, vomiting, headache and other central nervous system effects. May be harmful if swallowed. May be an aspiration hazard. Causes skin irritation. May cause respiratory irritation. Contains material which may cause cancer, based on animal data.

### POTENTIAL HEALTH EFFECTS:

#### Signs and symptoms of short-term (acute) exposure

- Inhalation** : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. In extremely high concentrations, product may act as an asphyxiant and cause increased breathing and pulse rates, fatigue and unconsciousness.
- Skin** : May cause moderate to severe skin irritation. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.
- Eyes** : May cause mild eye irritation. If product is sprayed directly into the eyes, could cause freezing of the eye.
- Ingestion** : Not an expected route of entry under normal conditions of use. However, if the product is sprayed directly into mouth and large amounts of the liquid concentrate are swallowed, it may cause irritation to the mouth, throat and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. 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 cause dermatitis (rash), characterized by red, dry, itching skin.

- Carcinogenic status** : Cancer hazard. 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>
Kerosene	8008-20-6	30.00 - 60.00
Petroleum oil	*64742-52-5 / 64742-53-6	30.00 - 60.00
Carbon dioxide	124-38-9	1.00 - 5.00

\*Note: Composition of this ingredient may vary between the two indicated CAS #'s, or may be a mixture of both.

### SECTION 4 - FIRST AID MEASURES

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.
- Skin contact** : Remove/Take off immediately all contaminated clothing. Wash exposed area thoroughly with soap and water for at least 15 minutes. Get medical attention.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes. 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

- : Flammable aerosol. Will ignite when exposed to heat, flame and other sources of ignition. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time.

**Oxidizing properties** : None known.

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

- : Aerosols are sensitive to mechanical impact. Vapours in the flammable range may be ignited by a static discharge of sufficient energy.

**Suitable extinguishing media** : Dry chemical, foam, carbon dioxide and water fog.

#### 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. Shield personnel to protect from venting or rupturing containers. 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; Other unidentified organic compounds.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up.
- 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. 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. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. No sparking tools should be used. Avoid contact with incompatible materials. Do not puncture or incinerate. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Keep away from 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; Reactive metals.
- 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**

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Kerosene	200mg/m <sup>3</sup> (skin)	N/Av	N/Av	N/Av
Petroleum oil	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	10 mg/m <sup>3</sup> (As 'Oil mist, mineral')	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av
Carbon dioxide	5000 ppm	30,000 ppm	5000 ppm (9000 mg/m <sup>3</sup> )	N/Av

**Ventilation and engineering measures**

- : Use in a well-ventilated area. 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. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

**Skin protection**

- : Impervious gloves must be worn when using this product. Wear impervious gloves, such as nitrile rubber. Advice should be sought from glove suppliers.

**Eye / face protection**

- : Chemical splash goggles are recommended.

**Other protective equipment**

- : Depending on conditions of use, an impervious apron should be worn. An eyewash station and safety shower should be made available in the immediate working area.

**General hygiene considerations**

- : Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapours or spray mist. Wash hands thoroughly after using this product, and before eating, drinking or smoking. Remove and wash contaminated clothing before re-use.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	: Liquid aerosol.	<b>Appearance</b>	: Dark liquid.
<b>Odour</b>	: Petroleum odour.	<b>Odour threshold</b>	: N/Av
<b>pH</b>	: N/Av		
<b>Boiling point</b>	: > 149°C (concentrate)	<b>Specific gravity</b>	: 0.85 @ 20°C
<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>	: < 50
<b>Flash point</b>	: 55.6°C (concentrate)		
<b>Flash point Method</b>	: Tag closed cup	<b>Auto-ignition temperature</b>	: Not available.
<b>Lower flammable limit (% by vol.)</b>	: N/Av	<b>Upper flammable limit (% by vol.)</b>	: N/Av
<b>Flame Projection Length</b>	: 15 - 100 cm	<b>Flashback observed</b>	: NO

**Absolute pressure of container** : N/Av  
**Viscosity** : N/Av

**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 polymerisation does not occur.  
**Conditions to avoid** : Avoid heat and open flame. Keep away from direct sunlight.  
**Materials To Avoid And Incompatibility** : See Section 7 (Handling and Storage) for further details.  
**Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Target organs** : Eyes, skin, respiratory system, digestive system, central nervous system.  
**Routes of exposure** : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* YES  
**Irritancy** : Mild eye irritant.  
 May cause moderate to severe skin irritation.  
**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>LC<sub>50</sub>(4hr)</u>	<u>LD<sub>50</sub></u>	
	<u>inh. rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Kerosene	> 5000 mg/m <sup>3</sup>	> 5000 mg/kg	> 2000 mg/kg
Petroleum oil	2180mg/m <sup>3</sup>	> 5000 mg/kg	> 2000 mg/kg
Carbon dioxide	N/Av	N/Av (gas)	N/Av (gas)

**Carcinogenic status** : Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: Kerosene.  
 No other components are classified as carcinogenic by IARC, ACGIH, OSHA or NTP.  
**Reproductive effects** : Not expected to have other 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** : May cause central nervous system depression.  
**Conditions aggravated by overexposure** : None known or reported by the manufacturer.


**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.  
**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** : None known or reported by the manufacturer.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Handling for Disposal** : Handle waste according to recommendations in Section 7.  
 Do not puncture or incinerate containers.  
**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	UN1950	AEROSOLS	2.1	none	
<b>TDG Additional information</b>	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, is shipping under this exemption.				

**SECTION 15 - REGULATORY INFORMATION****Labelling:**

WARNING! Flammable aerosol. Contents under pressure. Harmful if inhaled. May cause nausea, vomiting, headache and other central nervous system effects. May be harmful if swallowed. May be an aspiration hazard. Causes skin irritation. May cause respiratory irritation. Contains material which may cause cancer, based on animal data.

Precautions: Use in a well-ventilated area. Wear suitable protective equipment during handling. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, and open flames. No sparking tools should be used. Avoid contact with incompatible materials. Do not puncture or incinerate containers. Wash thoroughly after handling. Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight

FIRST AID: If inhaled, move to fresh air. If breathing stopped, begin artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention. For skin contact, immediately remove contaminated clothing then wash thoroughly with soap and water for at least 15 minutes. Get 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. Obtain medical attention immediately.

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).

Canadian WHMIS Classification: 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**

<b>Legend</b>	: ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstract Services CPR: Controlled Products Regulation 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 NTP: National Toxicology Program 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
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TWA: Time Weighted Average  
 TSCA: Toxic Substance Control Act  
 WHMIS: Workplace Hazardous Materials Identification System

**References**

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2009.
- 2. International Agency for Research on Cancer Monographs, searched 2010.
- 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2010 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.

<p><b>Prepared for:</b>                  Radiator Specialty Co. of Canada                  1711 Aimco Blvd., Mississauga, ON, Canada, L4W 1H7                  Telephone: 905-625-9117 (Monday - Friday, 9 AM - 5 PM)                  Please direct all enquiries to Radiator Specialty.</p>	
<p><b>Prepared by:</b>                  ICC The Compliance Center Inc.  <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	

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**Revision No.**

: 2

**Revision Information**

- : Sections 2 and 3, switched.
- (M)SDS sections updated:
  - 2. HAZARDS IDENTIFICATION;
  - 3. COMPOSITION/INFORMATION ON INGREDIENTS;
  - 4. FIRST AID MEASURES;
  - 5. FIRE-FIGHTING MEASURES;
  - 8. EXPOSURE CONTROLS / PERSONAL PROTECTION;
  - 9. PHYSICAL AND CHEMICAL PROPERTIES;
  - 11. TOXICOLOGICAL INFORMATION;
  - 12. ECOLOGICAL INFORMATION;
  - 15. REGULATORY INFORMATION.

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