LIQUID WRENCH PENETRANT

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

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:
- 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, pricking 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

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>Wt.%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene</td>
<td>8008-20-6</td>
<td>30.00 - 60.00</td>
</tr>
<tr>
<td>Petroleum oil</td>
<td>*64742-52-5 / 64742-53-6</td>
<td>30.00 - 60.00</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>124-38-9</td>
<td>1.00 - 5.00</td>
</tr>
</tbody>
</table>

*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**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
</tr>
<tr>
<td>Kerosene</td>
<td>200mg/m³ (skin)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Petroleum oil</td>
<td>5 mg/m³ (As 'Oil mist, mineral')</td>
<td>10 mg/m³ (As 'Oil mist, mineral')</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>5000 ppm</td>
<td>30,000 ppm</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid aerosol.</th>
<th>Appearance</th>
<th>Dark liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>Petroleum odour.</td>
<td>Odour threshold</td>
<td>N/Av</td>
</tr>
<tr>
<td>pH</td>
<td>N/Av</td>
<td>Specific gravity</td>
<td>0.85 @ 20°C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 149°C (concentrate)</td>
<td>Coefficient of water/oil distribution</td>
<td>N/Av</td>
</tr>
<tr>
<td>Melting/Freezing point</td>
<td>N/Av</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure (mmHg @ 20°C / 68°F)</td>
<td>N/Av</td>
<td>Solubility in water</td>
<td>Insoluble.</td>
</tr>
<tr>
<td>Vapour density (Air = 1)</td>
<td>N/Av</td>
<td>Evaporation rate (n-Butyl acetate = 1)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Volatile organic Compounds (VOC’s)</td>
<td>N/Av</td>
<td>Volatiles (% by weight)</td>
<td>&lt; 50</td>
</tr>
<tr>
<td>Flash point</td>
<td>55.6°C (concentrate)</td>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point Method</td>
<td>Tag closed cup</td>
<td>Upper flammable limit (% by vol.)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Lower flammable limit (% by vol.)</td>
<td>N/Av</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame Projection Length</td>
<td>15 - 100 cm</td>
<td>Flashback observed</td>
<td>NO</td>
</tr>
</tbody>
</table>
LIQUID WRENCH PENETRANT

MSDS Revision Date (mm/dd/yyyy): 06/18/2010

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.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>LC50(4hr) inh, rat</th>
<th>LC50(4hr) (Oral, rat)</th>
<th>LD50 (Rabbit, dermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene</td>
<td>&gt; 5000 mg/m³</td>
<td>&gt; 5000 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Petroleum oil</td>
<td>2180mg/m³</td>
<td>&gt; 5000 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>N/Av</td>
<td>N/Av (gas)</td>
<td>N/Av (gas)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN Number</th>
<th>Shipping Name</th>
<th>Class</th>
<th>Packing Group</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>UN1950</td>
<td>AEROSOLS</td>
<td>2.1</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Additional information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Legend:

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
DISCLAIMER OF LIABILITY

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MSDS Preparation Date (mm/dd/yyyy) : 06/25/2007

MSDS Revision Date (mm/dd/yyyy) : 06/18/2010

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.

END OF DOCUMENT