

## MATERIAL SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION

**Product identifier** : **LIQUID WRENCH PENETRATING SOLVENT**

**Product Use** : Lubricant.

**Chemical Family** : Mixture.

**Manufacturer part no.** : PL116PC

**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** : Dark liquid. Petroleum odour.  
 Warning! Combustible liquid and vapour. Harmful if inhaled. May be harmful if absorbed through the skin. May be harmful or fatal if swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May cause respiratory irritation. May be an aspiration hazard. May cause skin irritation. Possible birth defect hazard - contains material that may cause birth defects, 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** : 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. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

**Skin** : May cause moderate skin irritation. May be absorbed and cause symptoms similar to those for inhalation.

**Eyes** : May cause mild eye irritation. Mild redness, watering, stinging.

**Ingestion** : May cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Material is 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 or repeated contact may cause drying, cracking and defatting of the skin. Excessive overexposure could cause liver, kidney and blood system effects (anemia).

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

**Additional health hazards** : May cause birth defects. 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**

<b>Ingredients</b>	<b>CAS #</b>	<b>Wt.%</b>
stoddard solvent	8052-41-3	40.00 - 70.00
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	15.00 - 40.00
1,2,4-Trimethylbenzene	95-63-6	1.00 - 5.00
1,3,5-Trimethylbenzene	108-67-8	1.00 - 5.00
Xylene	1330-20-7	1.00 - 5.00
Dipropylene glycol methyl ether	34590-94-8	0.10 - 1.00
Solvent-refined heavy paraffinic petroleum distillates	64741-88-4	0.10 - 1.00

**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 off immediately with soap and plenty of water. 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. This product is a CNS depressant. Symptoms may be delayed.

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

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

**Oxidizing properties** : None known.

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

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

**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; Aldehydes; Hydrocarbons; Nitrogen oxides (NOx); Sulphur oxides; Phosphorus compounds; Polycyclic aromatic hydrocarbons; Other unidentified organic compounds.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

- Personal precautions** : All persons dealing with the clean-up should wear the appropriate personal 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. Do not breathe vapours or spray mist. 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. Keep container tightly closed when not in use.
- 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. Do not eat or smoke in areas of use or storage.
- 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>
stoddard solvent	100 ppm	N/Av	500 ppm	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	N/Av
1,2,4-Trimethylbenzene	25 ppm (trimethylbenzene isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av
1,3,5-Trimethylbenzene	25 ppm (trimethylbenzene isomers)	N/Av	25 ppm (trimethylbenzene isomers) (final rule limit)	N/Av
Xylene	100 ppm	150 ppm	100 ppm	N/Av
Dipropylene glycol methyl ether	100 ppm (skin)	150 ppm (skin)	100 ppm (skin)	N/Av
Solvent-refined heavy paraffinic petroleum distillates	5 mg/m <sup>3</sup> (inhalable) (As 'Oil mist, mineral')	N/Av	5 mg/m <sup>3</sup> (As 'Oil mist, mineral')	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** : Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers. Depending on conditions of use, an impervious apron should be worn.
- Eye / face protection** : Chemical splash goggles are recommended.
- Other protective equipment** : An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Do not breathe vapours or spray mist. 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. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- Physical state** : Liquid. **Appearance** : Dark liquid.
- Odour** : Petroleum odour. **Odour threshold** : N/Av
- pH** : N/Av
- Boiling point** : 160°C **Specific gravity** : 0.85
- Melting/Freezing point** : N/Av **Coefficient of water/oil distribution** : 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>	: 40.6°C	<b>Auto-ignition temperature</b>	: N/Av
<b>Flash point Method</b>	: TCC	<b>Upper flammable limit (% by vol.)</b>	: 5.0
<b>Lower flammable limit (% by vol.)</b>	: 0.7	<b>Flashback observed</b>	: N/Av
<b>Flame Projection Length</b>	: N/Av	<b>Viscosity</b>	: N/Av
<b>Absolute pressure of container</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. Ensure adequate ventilation, especially in confined areas. Keep out of direct sunlight.
<b>Materials To Avoid And Incompatibility</b>	: Strong oxidizing agents
<b>Hazardous decomposition products</b>	: None known, refer to hazardous combustion products in Section 5.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b>Target organs</b>	: Eyes, skin, respiratory system, digestive system, central nervous system, blood system. Liver; Kidneys.
<b>Routes of exposure</b>	: <i>Inhalation:</i> YES <i>Skin Absorption:</i> YES <i>Skin &amp; Eyes:</i> YES <i>Ingestion:</i> YES
<b>Irritancy</b>	: Moderate skin irritant. Mild eye irritant.
<b>Toxicological data</b>	: 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>inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
stoddard solvent	> 5.5 mg/L	> 5000 mg/kg	> 3000 mg/kg
Distillates (petroleum), hydrotreated heavy naphthenic	> 5 mg/L (mist)	> 5000 mg/kg	> 2000 mg/kg
1,2,4-Trimethylbenzene	18 mg/L	5000 mg/kg	> 3160 mg/kg
1,3,5-Trimethylbenzene	24 mg/L	23 000 mg/kg	N/Av
Xylene	6350 ppm	3523 mg/kg	12 180 mg/kg
Dipropylene glycol methyl ether	N/Av	5120 mg/kg	9480 mg/kg
Solvent-refined heavy paraffinic petroleum distillates	N/Av	> 5000 mg/kg	> 2000 mg/kg

<b>Carcinogenic status</b>	: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
<b>Reproductive effects</b>	: Not expected to cause reproductive effects.
<b>Teratogenicity</b>	: This product contains Xylene. Xylene may cause fetotoxic effects at doses which are not maternally toxic, based on animal data.
<b>Mutagenicity</b>	: Not expected to be mutagenic in humans.
<b>Epidemiology</b>	: None known or reported by the manufacturer.
<b>Sensitization to material</b>	: Not expected to be a skin or respiratory sensitizer.
<b>Synergistic materials</b>	: None known or reported by the manufacturer.
<b>other important hazards</b>	: 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: stoddard solvent; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; Xylene.

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
stoddard solvent	8052-41-3	2.1 - 4.2 mg/L (Bluegill sunfish)	N/Av	None.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 5000 mg/L (Rainbow trout)	N/Av	None.
1,2,4-Trimethylbenzene	95-63-6	7.19 - 8.28 mg/L (Fathead minnow)	N/Av	None.
1,3,5-Trimethylbenzene	108-67-8	12.52 mg/L (Goldfish)	N/Av	None.
Xylene	1330-20-7	8.2 mg/L (Rainbow trout)	N/Av	None.
Dipropylene glycol methyl ether	34590-94-8	> 10 000 mg/L (Fathead minnow)	N/Av	None.
Solvent-refined heavy paraffinic petroleum distillates	64741-88-4	> 5000 mg/L (Rainbow trout)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
stoddard solvent	8052-41-3	N/Av	N/Av	None.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L (Daphnia magna)	N/Av	None.
1,2,4-Trimethylbenzene	95-63-6	6.14 mg/L (Daphnia magna)	N/Av	None.
1,3,5-Trimethylbenzene	108-67-8	50 mg/L/24hr (Daphnia magna)	N/Av	None.
Xylene	1330-20-7	3.2 - 9.56 mg/L (Daphnia magna)	N/Av	None.
Dipropylene glycol methyl ether	34590-94-8	1919 mg/L (Daphnia magna)	N/Av	None.
Solvent-refined heavy paraffinic petroleum distillates	64741-88-4	> 1000 mg/L (Daphnia magna)	N/Av	None.


Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
stoddard solvent	8052-41-3	N/Av	N/Av	None.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L/96hr (Green algae)	N/Av	None.
1,2,4-Trimethylbenzene	95-63-6	N/Av	N/Av	None.
1,3,5-Trimethylbenzene	108-67-8	25 mg/L/48hr (Green algae)	N/Av	None.
Xylene	1330-20-7	3.2 - 4.9 mg/L/72hr (Green algae)	N/Av	None.
Dipropylene glycol methyl ether	34590-94-8	> 969 mg/L/72hr (Green algae)	N/Av	None.
Solvent-refined heavy paraffinic petroleum distillates	64741-88-4	N/Av	N/Av	None.

- 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: stoddard solvent; 1,2,4-Trimethylbenzene; Xylene.  
 Contains the following chemicals which are not readily biodegradable: Distillates (petroleum), hydrotreated heavy naphthenic; 1,3,5-Trimethylbenzene; Distillates (petroleum), solvent-refined heavy paraffinic.
- Bioaccumulation potential** : No data is available on the product itself. Contains: stoddard solvent; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; Xylene.  
 The log Kow value for stoddard solvent is 3.5 - 6.4.  
 The log Pow value for 1,2,4-Trimethylbenzene is 3.63, and its Bioconcentration Factor (BCF) is 31 - 275.  
 1,3,5-Trimethylbenzene has a Bioconcentration Factor (BCF) of 23 - 328, and its log Pow value is 3.6 - 3.93.  
 The log Pow for Xylene is 3.12.
- 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. 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	UN1268	PETROLEUM PRODUCTS, N.O.S.	3	III	
<b>TDG Additional information</b>	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption. Within Canada only, the 'Flammable Liquids General Exemption' may apply. This material may be shipped as non-regulated material when in small means of containment (<450 Litres; or 'non-bulk' containers such as 60 L drums), provided the requirements of TDG section 1.33 are met. Section 1.33 of the Regulations is an exemption permitting the transportation of this product in small means of containment as not regulated.				

**SECTION 15 - REGULATORY INFORMATION**

**Labelling:**

Warning! Combustible liquid and vapour. Harmful if inhaled. May be harmful if absorbed through the skin. May be harmful or fatal if swallowed. May cause nausea, vomiting, headache and other central nervous system effects. May cause respiratory irritation. May be an aspiration hazard. May cause skin irritation. Possible birth defect hazard - contains material that may cause birth defects, 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. 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 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, wash with soap and water while removing contaminated clothing. 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. Seek immediate medical attention/advice.

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 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.

<p><b><u>Prepared for:</u></b>  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><b><u>Prepared by:</u></b>  ICC The Compliance Center Inc.  <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	

**DISCLAIMER OF LIABILITY**

This Material Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Radiator Specialty Co. of Canada and CCOHS' Web Information Service. The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Radiator Specialty Co. of Canada expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process. This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Radiator Specialty Co. of Canada.

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

: 06/16/2008

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

: 08/09/2013

**Revision No.**

: 3

**Revision Information**

: (M)SDS sections updated:  
2. HAZARDS IDENTIFICATION (Ecological information);  
12. ECOLOGICAL INFORMATION.

**END OF DOCUMENT**