Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Personal protective equipment
	**Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).** **Class D-1B: Material causing immediate and serious toxic effects (Toxic).** **Class D-2A: Material causing other toxic effects (Very toxic).** **Class D-2B: Material causing other toxic effects (Toxic).**	

Section 1. Product and Company Identification

Product name / Trade name	Lacquer Thinner	**Associated Product's Item Code**	13-554
Synonym	Not available.	**CAS #**	Mixture.
Chemical family	Mixture. (Solvent.)	**Validation date**	Nov. 12 2007
Chemical formula	Not applicable.	**Print date**	Nov. 12 2007
Manufacturer	Recochem Inc. 850 Montee de Liesse Montreal, Quebec H4T 1P4 (514) 341-3550 www.recochem.com	**In case of emergency**	Recochem Inc. Communications and Regulatory Affairs Department (905) 791-1788
Material uses	Coatings: Solvent for lacquers and paints.		

Section 2. Hazardous Ingredients

Canada

Name	CAS number	%
Toluene	108-88-3	60-80
Methanol	67-56-1	15-20
2-butanone	78-93-3	10-15

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 3. Hazard Identification

Emergency Overview

WARNING !

FLAMMABLE LIQUID AND VAPOR. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Flammable liquid. Keep away from heat, sparks and flame. Avoid breathing vapor or mist. Avoid contact with skin and clothing. May cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.

Potential Acute Health Effects

See Section #11: "Toxicological Information" for further human health effects.

Hazardous by the following route of exposure: of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. Prolonged inhalation exposure can lead to central nervous system (CNS) depression.

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Note to Physician	Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary injury and possible death. This product contains methanol. Acute exposure to methanol, either through ingestion or breathing high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours after exposure. Symptoms and signs are usually limited to CNS, eyes and gastrointestinal tract. Because of the initial CNS's effects of headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within two hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended. This product contains Toluene, a known central nervous system (CNS) depressant. Handle situation of misuse accordingly.

Section 4. First aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire fighting measures

Products of combustion	Decomposition products may include the following materials: carbon oxides
Fire-fighting media and instructions	Use dry chemical, CO_2, water spray (fog) or foam.
Fire Hazards	Vapor may travel a considerable distance to source of ignition and flash back. Liquid will float and may reignite on surface of water.
Explosion Hazards	Vapours may travel along ground and flashback along vapour trail.

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Section 6. Accidental release measures

Small spill and leak	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
Large spill and leak	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	**See Section #10 for applicable incompatible materials.** Do not store above the following temperature: 38°C (100.4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls, personal protection

Engineering controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Personal protection	
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: splash goggles
Body	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber

Product name	**Exposure limits**
Canada	

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Toluene	**ACGIH (Canada, 2003). Skin** TWA: 50 ppm 8 hour(s). TWA: 188 mg/m³ 8 hour(s).
Methanol	**ACGIH (Canada, 2003). Skin** TWA: 200 ppm 8 hour(s). STEL: 250 ppm 15 minute(s). TWA: 260 mg/m³ 8 hour(s). STEL: 328 mg/m³ 15 minute(s).
2-butanone	**ACGIH (Canada, 2003).** TWA: 200 ppm 8 hour(s). STEL: 300 ppm 15 minute(s). TWA: 590 mg/m³ 8 hour(s). STEL: 885 mg/m³ 15 minute(s).

United States

Toluene	**OSHA (United States, 2003).** TWA: 200 ppm 8 hour(s). STEL: 300 ppm 15 minute(s).
Methanol	**OSHA (United States, 2003).** TWA: 200 ppm 8 hour(s). TWA: 260 mg/m³ 8 hour(s).
2-butanone	**OSHA (United States, 2003).** TWA: 200 ppm 8 hour(s). TWA: 590 mg/m³ 8 hour(s).

Section 9. Physical and chemical properties

Physical State and Appearance	Liquid.	**Odour**	Characteristic.
Molecular weight	Not applicable.	**Taste**	Not available.
pH	Not available.	**Colour**	Colourless.
Boiling/condensation point	Lowest known value: 64.5°C (148.1°F) (Methanol). Weighted average: 98.17°C (208.7°F)	**Volatility**	100% (w/w).
Melting/freezing point	May start to solidify at the following temperature: -86°C (-122.8°F) This is based on data for the following ingredient: 2-butanone. Weighted average: -94.4°C (-137.9°F)	**Evaporation rate**	Highest known value: 2.7 (2-butanone) Weighted average: 2.27compared with Butyl acetate.
Relative density	0.84 to 0.85 (Water = 1)	**Odour Threshold**	Lowest known value: 2 to 85 ppm (2-butanone) Weighted average: 403.74 ppm
Vapour Pressure	Highest known value: 12.8 kPa (96 mm Hg) (at 20°C) (Methanol). Weighted average: 5.46 kPa (40.95 mm Hg) (at 20°C)	**Viscosity**	Dynamic: Highest known value: 0.59 cP (Toluene) Weighted average: 0.56 cP
Vapour Density	Highest known value: 3.1 (Air = 1) (Toluene). Weighted average: 2.67 (Air = 1)	**Solubility**	Easily soluble in the following materials: hot water, methanol, diethyl ether, n-octanol, acetone. Insoluble in the following materials: cold water.
VOC Content	100 (%)	**Other Properties**	Not available.

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The product is:	Flammable.
Auto-ignition temperature	Lowest known value: 385°C (725°F) (Methanol).
Flash Point	Closed cup: -2°C (28.4°F). (Tagliabue)
Flammable limits	Greatest known range: Lower: 6% Upper: 36% (Methanol)
Fire hazards in the presence of various substances	Extremely flammable in the presence of open flames, sparks and static discharge, of heat. Non-flammable in the presence of shocks.

Section 10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions of instability	Not available.
Incompatibility with various substances	Reactive with oxidizing agents, acids.

Section 11. Toxicological information

Routes of entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Environmental effects	No known significant effects or critical hazards.
Acute effects on humans	
Eyes	Hazardous by the following route of exposure: of eye contact (irritant).
Skin	Hazardous by the following route of exposure: of skin contact (irritant, permeator). Can cause dermatitis. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
Inhalation	Hazardous by the following route of exposure: of inhalation. Prolonged inhalation exposure can lead to central nervous system (CNS) depression.
Ingestion	Hazardous by the following route of exposure: of ingestion. May be fatal or cause blindness if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Chronic effects on humans	Hazardous by the following route of exposure: of skin contact (irritant, permeator), of ingestion. Skin irritation caused by chronic skin exposure can lead to sensitivity to temperature and increased susceptibility to allergens. **CARCINOGENIC EFFECTS**: Classified A4 (Not classifiable for humans or animals.) by ACGIH [Toluene]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, D (Not classifiable for humans or animals.) by EPA [2-butanone]. Classified A5 (Not suspected for humans.) by ACGIH, 4 (Probably not for humans.) by IARC, None. by OSHA [Methanol]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, D (Not classifiable for humans or animals.) by EPA [2-propanone]. **MUTAGENIC EFFECTS**: Non-mutagenic for bacteria and/or yeast. [2-propanone]. **TERATOGENIC EFFECTS**: Teratogenic in mice at levels below maternal toxicity. (methanol) **DEVELOPMENTAL TOXICITY**: Fetotoxic in mice at levels below maternal toxicity. (methanol) The substance may be toxic to central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

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Section 12. Ecological information

Ecotoxicity

For accidential discharges into environment, see Section #6: "Accidential Release Measures" for suggested instructions.
No known significant effects or critical hazards.

Not available.

Section 13. Disposal considerations

Waste information

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Canada Transportation of Dangerous Goods (TDG) Information

Primary Class	Class 3: Flammable liquid.
Subsidiary Class (if applicable)	-
Proper shipping name	Paint related material (Toluene, Methanol)
Hazard identification number	UN 1263
Packing group	II
Special Provisions	In containers of 5 L (5Kg) capacity or less this product is classified as a "Limited quantity""Consumer Commodity" under TDG regulations.

International Maritime Dangerous Goods (IMDG) Transportation Information

Primary Class	Class 3: Flammable liquid.
Subsidiary Class (if applicable)	-
Proper shipping name	Paint related material (Toluene, Methanol)
Hazard identification number	UN 1263
Packing group	II
Marine pollutant	Not a pollutant.
Special Provisions	In containers of 5 L (5Kg) capacity or less this product is classified as a "Consumer Commodity" under IMDG regulations.

No placard (handling and hazard label) required.

United States Department of Transportation (DOT) Information

Primary Class	Class 3: Flammable liquid.
Subsidiary class (if applicable)	-
Proper shipping name	Paint related material

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Hazard identification number	UN 1263
Packing group	II
Special Provisions	In containers of 1 L (1Kg) this product is qualified as a "consumer commodity" ORM-D under DOT RQ (Reportable quantity) DOT, Methanol 5000 lbs. (2270 kg), Toluene.1000 lbs. (454 kg), Methyl ethyl ketone 5000 lbs. (2270 kg)
International Air Transport Association (IATA)	For air shipment classification and associated regulations, please refer to the latest edition of IATA Dangerous Goods Regulations.

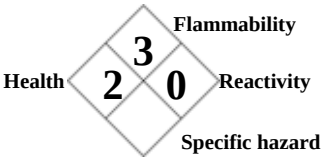
Section 15. Other Regulatory Information and Pictograms

WHMIS Classification (Canada)	Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).
Canada Domestic Substances List (DSL) Status	This product and/ or all of its components are on the DSL.
HCS Classification (U.S.A.)	Flammable liquid Target organ effects
U.S.A. Regulatory Lists	This product and/ or all of its components are on the TSCA inventory list.

Hazardous Material Information System (U.S.A.)

Health	2
Flammability	3
Reactivity	0
Personal protection	G

National Fire Protection Association (U.S.A.)



Section 16. Other information

Validated and verified by Compliance and Technical Information Manager on : Nov. 12 2007 **ph.# 905-791-1788.**

Printed : Nov. 12 2007 '.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MSDS are available at www.recochem.com