



**Shell Chemicals**

## Material Safety Data Sheet

Effective Date: 2001-08-13  
Supercedes: 2001-07-16  
Revision Number: 5

### SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** LIGHTER FLUID R  
643-320

**Manufacturer/Supplier:** SHELL CHEMICALS CANADA LIMITED  
400 - 4th AVE. SW  
P.O. Box 4280, Station C  
Calgary, Alberta  
Canada T2T 5Z5  
Telephone : 1-800-567-8717

**Emergency Phone:**  
Shell (24 Hours): 780-992-1235  
CANUTEC (24 Hours): 613-996-6666

**Synonyms:** Petroleum Naphtha

**Product Use:** Diluent

### SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	% Range	WHMIS CONTROLLED
SOLVENT NAPHTHA, LIGHT ALIPHATIC	64742-89-8	60 - 100	Yes
Solvent Naphtha (Petroleum), Light Aliphatic	64742-89-8	3 - 7	Yes

See SECTION 8 for Occupational Exposure Guidelines.

### SECTION 3 HAZARDS IDENTIFICATION



**WHMIS Class/Description:** Class B2 Flammable Liquid

**Physical Description:** Liquid Volatile Colourless Slight Odour

**Routes of Exposure:** Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

**Health Hazards:**

Flammable Liquid.  
Vapours are moderately irritating to the respiratory passages. In rare cases may sensitize heart muscle causing heart arrhythmia. The liquid when accidentally aspirated into the lungs can cause a severe inflammation of the lung.  
Vapours are moderately irritating to the eyes.

**Handling Information:**

Eliminate all ignition sources.  
Avoid prolonged exposure to vapours.  
Wear suitable gloves and eye protection.  
Bond and ground transfer containers and equipment to avoid static accumulation.  
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

For further information on health effects, see SECTION 11.

**SECTION 4 FIRST AID**

**Eyes:** Flush eyes with water for at least 15 minutes while holding eyelids open. Obtain medical attention as soon as possible after first aid has been initiated and completed.

**Skin:** Flush affected skin with gently flowing lukewarm water for at least 20 minutes and remove contaminated clothing while rinsing. Wash contaminated skin with mild soap and water for 15 minutes. Obtain medical attention as soon as possible after first aid has been initiated and completed.

**Ingestion:** Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. Do not give anything by mouth to an unconscious person. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs. Obtain medical attention immediately.

**Inhalation:** Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

**Notes to Physician:** The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered. Cardiac arrhythmias have been reported with solvent exposure.

**SECTION 5 FIRE FIGHTING MEASURES**

**Flash Point Deg C.:** Method Tag Closed Cup 4 degrees C  
**Lower Flammability Limit:** 1 % (vol.)  
**Upper Flammability Limit:** 7 % (vol.)

<b>Autoignition Temperature:</b>	Not available
<b>Extinguishing Media:</b>	Dry Chemical Carbon Dioxide Foam Water Fog
<b>Firefighting Instructions:</b>	Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Exclude air. Do not use water except as a fog. Clear area of unprotected personnel. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Product will float and can be reignited on surface of water. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Extremely flammable.
<b>Hazardous Combustion Products:</b>	Carbon monoxide and carbon dioxide are produced on combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

<b>Precautions:</b>	Issue warning "Flammable". Eliminate all ignition sources. Handling equipment must be grounded. Isolate hazard area and restrict access. Try to work upwind of spill. Avoid direct contact with material. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Clay or Sand . Flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations. Notify appropriate environmental agency(ies).
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## SECTION 7 HANDLING AND STORAGE

<b>Handling:</b>	Flammable. Hot surfaces may be sufficient to ignite liquid even in the absence of sparks or flames. Vapours may accumulate and travel to distant ignition sources and flashback. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Do not pressurize drum containers to empty them. Air-dry contaminated clothing in a well ventilated area before laundering. Avoid breathing vapours and prolonged or repeated contact with skin. Launder contaminated clothing prior to reuse. Use good personal hygiene.
<b>Storage:</b>	Store in a cool, dry, well ventilated area, away from heat and ignition sources. Use explosion-proof ventilation to prevent vapour accumulation.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

THE FOLLOWING INFORMATION ,WHILE APPROPRIATE FOR THE PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON THE CONDITIONS OF USE.

**EXPOSURE CONTROLS:**

**Occupational Exposure Limits:** North American exposure limits have not been established for the product. Consult local authorities for acceptable provincial values. Shell recommended value using the Reciprocal Calculator procedure developed by the solvent industry is :  
253 ppm, 1200 mg/m<sup>3</sup> (8 hour TWA)

**Mechanical Ventilation:** Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion-proof. Concentrations in air should be maintained below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

**PERSONAL PROTECTIVE EQUIPMENT:**

**Eye Protection:** Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

**Skin Protection:** Impervious gloves should be worn at all times when handling this product. Best protection is provided by: Viton Nitrile Rubber. In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn. Safety showers should be available for emergency use.

**Respiratory Protection:** If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

**SECTION 9 PHYSICAL DATA**

<b>Physical State:</b>	Liquid Volatile
<b>Appearance:</b>	Colourless
<b>Odour:</b>	Slight Odour
<b>Odour Threshold:</b>	Not available
<b>Freezing Point:</b>	Not available
<b>Boiling Point:</b>	104 - 156 degrees C
<b>Density:</b>	746 kg/m <sup>3</sup> @ 15 degrees C

Vapour Density (Air=1):	3.8
Vapour Pressure:	>30 mm Hg @ 38 degrees C
Specific Gravity:	0.746
pH:	Not available
Viscosity:	Not available cSt @
Evaporation Rate:	1.2 @
Partition Coefficient:	Not available
Water Solubility:	Insoluble
Soluble in Other Solvents:	Hydrocarbon Solvents

## SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:	Yes
Hazardous Polymerization:	No
Sensitive to Mechanical Impact:	No
Sensitive to Static Discharge:	Yes
Incompatible Materials:	Avoid strong oxidizing agents.
Conditions of Reactivity:	Avoid excessive heat, open flames and all ignition sources.

## SECTION 11 TOXICOLOGICAL INFORMATION

Component Name	Acute Toxicological Data
SOLVENT NAPHTHA, LIGHT ALIPHATIC	LD50 Oral Rat >8 mL/kg LD50 Dermal Rat >4 mL/kg LC50 Inhalation Rat = 3400 ppm for 4 hours
Solvent Naphtha (Petroleum), Light Aliphatic	LD50 Oral Guinea Pig >8000 mg/kg LD50 Dermal Guinea Pig >4000 mg/kg LC50 Inhalation Guinea Pig = 61000 mg/m3 for 4hours

Formulation:	No data is specifically available for this product and therefore this toxicological information is based on testing completed with the ingredients.
Routes of Exposure:	Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.
Acute Toxicity:	Male rats exposed for 90 days by inhalation to vapours of similar solvents showed evidence of kidney damage. The relevance of this effect to man is unknown.
Irritation :	Based on testing with similar materials, this product is not expected to be a primary skin irritant after exposure of short duration, would not be a skin sensitizer and would not be irritating to the eye. This product is expected to be irritating to skin but is not predicted to be a skin sensitizer.
Chronic Toxicity:	Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression.
Pre-existing Conditions:	Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

## SECTION 12 ECOLOGICAL INFORMATION

**Environmental Effects**

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. May be harmful to aquatic life. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities.

**Biodegradability**

Biodegradable. Rapid volatilization. No food chain concentration potential.

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste Disposal:**

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

**SECTION 14 TRANSPORTATION INFORMATION**

**Canadian Road and Rail Shipping Classification:**

<b>UN/NA Number:</b>	UN1268
<b>Proper Shipping Name:</b>	PETROLEUM DISTILLATES, N.O.S. (NAPHTHA)
<b>Hazard Class:</b>	Class 3 Flammable Liquid
<b>Packing Group:</b>	PG II
<b>Shipping Description:</b>	PETROLEUM DISTILLATES, N.O.S. (NAPHTHA) Class 3 UN1268 PG II

**SECTION 15 REGULATORY INFORMATION**

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

**WHMIS Class/Description:** Class B2 Flammable Liquid

**DSL/NDSL Status:** This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act.

**Other Regulatory Status:** No Canadian federal standards.

**SECTION 16 ADDITIONAL INFORMATION**

**WHMIS Label Statements:**

**Hazard Statements :** Flammable Liquid.

**Handling Statements:** Eliminate all ignition sources.  
Avoid prolonged exposure to vapours.  
Wear suitable gloves and eye protection.  
Bond and ground transfer containers and equipment to avoid static accumulation.  
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

**First Aid Statements:** Wash contaminated skin with soap and water.  
Flush eyes with water.  
If overcome by vapours remove to fresh air.  
Do not induce vomiting.  
Obtain medical attention.

**Revisions:** This MSDS has been reissued in the ANSI Z400.1 standard format.  
Last Revision Date for Previous MSDS Format: **19981105**

**MSDS Prepared By:** **Toxicology and Material Safety**  
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