SECTION 1  CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: CYPAR 9
642-950

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 Solvent

Product Use: Diluent Organic Solvent

SECTION 2  COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>% Range</th>
<th>WHMIS CONTROLLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>C8 TO C11 Hydrocarbons</td>
<td>68553-14-0</td>
<td>100</td>
<td>Yes</td>
</tr>
</tbody>
</table>

See SECTION 8 for Occupational Exposure Guidelines.

SECTION 3  HAZARDS IDENTIFICATION

WHMIS Class/Description: Class B2 Flammable Liquid
Class D2B Other Toxic Effects - Skin Irritant

Physical Description: Liquid Light Colour Hydrocarbon 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. The liquid when accidently 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. Do not give anything by mouth to an unconscious person. Guard against aspiration into lungs by having the individual turn on to their left side. 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. Cardiac arrhythmias have been reported with solvent exposure. 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.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point Deg C.:
Method Tag Closed Cup 24 degrees C
Lower Flammability Limit:
Not available
Upper Flammability Limit:
Not available
Autoignition Temperature:
0
Extinguishing Media:  
Dry Chemical  
Carbon Dioxide  
Foam  
Water Fog

Firefighting Instructions:  
Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Exclude air. Do not use water except as a fog. 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. Fight fire from maximum distance. Always stay away from ends of containers due to explosive potential. Extremely flammable.

Hazardous Combustion Products:  
Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

SECTION 6  ACCIDENTAL RELEASE MEASURES

Precautions:  
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. Saturated clothing should be immediately removed to avoid flammability hazard. 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).

SECTION 7  HANDLING AND STORAGE

Handling:  
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.

Storage:  
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. Rubber solvent (Naphtha): 400 ppm, 1590 mg/m³ (TLV/TWA) ACGIH

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 lower explosive limit at all times or 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 (viton, polyvinyl alcohol) should be worn at all times when handling this product. 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

Physical State: Liquid
Appearance: Light Colour
Odour: Hydrocarbon Odour
Odour Threshold: Not available
Freezing Point: Not available
Boiling Point: 138 - 160 degrees C
Density: Not available @
Vapour Density (Air=1): 4.4
Vapour Pressure: 6.6 mm Hg @ 38 degrees C
Specific Gravity: 0.78
pH: Not available
Viscosity: Not available cSt @
Evaporation Rate: 0.64 @ 20 degrees C
Partition Coefficient: Not available
Water Solubility: Negligible
Soluble in Other Solvents: Hydrocarbon Solvents

Molecular Weight: Not available
Formula: C8 - C11 Hydrocarbons

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
C8 TO C11 Hydrocarbons LC50 Inhalation Rat = 2745 ppm for 4 hours
LD50 Dermal Rat >4 mL/kg
LD50 Oral Rat >8 mL/kg

Routes of Exposure: Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.
Irritation: 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 over a period of weeks or months to levels well above the TLV may cause neurotoxic disease, with symptoms including weakness and lack of sensation in hands and feet. 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. 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: Not available.
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:

UN/NA Number: UN1268
Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class: Class 3 Flammable Liquid
Packing Group: PG III
Shipping Description: PETROLEUM DISTILLATES, N.O.S. Class 3 UN1268 PG III

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
Class D2B Other Toxic Effects - Skin Irritant

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  
Shell Chemicals Canada Ltd.  
1-800-567-8717