



Philippine Prosperity Chemicals, Inc.

MATERIAL SAFETY DATA SHEET

Date Reviewed :
January 14, 2010

EXXSOL™ D40

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: EXXSOL™ D40 FLUID
Product Code: D40
Product Type Chemical Solvent
Company: Philippine Prosperity Chemicals, Inc.
Office Address: U1201 Picadilly Star Building
4th Ave. cor 27th St. Fort Bonifacio Global City, Taguig
Plant Addresses: (1) LMG Bulk Terminal – Pinamucan, Batangas
(2) Nagtahan Terminal Inc. – Pandacan, Manila
(3) PPCI In-land Bulk Terminal – Guiguinto, Bulacan
Contact Numbers: Tel: (632) 621-3104 to 09
Fax: (632) 659-6874
Emergency Numbers: Mobile: 0917.5845496 / 0917.5845509

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance Formal Name: Distillates (Petroleum) Hydrotreated Light
Common name: Exxsol™ D40
Substance Description: Dearomatized Hydrocarbon
Synonym: Deodorized Kerosene, Dearomatized Kerosine
Chemical Abstract Service Registry Number (CAS RNs): 64742-47-8

3. HAZARDS IDENTIFICATION

Emergency overview: Combustible liquid and vapor! Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an incendiary electrical discharge. May be irritating to the eyes, nose, throat, and lungs.

Human Health Hazards:

Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs.

Inhalation: Breathing in vapor can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of coordination, impaired judgment and if exposure is prolonged, unconsciousness.



Skin Contact: Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Repeated exposure may cause skin dryness or cracking.

Eye Contact: May be an eye irritant.

Aggravation of Pre-existing Conditions: Petroleum Solvents/Petroleum Hydrocarbons - Skin contact may aggravate an existing dermatitis.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention immediately.

Ingestion: Obtain medical attention immediately. Do not induce vomiting unless directed to do so by a medical personnel. Never give anything by mouth to an unconscious person.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If persistent irritation occurs, obtain medical attention. Wash clothing before reuse.

Eye Contact: Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If persistent irritation occurs, obtain medical attention.

5. Fire Fighting Measure

Fire: Combustible liquid and vapor!
Flash point: 40 °C (104 °F)
Auto ignition temperature: 260 °C (500 °F)
Flammable limits in air based on pure D40 % by volume:
Lower Flammable Limit: 0.8; Upper Flammable Limit: 5.6

Explosion: Vapor-air mixtures are explosive within flammable limits at temperatures above flash point. Vapors are heavier than air and can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Sensitive to static discharge.

Extinguishing media: Dry chemical, alcohol-resistant foam or carbon dioxide. Water spray may only be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Unsuitable extinguishing media: Do not use a solid stream or jet of water, since the stream will scatter and spread the fire.



Special Information: All storage areas should be provided with adequate firefighting facilities and equipment. The liquid produces a vapor that forms explosive mixtures with air especially in conditions at above flash point temperatures. In the event of a fire, contact the nearest fire station. For the company's own firefighters, they should wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Special Firefighting Procedure: Stay upwind. Use self-contained breathing apparatus and protective clothing. Vapor may explode if ignited in an enclosed area. Cool exposed containers with water.

6. ACCIDENTAL CONTROL MEASURES

Personal precautions: Avoid contact with skin and eyes. Ventilate area of leak or spill thoroughly. Do not breathe vapor. Remove all heat or ignition sources. Evacuate the area of all non-essential personnel. Shut off leaks, if possible without personal risk.

Personal protection: Wear appropriate personal protective equipment (PPE) as specified in Section 8.

Environmental precautions: Contain and recover liquid when possible with an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand or earth) and place in a chemical waste container. Do not use combustible materials such as saw dust. Use non-sparking tools and equipment. Prevent from spreading or entering into drains, ditches, rivers and other waterways by using sand, earth or other appropriate barriers.

Clean-up methods - small spillage: Remove all ignition sources and ventilate area. Evacuate all non-essential personnel. Stop leak if without risk. Dilute with water and mop up or absorb with an inert dry material and place in a sealable container. Label and seal waste containers for product recovery or appropriate disposal (see Section 13).

Clean-up methods – large spillage: For large liquid spills (say more than a drum), remove all ignition sources. Evacuate all non-essential personnel. Stop leak if possible and without risk. Do not flush away residues with water. Blanket spill with alcohol resistant foam to limit evaporation or dike area to contain spill and absorb with earth, sand or other non-combustible material. Transfer to a labeled, sealable container for product recovery or proper disposal. Wear appropriate protective clothing to minimize contact with skin. Allow residues to evaporate or soak up with a suitable absorbent material and dispose safely and appropriately (see Section 13).



7. HANDLING AND STORAGE

<i>Handling:</i>	Protect self against physical damage. Avoid contact with skin, eyes and clothing. Do not breathe vapor. Use only in well ventilated areas.
<i>Handling temperature:</i>	Ambient.
<i>Storage:</i>	Keep container tightly closed in a cool, dry and well-ventilated place. Outside or detached storage is preferred. Separate from oxidizing materials. Storage and use areas should be No Smoking areas. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.
<i>Storage temperature:</i>	Ambient. Avoid handling and storing above 40 °C; otherwise the product may form flammable vapor-air mixtures.
<i>Product transfer:</i>	Metal containers should be bonded and grounded for transfers to avoid static sparks.
<i>Recommended materials:</i>	For containers or container linings, use mild steel, carbon steel or stainless steel. Refer to appropriate sources or compatibility charts if using internal coating materials.
<i>Unsuitable materials:</i>	Natural rubber; butyl rubber; ethylene-propylene-diene monomer (EPDM); Polystyrene
<i>Other Information:</i>	EXXSOL™ D40 is available from PPCI in bulk and in drums. Details are available upon request.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

<i>Engineering Control Measure / Ventilation System:</i>	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <i>Industrial Ventilation, A Manual of Recommended Practices</i> , most recent edition, for details.
<i>Occupational Exposure Limit Standards:</i>	No value assigned for this specific material by American Conference of Governmental Industrial Hygienist (ACGIH). However, Exxon Mobil which is the supplier has below recommendations.
<i>Limit type:</i>	Time Weighted Average (TWA) – safe exposure over an eight-hour working day, for a five-day working week over an entire working life.
<i>Unit:</i>	Parts per million (ppm)
<i>Value:</i>	197
<i>Respiratory protection:</i>	Where local exhaust ventilation is not practicable, wear a full face-piece or a double cartridge respirator with organic vapor canister NPF 400. It may be worn up to 50 times the exposure limit or the maximum use concentration specified



<i>Respiratory protection:</i>	by the appropriate regulatory agency or respirator supplier, or whichever is the lowest. For emergencies or instances where the exposure levels are not known, use a full-face-piece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
<i>Hand protection:</i>	PVC gloves, chemical resistant gloves and nitrile gloves.
<i>Eye protection:</i>	Use chemical safety goggles with side shields or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
<i>Body Protection:</i>	Wear impervious protective clothing such as one-piece overall, including safety shoes or boots, gloves, laboratory coat, apron or any appropriate cotton-made clothing to prevent skin contact.
<i>Specific Hygiene Measures:</i>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

<i>Appearance:</i>	Clear, colorless liquid
<i>Odor:</i>	Aliphatic Hydrocarbon
<i>Initial boiling point:</i>	164 °C (327.2 °F)
<i>Freezing point:</i>	-75 °C (-103 °F)
<i>Vapor Pressure:</i>	0.270 kPa @ 20 °C
<i>Specific Gravity:</i>	0.776 @ 15 °C
<i>Solubility:</i>	Immiscible in water
<i>Dynamic viscosity:</i>	0.845 centipoise (cP) @ 20 °C
<i>Vapor density (air=1):</i>	4.90
<i>Flash point:</i>	40 °C
<i>Auto-ignition temperature:</i>	260 °C
<i>Upper flammable limit in air:</i>	5.6 % (v/v)
<i>Lower flammable limit in air:</i>	0.8 % (v/v)
<i>Molecular Weight:</i>	143 g/mole
<i>Evaporation rate, (NBAC = 1):</i>	0.18



10. STABILITY AND REACTIVITY

<i>Stability:</i>	Stable under normal temperature and pressure for use and storage.
<i>Conditions to avoid:</i>	Heat, flames, ignition sources and incompatibles.
<i>Materials to avoid:</i>	Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this presents a serious explosion hazard.
<i>Hazardous decomposition products:</i>	Carbon dioxide and carbon monoxide may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATIONS

<i>Basis for assessment:</i>	Information given by Exxon Mobil, who is the supplier for this product.
<i>Inhalation</i>	Minimally toxic through inhalation and negligible hazard at ambient/normal handling temperatures.
<i>Ingestion</i>	Toxicity: LD ₅₀ >15,000 mg/kg
<i>Skin</i>	Toxicity: LD ₅₀ >3,160 mg/kg
<i>Eye irritation:</i>	May cause mild, short-lasting discomfort to eyes.
<i>Skin irritation:</i>	Mildly irritating to skin with prolonged exposure.
<i>Respiratory toxicity:</i>	Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.
<i>Human effects:</i>	Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

12. ECOLOGICAL INFORMATION

<i>Basis for assessment:</i>	Information given is based on product data.
<i>Environmental Fate:</i>	
<i>Water:</i>	This material may evaporate to a moderate extent.
<i>Soil:</i>	This material may biodegrade and evaporates to a moderate extent in soil and may leach into groundwater.
<i>Bioaccumulation:</i>	The estimated bioconcentration factor (BCF) of Exxsol D40 is less than 100. This material is not expected to significantly bioaccumulate.
<i>Environmental Toxicity:</i>	Not expected to be harmful to aquatic organisms. Not expected to demonstrate chronic toxicity to aquatic organisms.



13. Disposal Considerations

<i>Precautions:</i>	Refer to Sections 7 before handling the product or containers.
<i>Waste disposal:</i>	Whatever Exxsol™ D40 cannot be saved for recovery or treating, it should be managed in an appropriate and approved waste disposal facility. Care should in any case be taken to ensure disposal is compliant with statutory or regulatory requirements and local environmental laws.
<i>Product disposal:</i>	This product is not suitable for disposal by either landfill or via local sewers, drains, natural streams or rivers. The following advice only applies to the product as supplied. Processing, use or contamination of this product may change the waste management options.
<i>Container disposal:</i>	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Send to drum handlers that clean, recondition or metal reclaimer. Disposal of container and unused contents must be in accordance to local regulatory requirements and environmental laws.

14. TRANSPORT INFORMATION

<i>UN Number:</i>	1268
<i>Hazard Class</i>	3 (Flammable Liquid)
<i>Proper shipping name:</i>	Petroleum Distillates
<i>Packing Group</i>	III (Flash Point = 40 °C)

15. OTHER INFORMATION

Philippine Prosperity Chemicals, Inc. provides the information contained herein in good faith and was obtained from sources which we believe are reliable. However, the information is provided without any warranty. The condition or methods of handling storage, use and disposal are beyond our control and may be beyond our knowledge. For this and any other reasons, we don't assume responsibility and disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use and disposal of the product. This document is intended only as a guideline to the appropriate precautionary handling of the material by properly trained personnel using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.