



Philippine Prosperity Chemicals, Inc.

MATERIAL SAFETY DATA SHEET

Date Reviewed :
February 02, 2010

LOW AROMATIC WHITE SPIRIT

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: LOW AROMATIC WHITE SPIRIT
Product Code: LAWS
Synonym: White Spirit, stoddard solvent, mineral turpentine, turpentine substitute
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

This material is regulated as a complex substance.

Hazardous substance(s) or complex substance(s)

Chemical Entity	CAS Registry No.	Proportions (%)
Naphtha (petroleum), hydrodesulphurised heavy	64742-82-1	100

Hazardous constituents contained in complex substances

Chemical Entity	CAS Registry No.	Proportions (%)
Ethyl Benzene	100-41-7	<1
1,2,4-Trimethyl benzene	95-63-6	<5
Naphthalene	91-20-3	<1
Xylenes	1330-20-	<5

Remarks: All concentrations or proportions are percent by weight unless ingredient is a gas. Gas concentrations are in % by volume.

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.

Human Health Hazards:

Doc. Code : PS-020-QMS	Revision : 00	File Page : LAWS MSDS	Page 1 of 7
------------------------	---------------	-----------------------	-------------

GVB



LOW AROMATIC WHITE SPIRIT

<i>Ingestion:</i>	May be harmful if swallowed. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia, chemical pneumonitis or pulmonary edema.
<i>Inhalation:</i>	High vapor/aerosol concentrations are irritating to the eyes and respiratory tract causing headaches, dizziness, could be anesthetic and may have other central nervous system effects.
<i>Skin Contact:</i>	Low order of toxicity, frequent or prolonged contact may irritate and cause dermatitis.
<i>Eye Contact:</i>	Slightly irritating, but does not injure eye tissue.
<i>Chronic / Other Effects:</i>	Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis
	Contains:
	Naphthalene: Exposure to high concentration of this material may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.
	Ethylbenzene: Caused cancer in laboratory animal studies. The relevance of these findings to humans is also uncertain.

4. FIRST AID MEASURES

<i>Inhalation:</i>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention immediately.
<i>Ingestion:</i>	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.
<i>Skin Contact:</i>	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.
<i>Eye Contact:</i>	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

<i>Fire:</i>	Combustible Liquid. Flash point: 42 °C (107.6 °F) Auto ignition temperature: 296 °C (564.8 °F) Flammable limits in air based on pure LAWS % by volume: Lower Flammable Limit: 0.6 ; Upper Flammable Limit: 7.0
<i>Explosion:</i>	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.



LOW AROMATIC WHITE SPIRIT

- 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 and 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 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



LOW AROMATIC WHITE SPIRIT

Clean-up methods – large spillage: suitable absorbent material and dispose safely and appropriately (see Section 13).

7. HANDLING AND STORAGE

Handling: Protect self against physical damage. Avoid contact with skin, eyes and clothing. Do not breathe vapor. Use only in well ventilated areas.

Handling temperature: Ambient.

Storage: 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.

Storage temperature: Ambient.

Product transfer: Metal containers should be bonded and grounded for transfers to avoid static sparks.

Recommended materials: 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.

Unsuitable materials: Natural rubber, butyl rubber, ethylene-propylene-diene monomer (EPDM), polystyrene are unfit for this material

Other Information: LAWS is available from PPCI in bulk and in drums. Details are available upon request.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Control Measure / Ventilation System: 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, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Occupational Exposure Limit and Standard: No value assigned for this specific material by American Conference of Governmental Industrial Hygienist (ACGIH). However, the manufacturer recommends exposure based on total hydrocarbons.

Limit type: Time Weighted Average (TWA) – allowable exposure value over an eight-hour working day, for a five-day working week over an entire working life.

Value and Unit: 52 Parts per million (ppm) or 300 mg/ m³



LOW AROMATIC WHITE SPIRIT

<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 by the appropriate regulatory agency or respirator supplier, and whichever is 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 or 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 personal protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Always practice good housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

<i>Appearance:</i>	Clear, colorless liquid
<i>Odor:</i>	Petroleum solvent
<i>Initial boiling point:</i>	150 °C (302 °F)
<i>Freezing point:</i>	-20 °C
<i>Vapor Pressure:</i>	0.248 kPa @ 20 °C
<i>Specific Gravity:</i>	0.780 @ 15 °C
<i>Solubility:</i>	Immiscible in water
<i>Dynamic viscosity:</i>	0.725 centipoise (cP) @ 25 °C
<i>Vapor density (air=1):</i>	4.35
<i>Flash point:</i>	42 °C
<i>Auto-ignition temperature:</i>	296 °C
<i>Upper flammable limit in air:</i>	0.6 % (v/v)
<i>Lower flammable limit in air:</i>	7.0 % (v/v)
<i>Molecular weight</i>	140 g/mole
<i>Evaporation rate, (NBAC = 1):</i>	0.14



10. STABILITY AND REACTIVITY

<i>Stability:</i>	Stable under normal temperature and pressure for use and storage.
<i>Conditions to avoid:</i>	Exposure to excessive heat, open flames and sparks. Avoid conditions that favor the formation of excessive mists and/or fumes.
<i>Materials to avoid:</i>	Avoid contact with strong oxidizing agents.
<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 is based on product data.
<i>Oral rat, LD₅₀</i>	5,000 mg/kg
<i>Inhalation rat, LC₅₀</i>	1,369 ppm /8 Hours
<i>Skin rabbit, LD₅₀</i>	3,160 mg/kg
<i>Eye irritation:</i>	Slight irritant.
<i>Skin irritation:</i>	Slight irritant.
<i>Human effects:</i>	This product contains naphthalene. The International Agency for Research on Cancer evaluated naphthalene and concluded that there was sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

12. ECOLOGICAL INFORMATION

<i>Basis for assessment:</i>	Information given is based on product data.
<i>Environmental Fate:</i>	
<i>Air</i>	This product can degrade rapidly in air.
<i>Soil:</i>	Adsorbs to soil and has low mobility
<i>Water:</i>	This substance is expected to be removed in a wastewater treatment facility but not expected to partition to sediments and wastewater solids.
<i>Bioaccumulation:</i>	This material has an estimated bioconcentration factor (BCF) of LAWS is less than 100. This material is not expected to significantly bioaccumulate.
<i>Environmental Toxicity:</i>	Expected to be toxic to aquatic organism. May cause long term adverse effects in the aquatic environment.



13. Disposal Considerations

<i>Precautions:</i>	Refer to Sections 7 before handling the product or containers.
<i>Waste disposal:</i>	Whatever LAWS 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>	1300
<i>Hazard Class</i>	3 (Flammable Liquid)
<i>Proper shipping name:</i>	Turpentine Substitute (White Spirit)
<i>Packing Group</i>	III (Flash Point = 42 °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.