



## **SAFETY DATA SHEET**

Page: 1

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Version: 1.8

# Synpower™ ENGINE CLEANER VV097

## **1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**Product name**      **Synpower™ ENGINE CLEANER**

Product code VV097

## **2. HAZARDS IDENTIFICATION**

## Emergency Overview

Appearance: liquid, clear

**CAUTION! COMBUSTIBLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY CAUSE EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS. MAY BE HARMFUL IF SWALLOWED.**

### Potential Health Effects

## Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

## **Eye contact**

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

### Skin contact

Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

Synpower™ ENGINE CLEANER  
VV097

**Ingestion**

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

**Inhalation**

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

**Aggravated Medical Condition**

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, Upper respiratory tract, lung (for example, asthma-like conditions), Liver, Kidney, urinary system, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias., Individuals with erythrocyte glucose-6-phosphate dehydrogenase deficiency are particularly susceptible to hemolytic agents and rapidly develop hemolytic anemia from ingestion or inhalation of this material (or a component).

**Symptoms**

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, sweating, Fever, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Lung irritation, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, Lowered blood pressure, Abdominal pain, Lack of coordination, confusion, Difficulty in breathing, Bloody urine, blood abnormalities (breakage of red blood cells), kidney damage, liver damage, lung damage, coma

**Target Organs**

Acute lethal exposure to ethylene glycol monobutyl ether in animal studies has resulted in congestion of organs including kidney, spleen, and lung., Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, mild, reversible spleen effects, blood abnormalities, cataracts, anemia, nasal damage, eye damage, kidney damage, liver damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, cataracts, eye damage

**Carcinogenicity**

Synpower™ ENGINE CLEANER  
VV097

Ethylene glycol monobutyl ether has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. In a National Toxicology Program (NTP) study, lifetime inhalation exposure to naphthalene resulted in increases in tumors of the nose in rats. In a previous NTP study, lifetime exposure to naphthalene caused lung tumors in female mice. Male mice with the same exposure did not develop tumors. The relevance of this finding to humans is uncertain. Naphthalene is listed as carcinogenic by IARC (International Agency for Research on Cancer) and the National Toxicology Program (NTP).

**Reproductive hazard**

This material (or a component) causes harm to the fetus.

**Other information**

Infants are more sensitive than adults to the toxic effects of naphthalene. Diapers or cloths stored with mothballs and used directly on infants have caused skin rashes and illness. Naphthalene vapors from clothing or blankets that had been stored in or near the infant's room have caused illness and death.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Components	CAS-No. / Trade Secret No.	Concentration
HYDROTREATED HEAVY NAPHTHA	64742-48-9	>=70-<80%
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	>=10-<15%
AROMATIC HYDROCARBONS	64742-94-5	>=10-<15%
DIACETONE ALCOHOL	123-42-2	>=1.5-<5%
NAPHTHALENE	91-20-3	>=0.5-<1%

**4. FIRST AID MEASURES****Eyes**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

**Skin**

Synpower™ ENGINE CLEANER  
VV097

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

### **Ingestion**

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

### **Inhalation**

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

### **Notes to physician**

**Hazards:** This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting. Inhalation or ingestion of high levels of this material (or a component) may cause a hemolytic reaction. Complications of acute intravascular hemolysis include anemia, leukocytosis, fever, hemoglobinuria, jaundice, renal insufficiency, and sometimes disturbances in liver function. Fats, for example, baby oil on the skin or ingested oil, facilitate absorption of naphthalene.

**Treatment:** No information available.

## **5. FIREFIGHTING MEASURES**

### **Suitable extinguishing media**

Foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Carbon dioxide (CO<sub>2</sub>), Water spray

### **Hazardous combustion products**

acrid smoke and fumes, Aldehydes, carbon, carbon dioxide and carbon monoxide, Hydrocarbons, Ketones, Organic acids, Acetone

### **Precautions for fire-fighting**

If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).



## SAFETY DATA SHEET

Page: 5

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Synpower™ ENGINE CLEANER  
VV097

Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

### NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class II

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Ensure adequate ventilation. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.

### Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### Other information

Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

## 7. HANDLING AND STORAGE

### Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

Synpower™ ENGINE CLEANER  
VV097

**Storage**

Store in a cool, dry, ventilated area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

<b>HYDROTREATED HEAVY NAPHTHA</b>		<b>64742-48-9</b>
	time weighted average	100 ppm
<b>ETHYLENE GLYCOL MONOBUTYL ETHER</b>		<b>111-76-2</b>
ACGIH	time weighted average	20 ppm
NIOSH	Recommended exposure limit (REL):	5 ppm
NIOSH	Recommended exposure limit (REL):	24 mg/m <sup>3</sup>
OSHA Z1	Permissible exposure limit	50 ppm
OSHA Z1	Permissible exposure limit	240 mg/m <sup>3</sup>
<b>DIACETONE ALCOHOL</b>		<b>123-42-2</b>
ACGIH	time weighted average	50 ppm
NIOSH	Recommended exposure limit (REL):	50 ppm
NIOSH	Recommended exposure limit (REL):	240 mg/m <sup>3</sup>
OSHA Z1	Permissible exposure limit	50 ppm
OSHA Z1	Permissible exposure limit	240 mg/m <sup>3</sup>

**General advice**

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

**Exposure controls**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Eye protection**

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Synpower™ ENGINE CLEANER  
VV097

**Skin and body protection**

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Wear resistant gloves (consult your safety equipment supplier).

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Wear resistant gloves (consult your safety equipment supplier).

Discard gloves that show tears, pinholes, or signs of wear.

**Respiratory protection**

Respiratory protection is not required under normal conditions of use.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	liquid
<b>Colour</b>	clear
<b>Odour</b>	strong
<b>Boiling point/boiling range</b>	351.0 °F / 177.2 °C
<b>Flash point</b>	108.0 °F / 42.2 °C Calculated Flash Point
<b>Lower explosion limit/Upper explosion limit</b>	0.7 % (V) / 10.6 % (V)
<b>Vapour pressure</b>	1.293 hPa @ 68 °F / 20 °C Calculated Vapor Pressure
<b>Density</b>	0.8164 g/cm³ @ 60.01 °F / 15.56 °C 6.81 lb/gal @ 60.00 °F / 15.56 °C

**10. STABILITY AND REACTIVITY****Stability**

Stable.

**Conditions to avoid**

excessive heat, Do not allow evaporation to dryness., Heat, flames and sparks.

Synpower™ ENGINE CLEANER  
VV097

**Incompatible products**

Acids, Amines, Ammonia, Bases, chlorates, Chlorine, Lead, peroxides, salts of strong bases, strong alkalis, Strong oxidizing agents

**Hazardous decomposition products**

acrid smoke and fumes, Aldehydes, carbon dioxide and carbon monoxide, Hydrocarbons, Organic acids, ketones

**Hazardous reactions**

Product will not undergo hazardous polymerization.

**11. TOXICOLOGICAL INFORMATION****Acute oral toxicity**

Acute oral toxicity - Product	: no data available
----------------------------------	---------------------

**Acute oral toxicity - Components**

ETHYLENE GLYCOL	: LD 50: 1.2 g/kg Species: Guinea pig
-----------------	---------------------------------------

MONOBUTYL ETHER	
-----------------	--

AROMATIC HYDROCARBONS	: LD 50: 3,000 mg/kg Species: Rat
-----------------------	-----------------------------------

DIACETONE ALCOHOL	: LD 50: 4,000 mg/kg Species: Rat
-------------------	-----------------------------------

NAPHTHALENE	: LD50 Oral: 2,200 mg/kg Species: Rat
-------------	---------------------------------------

**Acute inhalation toxicity**

Acute inhalation toxicity - Product	: no data available
--	---------------------

**Acute inhalation toxicity - Components**

ETHYLENE GLYCOL	: LC 50: > 633 ppm Exposure time: 1 h Species: Guinea pig
-----------------	---

MONOBUTYL ETHER	Remarks: Slightly toxic by inhalation
-----------------	---------------------------------------

AROMATIC HYDROCARBONS	: LC 50: > 3,800 mg/m <sup>3</sup> Exposure time: 4 h Species: Rat
-----------------------	--

Synpower™ ENGINE CLEANER  
VV097

**Acute dermal toxicity**

Acute dermal toxicity - Product	: no data available
---------------------------------	---------------------

**Acute dermal toxicity - Components**

ETHYLENE GLYCOL	: LD 50: 400 - 500 mg/kg Species: Rabbit
MONOBUTYL ETHER	: LD 50: > 2,000 mg/kg Species: Guinea pig
AROMATIC HYDROCARBONS	: LD 50: > 3,000 mg/kg Species: Rabbit
DIACETONE ALCOHOL	: LD 50: 13,500 mg/kg Species: Rabbit
NAPHTHALENE	: LD50 Dermal: > 2.0 g/kg Species: Rabbit

**Acute toxicity (other routes of administration)**

Acute toxicity (other routes of administration)	: no data available
---	---------------------

**12. ECOLOGICAL INFORMATION****Biodegradability**

Biodegradability - Product	: no data available
----------------------------	---------------------

**Biodegradability - Components**

HYDROTREATED HEAVY NAPHTHA	: Remarks: Not readily biodegradable.
----------------------------	---------------------------------------

**Bioaccumulation**

Bioaccumulation - Product	: no data available
---------------------------	---------------------

**Bioaccumulation - Components**

NAPHTHALENE	: Species: Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ) Exposure time: 16 d Concentration: 0.023 mg/l Bioconcentration factor (BCF): 25 Method: Flow through
-------------	--

**Ecotoxicity effects****Toxicity to fish**



## SAFETY DATA SHEET

Page: 10

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Synpower™ ENGINE CLEANER  
VV097

Toxicity to fish - Product : no data available

### Toxicity to fish - Components

NAPHTHALENE : LC 50: 0.91 - 2.82 mg/l  
Exposure time: 96 h  
Species: Rainbow trout,donaldson trout (*Oncorhynchus mykiss*)  
Test Type: static test

### Toxicity to daphnia and other aquatic invertebrates

Toxicity to daphnia and other aquatic invertebrates - Product : no data available

### Toxicity to daphnia and other aquatic invertebrates - Components

NAPHTHALENE : EC 50: 1.09 - 3.4 mg/l  
Exposure time: 48 h  
Species: Water flea (*Daphnia magna*)  
Test Type: static test

### Toxicity to algae

Toxicity to algae - Product : no data available

### Toxicity to bacteria

Toxicity to bacteria - Product : no data available

## 13. DISPOSAL CONSIDERATIONS

### Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations.



## SAFETY DATA SHEET

Page: 11

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Synpower™ ENGINE CLEANER  
VV097

### 14. TRANSPORT INFORMATION

#### REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

#### U.S. DOT - ROAD

Not dangerous goods
---------------------

#### U.S. DOT - RAIL

Not dangerous goods
---------------------

#### U.S. DOT - INLAND WATERWAYS

Not dangerous goods
---------------------

#### TRANSPORT CANADA - ROAD

Not dangerous goods
---------------------

#### TRANSPORT CANADA - RAIL

Not dangerous goods
---------------------

#### TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods
---------------------

#### INTERNATIONAL MARITIME DANGEROUS GOODS

UN 1993 FLAMMABLE LIQUID, N.O.S. 3 (HYDROTREATED HEAVY NAPHTHA)	III
---	-----

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN 1993 Flammable liquid, n.o.s. 3 (HYDROTREATED HEAVY NAPHTHA)	III
---	-----

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN 1993 Flammable liquid, n.o.s. 3 (HYDROTREATED HEAVY NAPHTHA)	III
---	-----



## SAFETY DATA SHEET

Page: 12

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Synpower™ ENGINE CLEANER  
VV097

### MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1993	LIQUIDO INFLAMABLE, N.E.P. (HYDROTREATED HEAVY NAPHTHA)	3	III
----	------	---	---	-----

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

### 15. REGULATORY INFORMATION

#### California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer.	NAPHTHALENE BENZENE
---	------------------------

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.	TOLUENE BENZENE
---	--------------------

#### SARA Hazard Classification

#### SARA 311/312 Classification

Fire Hazard

Acute Health Hazard

Chronic Health Hazard

#### SARA 313 Component(s)

ETHYLENE GLYCOL MONOBUTYL ETHER	11.94 %
NAPHTHALENE	0.93 %

#### New Jersey RTK Label Information

HYDROTREATED HEAVY NAPHTHA	64742-48-9
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2
AROMATIC HYDROCARBONS	64742-94-5
PETROLEUM DISTILLATES	
DIACETONE ALCOHOL	123-42-2



# SAFETY DATA SHEET

Page: 13

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Synpower™ ENGINE CLEANER  
VV097

NAPHTHALENE	91-20-3
-------------	---------

## Pennsylvania RTK Label Information

HYDROTREATED HEAVY NAPHTHA	64742-48-9
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2
AROMATIC HYDROCARBONS	64742-94-5
PETROLEUM DISTILLATES	
DIACETONE ALCOHOL	123-42-2

## Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA).	y (positive listing)
Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)
Japan. Kashin-Hou Law List	y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	n (Negative listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

## Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302)	10720 lbs
--	-----------

## Reportable quantity-Components

NAPHTHALENE	91-20-3	100 lbs
-------------	---------	---------

	HMIS	NFPA
Health	2*	1
Flammability	2	2
Physical hazards	0	
Instability		0
Specific Hazard	--	--



## SAFETY DATA SHEET

Page: 14

Revision Date: 01/22/2013

Print Date: 8/13/2014

MSDS Number: R0391985

Version: 1.8

Synpower™ ENGINE CLEANER  
VV097

### 16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).