

**SAFETY DATA SHEET**

Date Prepared: June 19, 2014

MOLYGREEN SILENT COAT

MSDS No. 4144001

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Name: MOLYGREEN SILENT COAT  
 General or Generic ID: Aditive For Engine Oil  
 Chemical Family / Description: Petroleum Hydrocarbons  
 Company: ROOT SANGYO K. K.  
 Address: 1-3-2, Minami-Nagareyama, Nagareyama-City, Chiba Pref., Japan  
 Telephone Numbers  
 Emergency: 81-47-150-3541  
 Information: 81-47-150-3544

**2. HAZARDS IDENTIFICATION**

Physical Hazards:	Flammable liquids	Not classified
Health Hazards:	Acute toxicity	Oral Not classified
		Dermal Not classified
		Inhalation Not classified
	Skin corrosion/Irritation	Not classified
	Serious eye danger/Eye irritation	Not classified
	Respiratory sensitization	Not classified
	Skin sensitization	Not classified
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Not classified
	Reproductive toxicity	Not classified
Enviromental Hazards:	Specific target organ systemic toxicity	
	- Single exposure	Category 2
	- Repeated exposure	Category 1
	Aspiration hazard	Not classified
	Hazardous to the aquatic enviroment	
	-Acute aquatic toxicity	Category 3
	-Chronic aquatic toxicity	Not classified

Symbol:



Signal word: Danger

Hazard statement:

- H341: Suspected of causing genetic defects
- H371: May cause damage to organs (lung)
- H372: Causes damage to organs (lung, skin) through prolonged or repeated exposure
- H402: Toxic to aquatic life

Precautionary statement

Prevention:

- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P260: Do not breathe dust/fume/gas/mist/vapours/spray
- P264: Wash hand thoroughly after handling
- P270: Do not eat, drink or smoke when using this product
- P273: Avoid release to the environment.
- P281: Use personal protective equipment as required

## SDS MOLYGREEN SILENT COAT

- Response: • IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician  
Storage: • P405: Store locked up  
Disposal: • P501 : Dispose of contents/container in according with local/regional/  
national/international regulation.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture  
General product description: Petroleum hydrocarbons, synthetic oils and additive(s)  
Ingredients and composition:

<u>Ingredient(s)</u>	<u>Composition(wt%)</u>
Mineral,Hydrotreated Oil	85.0 - 95.0
Synthetic Oil	below 5.0
Additive(s)	5.0 - 15.0

### 4. FIRST AID MEASURES

Skin contact: Remove all contaminated clothing. Wash the affected area with plenty of water with mild soap. If irritation is continued, refer to medical attention.  
Eye contact: Gently rinse the affected eyes with clean water for at least 15 minutes lifting upper and lower eyelids occasionally. And refer to medical attention.  
Inhalation: Remove victim to fresh air. If breathing is weak, irregular or has stopped, open his airway, loosen his collar and administer artificial respiration. And refer to medical attention.  
Ingestion: Do not induce vomiting and refer to medical attention.  
Never give anything by mouth to a convulsing or unconscious person.

### 5. FIRE-FIGHTING MEASURES

Extinguishing media: Foam, Dry chemical, Carbon dioxide  
Specific hazards regarding with fire-fighting measure  
• Large fires are best controlled by foam.  
• Apply extinguishing media from a safe distance and project surrounding area.  
• Firefighters should wear proper protective equipment and self-breathing apparatus.  
Hazardous combustion product: Incomplete combustion can produce smoke and carbon monoxide.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions:  
• Evacuate personnel to safe area. Evacuate non-essential personnel.  
• Wear proper protective equipment.  
Procedures if material is released or spilled:  
• Shut off all sources of ignition.  
• For small spill, absorb spills with inert materials(e.g. dry sand, earth, etc.), then place in a chemical waste containers.  
• For large spill, dike for later disposal, cover spills with foam, then place in a chemical waste container using non-sparking tools.

### 7. HANDLING AND STORAGE

Handling:  
• Shut off all gas pilot and electrical igniters and other sources of ignition during use and until all vapors gone.  
• Wear proper protective equipment to avoid contact and inhalation.  
• Use local exhaust ventilation.

## Storage:

- Keep containers tightly closed and store in a cool, dark, well-ventilated location.
- Keep away from heat, ignition source and sunlight.
- Specific materials to be avoided: Strong oxidizing agents, organic peroxides, strong bases.

**8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**

## Exposure control:

- Use this product only in a totary enclosed systems or local exhaust ventilation.
- Make available in the work area with emergency shower and eyes washer.

## Exposure limit:

ACGIH(2010): 5mg/m<sup>3</sup> mist(TWA)

## Personal protection equipment:

- Respiratory protection: Industrial canister gas masks.
- Eye protection: Safety goggles or face shield.
- Hand, skin and body protection: Chemical-resistant gloves, impervious boots and apron or full-body suit.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Bright and clear liquid
Color:	Dark Green
Odor:	Slight odor
Flash point:	> 200 °C (COC)
Boiling point:	No Data Available
Explosion limit (in air, vol%):	Lower 1 Upper 7
Vapor density:	No Data Available
Density at 15°C:	0.87 – 0.89 g/cm <sup>3</sup>
Solubility:	Insolube in water
Pour point:	< -25.0 °C

**10. STABILITY AND REACTIVITY**

Stability:	Stable under normal temperature and pressure.
Materials to avoid:	strong oxidizers.
Hazardous Decomposition products:	Carbon monoxide.
Hazardous polymerization:	Will not occur.

**11. TOXICOLOGICAL INFORMATION**

Oral toxicity(rats):	LD <sub>50</sub> > 5000mg/kg practically non-toxic.
Dermal toxicity(rats):	LD <sub>50</sub> > 5000mg/kg practically non-toxic.
Inhalation toxicity(rats):	LC <sub>50</sub> > 5mg/L practically non-toxic.
Calcinogenic effects:	OSHA: This material is listed as Group 3 IARC. EU: The classification as a carcinogen need not apply.

**12. ECOLOGICAL INFORMATION**

## Toxicity:

- In a static acute limit test, fathead minnow were exposed to the Water Accommodated Flaction (WAF) of a similar substance to the product at a nominal concentration of 100 mg/L: LL<sub>50</sub> (fish, 96h,) ≥100mg/L; NOEL (fish, 14d) ≥ 100mg/L.
- In a static Daphnia magna test, animals were exposed to the WAF of a similar substance to the product at nominal concentrations of up to 10,000 mg/L:EL<sub>50</sub> (48h) and NOEL were greater than 10,000 mg/L. Thus, the similar base oil WAF is generally non-toxic.
- In a semi-static, long-term Daphnia magna reactive test, animals were exposed to the WAF of a similar substance to the product at nominal concentrations of up to 1,000 mg/L: the NOEL (Daphnia magna, 21d) was 10 mg/L based on effects to reproduction.

- In an algal toxicity study, Pseudokirchneriella subcapitata was exposed to a similar substance to the product at a nominal concentration of 100 mg/L WAF loading rate under static conditions: NOEL was found to be  $\geq 100$  mg/L based on average specific growth rate and cell yield.
- In a static 4-Day microorganism luminescence inhibition study using other lubricant base oils as control substances, no significant luminescence inhibition was observed.

Mobility in soil:

Lubricating oils components have estimated  $\log K_{oc} > 3$ , indicating these components are likely to be adsorbed onto soil and sediment and are not likely to leach to ground water.

Persistence and degradability:

Another lubricant base oil was determined to be inherently biodegradable but not readily biodegradable, with a mean degradation of 31% by day 28.

Bioaccumulative potential:

The bioconcentration values estimated for components of lubricating oils suggest some bioaccumulation potential for some components.

**13. DISPOSAL CONSIDERATION**

Dispose of in accordance with all applicable local, state and federal regulations.  
This product is not suitable for landfill or disposal via the drains.  
Containers of this material may be hazardous when emptied due to product residue.  
All hazard precautions given in this data sheet must be observed for empty containers.

**14. TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations.  
DOT Proper Shipping Name: Not Applicable  
IMDG Proper Shipping Name: Not Applicable  
ICAO Proper Shipping Name: Not Applicable  
TDG Proper Shipping Name: Not Applicable  
NFPA Proper Shipping Name: Class 1  
UN Number: Not Applicable

**15. REGULATORY INFORMATION**

The U.S. TSCA inventory:  
All components of this material are on the US TSCA Inventory.  
The EC EINECS inventory:  
All components of this material are on the EC EINECS Inventory.  
The CANADA DSL inventory:  
All components of this material are on the DSL Inventory.  
The AUSTRALIA AICS inventory:  
All components of this material are on the AICS Inventory.  
The KOREA TCCL inventory:  
All components of this material are on the TCCL Inventory.  
The PHILIPPINE PICCS inventory:  
All components of this material are on the PICCS Inventory.

**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.