

**SAFETY DATA SHEET****1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name : MOLY GREEN PREMIUM BLACK $\alpha$  5W-30 SN/CF C3  
 Product Code : 50-E-140  
 Recommended Use : Engine oil  
 Identification of the supplier : CHUGAI YUKAGAKU KOGYO Co., Ltd.  
 Address : 790 Nisibukuro, Yasio-City, Saitama Pref. JAPAN  
 Phone number : +81-48-924-5211  
 Facsimile number : +81-48-924-5212  
 Emergency telephone number : +81-48-929-0051

**2. Hazards identification**

GHS CLASSIFICATION  
 PHYSICAL/CHEMICAL HAZARDS : Not classified  
 HEALTH HAZARDS : Not classified  
 ENVIRONMENTAL HAZARDS : Not classified  
 GHS LABELING  
 Precautionary pictograms : Not applicable  
 Signal word : Not applicable  
 Hazard Statement : Not applicable  
 Precautionary Statements  
 Prevention : Not applicable  
 Response : Not applicable  
 Storage : Not applicable  
 Disposal : Not applicable

※ Even when there is no mentioning in the above instructions by GHS classification, please consider sufficiently to prevention /response/storage/disposal by making reference to after information.

**3. Composition/information on ingredients**

Substance/Mixture : Mixture  
 The name of a chemical substance : Mixture of lubricant base oils and Additives  
 Ingredients and Concentration :

Ingredients	Cas No.	Concentration (mass%)
Petroleum hydrocarbons	64742-54-7	75-85
Additives	(Mixture)	15-25

Chemical formula : nonidentifiable

Hazardous substances

Poisonous and Deleterious Substances Control Act : Not Regulated

Pollutant Release and Transfer Register (PRTR) : Not Regulated

Japan Industrial Safety and Health Act :

Ingredients	Cabinet Order No.	Concentration (mass%)
Mineral oil	Article 18, 1, Attached table 9-168 of Cabinet order (Labeling, etc)	87-97

**4. First-aid measures**

Inhalation  
 1 Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 2 Cover the body with blankets to keep warm and quiet. If you feel unwell, seek medical advice.

Skin Contact  
 1 Immediately take off the polluted clothes and flush skin with large amounts of water and soapy water.  
 2 Wash contaminated clothing before reuse.

Eye Contact  
 1 Rinse with clean water carefully for several minutes.  
 2 Remove contact lenses if present and if removal is easy, then continue rinsing.  
 3 Rinse for 15 minutes at a minimum and seek medical attention.

Ingestion  
 1 Do not induce vomiting. Call a physician or poison control center immediately.  
 2 When the inside of the mouth is polluted, it's washed with water enough.

**5. Fire-fighting measures**

Extinguishing Media : Mist of loaded liquid, dry chemicals, carbon dioxide, fire foam, and dry sand are effective.

Extinguishing Media to Avoid : Use of straight steam of water can cause a risk of spreading fire.

Specific hazards arising : In some cases of fire, may release irritant gases.

Peculiar fire extinguishing method  
 1 Remove combustion source in fire.  
 2 Spray water to the surrounding facilities for cooling.  
 3 Keep unauthorized persons off the site of occurrence of fire and the surroundings.

Precautions for fire fighters  
 1 Fight fire from windward direction while wearing protective equipment. If contact with skin is expected, wear impervious protective equipment and gloves.  
 2 Use air-breathing apparatus and protective clothing whenever necessary.

**6. Accidental release measures**

Personal precautions : Wear protective equipment when working.

Environmental precautions  
 1 Prevent spreading of oil spill with earth and sand, sandbags, or other proper materials and use care not to allow the oil spill to flow to street drains, sewer systems, and rivers.  
 2 At sea, install oil spill containment booms to prevent spreading of spills and absorb with absorption mat or other proper materials.

Methods and materials for containment and cleaning up  
 1 Make a person evacuate from a dangerous area.  
 2 Stretch a rope and prohibit person's entering around the dangerous area.  
 3 In case of spillage in small quantity, collect spillage by absorbing with earth, sand,

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- sawdust, waste, or other proper materials.
- 4 In case of spillage in large quantity, enclose with embankment to prevent spreading of spillage and collect spillage in empty containers to the extent possible.
- Prevention of second accident
- 1 In case of spillage, immediately inform the organizations concerned of the spillage to prevent possible accidents and spreading of spillage.
  - 2 Remove nearby potential ignition sources immediately and make fire-extinguishing agents available.
  - 3 Remove spillage completely, and ventilate and clean the site and the surroundings.

**7. Handling and storage**

- Handling
- Technical measures
- 1 Keep away from any possible contact with sparks, open flames, and high-temperature materials, and do not allow release of vapor without justification.
  - 2 Use personal protective equipment as required.
  - 3 Use pumps or other proper equipment for taking out from containers. Do not siphon with your mouth using a tube. Do not drink.
  - 4 When mist is generated, use respiratory equipment to prevent inhalation of mist.
- Ventilation/Exhaust measure
- 1 Maintain adequate ventilation when handling indoors.
  - 2 In case of vapor/mist dispersion, install a closed system, local ventilation system, and/or other proper equipment for the sources of vapor/mist generation.
- Precautions
- 1 Wash hands and face thoroughly after handling.
  - 2 Wear protective gloves when opening containers to eliminate a risk of hand injury.
  - 3 Avoid rough handling of containers such as falling, dropping, exposing to shock, and dragging.
- Storage
- Storage Conditions
- 1 Store in a well ventilated, cool, dry, dark place, protecting from direct sunlight.
  - 2 Avoid every kind of potential ignition sources and high-temperature materials.
  - 3 Keep containers tightly closed after use to prevent possible contamination with dust and moisture.
- Precautions
- 1 Avoid contact and storage in the same place with Halogens, Strong acids, Alkalies and Oxidizers.
  - 2 Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or perform similar operations unless they have been properly cleaned.

**8. Exposure controls and personal protection**

- Engineering controls
- 1 In case of mist generation, enclose the source of mist generation, or install a ventilation system.
  - 2 Install eye cleaning and body cleaning equipment near the handling site.
- Control parameters
- : None established
- Assessment Criteria of Working Environment  
(Ministry of Labor, Notification No.79 in 27-Mar-95)
- Threshold Limit Values
- 1 Time Weighted Average  $3\text{mg}/\text{m}^3$  (Mineral Oil Mist)  
(Japan Society for Occupational Health /2010 year editions)
  - 2 Time Weighted Average  $5\text{mg}/\text{m}^3$  (Mineral Oil Mist)  
(ACGIH /2010 year editions)
- Protective Equipment
- Respiratory Protection
- : Not needed under normal conditions, but wear a gas mask (against organic gases) whenever required.
- Hand protection
- : In case of prolonged or repeated exposure, wear oil-resistant hand protection.
- Eye protection
- : In case of exposure to splashes, wear ordinary type goggles.
- Skin Protection
- : In case of handling over a prolonged period of time or in case of exposure to oil, wear oil-resistant, long-sleeved work clothing.
- Hygiene Measures
- 1 Take off contaminated clothing and wash thoroughly before reuse.
  - 2 Wash hands thoroughly after handling.

**9. Physical and chemical properties**

- Appearances
- Physical state
- : Liquid
- Form
- : Viscous fluid
- Color
- : Clear Brown
- Odor
- : Slight odor
- Density (at 15 C)
- : 0.85  $\text{g}/\text{cm}^3$  JIS K 2249
- Flash Point
- : >200  $^{\circ}\text{C}$  JIS K 2265-4 (COC)
- Viscosity (at 40 $^{\circ}\text{C}$ )
- : 72  $\text{mm}^2/\text{s}$  JIS K 2283
- (at 100 $^{\circ}\text{C}$ )
- : 12  $\text{mm}^2/\text{s}$  JIS K 2283
- Pour Point:
- : <-20.0  $^{\circ}\text{C}$  JIS K 2269
- Upper/lower flammability or explosive limits (Estimated value)
- : Explosion Limit (1-7%)
- Solubility
- : Water/insoluble

**10. Stability and reactivity**

- Chemical stability
- : Stable when stored or preserved in a dark place at room temperature.
- Possibility of hazardous reactions
- : Keep away from any possible contact with strong oxidizing agents.
- Conditions to avoid
- 1 Contact with incompatible hazard substances.
  - 2 Prolonged heating, open flames, and ignition sources
- Incompatible materials
- : Use care to keep away from any possible contact with halogens, strong acids, alkalis, and Oxidizers.
- Hazardous decomposition products
- : When burnt, may release carbon monoxide and other gases.

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(The obtained information is based on a safety data sheet of each ingredient)

## Product

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Acute toxicity : No data available  
 Skin Corrosion/Irritation : No data available  
 Serious Eye Damage : No data available  
 /Eye Irritation  
 Respiratory sensitizer : No data available  
 Skin sensitizer : No data available  
 Germ Cell Mutagenicity : No data available  
 Carcinogenicity : No data available  
 Toxic to reproduction : No data available  
 Specific Target Organ Toxicity : No data available  
 Specific Target Organ Toxicity : No data available  
 Aspiration Hazard : As Kinematic viscosity at 40°C is 20.5 mm<sup>2</sup>/s and more .not applicable.

## Ingredients(Petroleum hydrocarbons)

Acute toxicity(oral) : LD50:  $\geq$  5000 mg/kg[rat]  
 Acute toxicity(dermal) : LD50:  $\geq$  5000 mg/kg[rat]  
 Acute toxicity(Inhalation) : LC50(4h) >5.0 mg/L[rat] (Oil mist)  
 Serious eye damage : Practically None [rabbit]

Respiratory sensitization : Not applicable  
 Skin sensitization : None Buehler method [guinea pig]  
 Mutagenicity : None AMES method [guinea pig]  
 Carcinogenicity : EU:Category 2 : R45 need not apply. (NOTE L is Applicable), IARC:3  
 Reproductive toxicity : Negative  
 Specific target organ toxicity (Single exposure) : Negative  
 Specific target organ toxicity (Repeated exposure) : Negative  
 Aspiration hazard : Not applicable

## Ingredient (Additive)

(Long-chain arcarylamine/The content in the product : 0.1- &lt;1.3 %)

Acute oral toxicity : LD50 Rat: > 5,000 mg/kg  
 Method: OECD Test Guideline 401  
 Test substance: Read-across (Analogy)  
 Remarks: Based on available data, the classification criteria are not met.  
 Acute dermal toxicity : LD50 Rat: > 2,000 mg/kg  
 Method: OECD Test Guideline 402  
 Test substance: Read-across (Analogy)  
 Remarks: Based on available data, the classification criteria are not met.  
 Acute inhalation toxicity : study scientifically unjustified  
 Skin corrosion/irritation : Species: Rabbit  
 Result: No skin irritation  
 Method: OECD Test Guideline 404  
 Test substance:yes  
 Serious eye damage/eye irritation : Species: Rabbit  
 Result: No eye irritation  
 Method: OECD Test Guideline 405  
 Test substance: yes  
 Based on available data, the classification criteria are not met.  
 Respiratory or skin sensitisation : Test Method: Maximisation Test  
 Species: Guinea pig  
 Result: Does not cause skin sensitisation.  
 Method: OECD Test Guideline 406  
 Test substance: Read-across (Analogy)  
 Based on available data, the classification criteria are not met.  
 Germ cell mutagenicity  
 Genotoxicity in vitro : Result: negative  
 Test substance: Read-across (Analogy)  
 Based on available data, the classification criteria are not met.  
 Genotoxicity in vivo : Test species: Mouse  
 Test substance: Read-across (Analogy)  
 Result: negative  
 Based on available data, the classification criteria are not met.  
 Carcinogenicity : study scientifically unjustified  
 Reproductive toxicity : Test substance: Read-across (Analogy)  
 Based on available data, the classification criteria are not met.

(Zinc alkyl dithiophosphate)/The content in the product : 0.1- &lt;1.3 %)

Acute oral toxicity : LD50 Rat, male: 2,600 mg/kg  
 Method: Tested according to Annex V of Directive 67/548/EEC.  
 Test substance: yes  
 GLP: yes  
 Remarks: May be harmful if swallowed.  
 Acute dermal toxicity : LD50 Rabbit, male and female: > 3,160 mg/kg  
 Method: OECD Test Guideline 402  
 Test substance: yes  
 Remarks: Based on available data, the classification criteria are not met.  
 Acute inhalation toxicity : LC50 Rat, male: > 2 mg/l

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	Exposure time: 1 h
	Method: OECD Test Guideline 403
	Test substance: Read-across (Analogy)
	GLP: no
	Remarks: Based on available data, the classification criteria are not met.
Skin corrosion/irritation	: Species: Guinea pig
	Exposure time: 4 h
	Result: Causes skin irritation.
	Method: OECD Test Guideline 404
	Test substance: Read-across (Analogy)
	Specific concentration limits : Skin Irrit. 2 H315 $\geq$ 6.25 -100%.
Serious eye damage/eye irritation	: Species: Rabbit
	Exposure time: 504 h
	Result: Causes serious eye damage.
	Method: 16 CFR 1500.42
	Test substance: Read-across (Analogy)
Carcinogenicity	: No data available

**12. Ecological information**

(The obtained information is based on a safety data sheet of each ingredient)

## Product

For mixtures, hazard category was identified based on the classification criteria for mixtures.

Ecotoxicity	: No data available
Bioaccumulative potential	: No data available
Mobility	: No data available
Other adverse effect	: No data available
Ingredients (Petroleum hydrocarbons)	
Ecotoxicity	
Acute toxicity	: Hydrobios is polluted because dissolve in no water. LC 50 (Fathead Minnow, 4 d): > 100 mg/l EC 50 (Water flea (Daphnia magna), 2 d): > 10,000 mg/l NOEL (Green algae (selenastrum capricornutum)): >100mg Since putting it in the above test for water-insolubility, adjusted WAF (for water applicability picture) is being used as a sample. From the above test outcome, without aquatic environment acute harmful effects.
Chronic toxicity	: Hydrobios is polluted because dissolve in no water. NOEL (Fathead Minnow, 14 d): > 100 mg/l NOEL (Water flea (Daphnia magna), 21 d): > 10 mg/l applicability picture) is being used as a sample. From the above test outcome, without aquatic environment acute harmful effects. Biological decomposition test outcome is 31% (28 days). There is biodegradability basically, but it isn't biodegradability easily.
Bioaccumulative potential	: There is no useful information.
Mobility	: Log KOC of resemblance group oil is guessed at with more than 3. It's difficult to think that the oil which leaked at the surface of the earth flows to groundwater by being absorbed in ground.
Other adverse effect	: There is no useful information.
Ingredient (Additive)	
(Long-chain arcarylamine/The content in the product	: 0.1- <1.3 %)
Ecotoxicity	
Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Test Method: static test Test substance: Read-across (Analogy) Method: OECD Test Guideline 203 Based on available data, the classification criteria are not met.
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Method: static test Test substance: yes Method: OECD Test Guideline 202 Based on available data, the classification criteria are not met.
Toxicity to algae	: EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test Method: static test Test substance: Read-across (Analogy) Method: OECD Test Guideline 201 Based on available data, the classification criteria are not met.
Persistence and degradability	
Biodegradability	: aerobic activated sludge Result: Not biodegradable Biodegradation: 1 % Exposure time: 28 d Test substance: Read-across (Analogy) According to the results of tests of biodegradability this product is not readily biodegradable.
Bioaccumulative potential	: Accumulation in aquatic organisms is expected.

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	Partition coefficient: noctanol/water log Pow: > 7.6
Mobility in soil	: After release, adsorbs onto soil.
Results of PBT and vPvB assessment	: This substance is not considered to be persistent, bioaccumulating and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).
(Zinc alkyl dithiophosphate)/The content in the product	: 0.1- <1.3 %
Ecotoxicity	
Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l Exposure time: 96 h Test Method: semi-static test Analytical monitoring: no Test substance: Read-across (Analogy) Method: OECD Test Guideline 203 GLP: yes Toxic to aquatic life.
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): 5.4 mg/l Exposure time: 48 h Test Method: static test Analytical monitoring: yes Test substance: Read-across (Analogy) Method: OECD Test Guideline 202 GLP: yes Toxic to aquatic life.
Toxicity to algae	: EbC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l Exposure time: 96 h Test Method: static test Analytical monitoring: yes Test substance: Read-across (Analogy) Method: OECD Test Guideline 201 GLP: yes Toxic to aquatic life.
Persistence and degradability	
Biodegradability	: aerobic activated sludge Concentration: 10 mg/l Result: Not readily biodegradable. Biodegradation: 1.5 % Exposure time: 28 d Method: OECD Test Guideline 301B Test substance: yes GLP: yes According to the results of tests of biodegradability this product is not readily biodegradable.
Bioaccumulative potential	: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected. Partition coefficient: noctanol/water log Pow: 0.9 at 23 ° C
Mobility in soil	: After release, adsorbs onto soil.
Results of PBT and vPvB assessment	: This substance is not considered to be persistent, bioaccumulating and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**13. Disposal considerations**

- Disposal methods
- 1 Dispose of contents/container in accordance with local/regional/national/international regulations.
  - 2 Don't throw
  - 3 Every customer/user of the product should dispose of industrial waste on its own responsibility, otherwise it must rely on a company authorized by prefectural governor for treating industrial waste or a local public body involved in the disposal of industrial waste for proper disposal.
  - 4 Before disposal of used container, remove contents completely.

**14. Transport information**

- UN classification : Not applicable
- LAND - Precautionary Transportation Measures & Conditions : Do not co-load together with dangerous substances categorized in Fire Cat. 1 and/or 6, and/or High Pressure Gases.
- NOTE: Comply with applicable laws and regulations.
- SEA (IMDG) : Not Regulated for Sea Transport according to IMDG-Code
- Marine Pollutant : No
- AIR (IATA) : Not Regulated for Air Transport
- Specific security precaution and condition of transportation : Transport containers without causing any significant friction or shaking.

**15. Regulatory information**

- National Laws and Regulations
- Fire Service Law : Category 4, Flammable Liquids, Class III (#4 Petroleum)
- Industrial Safety and Health Act : Notified Substances
- Pollutant Release and Transfer Register (PRTR) : Not Regulated
- Water Pollution Control Act : Regulations on emissions
- Sewerage Act : Regulations on emissions

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Marine Pollution Prevention Law : Regulations on emissions  
Waste Management and Public : Industrial waste treatment regulation  
Cleaning Law

### **16. Other information**

(references)

Globally Harmonized System of Classification and Labelling of Chemicals(GHS) (2013 year editions)  
The National Institute of Technology and Evaluation (NITE) /GHS relevant information  
Japan Personnel management & Safety information /GHS relevant information  
The others; Additionally the information a literature search gave.

We would like every customer/user of the product to refer to the information and understand the necessity of taking appropriate measures for the actual handling conditions on their own responsibilities for optimum practical application of the product of interest.

Consequently, the Safety Data Sheet is not intended to guarantee the safety of the product referenced to herein.