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	SN GF-16	Gasoline SN/GF-5 5W30	Date : 2017. 09. 01.

1. Product and company identification

- a) Product Name : Gasoline SN/GF-5 5W30
- b) Recommended use of the chemical and restrictions on use : Gasoline Engine
- c) Manufacture Information
- Name : C&L Lube Co. Ltd. (Super-Q)
 - Address : 182, Hwasan-ro, Onsan-eup, Ulju-gun, Ulsan Metro City, Korea
 - Emergency phone number : 82 - 52 - 239 - 5189/5280

2. Hazards identification

- a) Hazard.Risk Classification : Acute Toxicity-Inhalation : Category 4
Skin corrosion/irritation : Category 2
Eye Damage/irritation : Category 2A

b) Label elements including precautionary statements

- Symbol :



- Signal Word : Warning
- Hazard.Risk Statement : H315: Causes skin irritation
H332: Causes serious eye irritation
H332 : Harmful if inhaled

Precautionary Statement :

- Prevention

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash ... thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
- Response

P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P321: Specific treatment(see ... on this label).
P332+P313: If skin irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
- Storage

See the Section 7
- Disposal

See the Section 13

c) Other Hazard.Risk which are not included in the classification criteria

- NFPA Code : Health: 1, Flammability: 1, Reactivity: 0

3. Composition/Information on ingredients

Chemical Name	Other name	CAS No.	Content (%)
Distillates, hydrotreated heavy paraffinic	Highly refined mineral oil	64742-54-7	75 ~ 85
Ethylene-propylene copolymer	Olefin copolymer	9010-79-1	5 ~ 15
Trade Secret	Additive Mixture	Not determined	1 ~ 10



4. First aid measures

- a) **Eye contact :** Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.
- b) **Skin contact :** Remove contaminated clothing and wash skin with plenty of soap and water. Flush with plenty of water for 15 minutes. If sticky, use waterless cleaner first. Seek medical attention if ill effect or irritation develops.
- c) **Inhalation :** If overcome by exposure, remove person to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
- d) **Ingestion:** Do not induce vomiting. Obtain emergency medical attention. Prompt action is essential.
- e) **Indication of immediate medical attention and notes for physician :** May cause slight eye and skin irritation. Not expected to be a sensitizer. Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire-Fighting measures

- a) **Suitable extinguishing media :**
- ⊙ SMALL FIRE : Use dry chemicals, CO₂, water spray or alcohol-resistant foam.
 - ⊙ LARGE FIRE : Use water spray, water fog or alcohol-resistant foam
- b) **Specific hazards arising from the chemical :**
Thermal decomposition may produce carbon monoxide and other toxic vapors.
- c) **Special protective equipment and precautions for fire-fighters :**
Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear. Heat from fire generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal flash point. Fight fire from a safe distance/protected location. Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing/steam explosion. Burning liquid may float on water. Although water soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer/public waters.

6. Accidental release measures

- a) **Personal precautions, protective equipment and emergency procedures :**
Wear chemical resistant gloves such as : Butyl rubber.
Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn.
The equipment must be cleaned thoroughly after each use.
- b) **Environmental precautions and protective procedures :**
May contaminate water supplies/pollute public waters. Evacuate/Limit access.
Equip responders with proper protection.
Prevent flow to sewer/public waters. Stop release. Notify fire and environmental authorities.
Restrict water use for cleanup.
- c) **Methods and materials for containment and cleaning up :**
Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent



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7. Handling and storage

a) Precautions for safe handling :

Avoid contact with skin. Use proper bonding and/or grounding procedures.

Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source).

b) Conditions for safe storage (including any incompatibilities) :

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded.

Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters.

8. Exposure controls & personal protection

a) Control parameters (e.g. occupational exposure limit values, biological limit values) :

<Mineral oil mist>

- OSHA TWA: 5mg/m³

- ACGIH TWA: 5mg/m³, STEL: 10mg/m³

- NIOSH TWA(10hr): 5mg/m³, STEL: 10mg/m³

b) Appropriate engineering controls :

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

c) Personal protective equipment :

○ Respiratory protection :

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include : Half-face filter respirator.

○ Eye protection :

Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

○ Hands protection :

Wear chemical resistant gloves such as: Butyl rubber.

○ Body protection :

Any specific clothing information provided is based on published literature or manufacturer data.

The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

9. Physical and chemical properties

a) Appearance :

Amber clear liquid

b) Odour :

Mild petroleum odour

c) Odour threshold :

No data available.

d) pH :

Not available.

e) Melting point/freezing point :

Not available.

f) Initial boiling point and boiling range :

300~580 °C

g) Flash point :

234 °C (Typical)

h) Evaporation rate :

No data available.

i) Flammability (solid, gas) :

No applicable

j) Upper/lower flammability or explosive limits :

No data available.

k) Vapor pressure :

Less than 0.1kPa at 20 °C

l) Solubility :

Water solubility: Negligible

m) Vapor density :

More than 5 (Air = 1)

n) Specific gravity (15 °C) :

0.850 (Typical)

o) Partition coefficient: n-octanol/water :

No data available.

p) Auto-ignition temperature :

No data available.

q) Decomposition temperature :

No data available.

r) Viscosity (mm²/s, 100 °C) :

10.7 (Typical)

s) Molecular mass :

No data available.



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10. Stability and reactivity

- a) Chemical stability and possibility of hazardous reactions : Material is stable under normal conditions
- b) Conditions to avoid : Not expected to occur.
- c) Incompatible materials : Heat, sparks, open flame, other ignition sources, and oxidizing conditions.
- d) Hazardous decomposition products : Strong oxidizers such as hydrogen peroxide, nitric acid, sulphuric acid, etc.
- e) Hazardous decomposition products : Carbon oxides (CO, CO₂)

11. Toxicological information

- a) Information on the likely routes of exposure:
- Inhalation exposure : May cause slight irritation.
 - Ingestion exposure : May cause diarrhea.
 - Eye exposure : May cause slight eye irritation.
 - Skin exposure : May cause slight skin irritation.
- b) Health hazards information
- Acute toxicity :
<Highly refined mineral oil>-IUCRID
- Oral : LD50(rat) > 5000mg/kg
 - Skin : LD50(rabbit): > 5000mg/kg
 - Inhalation : LC50(rat) : 2.18mg/L/4h
 - Skin corrosion/irritation : May cause slight skin irritation.
 - Serious eye damage/irritation : May cause slight skin irritation.
 - Respiratory sensitization : Not expected to be a sensitizer.
 - Skin sensitization : Not expected to be a sensitizer.
 - Carcinogenicity : Not applicable
 - Germ cell mutagenicity : Not applicable
 - Reproductive toxicity : Not applicable
 - Specific target organ systemic toxicity-single exposure : Not applicable
 - Specific target organ systemic toxicity-repeated exposure : Not applicable
 - Aspiration hazard : No data available.
- c) Numerical measures of toxicity : No data available.

12. Ecological information

- a) Aquatic and terrestrial ecotoxicity:
- <Highly refined mineral oil>
- Chronic Toxicity data (fish), NOEC : >5000mg/L (7day)-IUCID Data
 - Chronic Toxicity data (Aquatic Invertebrates), NOEC : 552mg/L (7day)-IUCID Data
- *NOEC: No Observed Effect Concentration
- b) Persistence and degradability : Expected to be biodegradable.
- c) Bioaccumulative potential : Not applicable
- d) Mobility in soil : Expected to have mobility in soils.
- e) Other adverse effects : No data available.

13. Disposal considerations

- a) Disposal method : Use only licensed transporters and permitted facilities for waste disposal.
- b) Disposal precaution : RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.



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14. Transport information

- a) UN number : Not applicable
b) UN proper shipping name : Not applicable
c) Transport hazard class : Not applicable
d) Packing group (if applicable) : Not applicable
e) Marine pollution (yes/no) : Not applicable
f) Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises : Not applicable

15. Regulatory information

- a) **Safety, health and environmental regulations specific for the product in question:**
- EINECS (European Inventory of Existing Commercial Chemical Substances), June 15, 1991
 - TSCA (US, Toxic Substances Control Act), December, 2006
 - AICS (Australian Inventory of Chemical Substances), June, 1996
 - DSL (Canadian Domestic Substances List), January 26, 1991
 - IECSC (Chinese Chemical Inventory)
 - ENCS (Japanese Existing and New Chemical Substances)
 - ECL (Korean Existing Chemical Number), January, 1997
 - PICCS (Philippine Inventory of chemicals and Chemical Substances), 2000
 - NZIoC (New Zealand Inventory of Chemicals), 2006
 - SWISS (Swiss Giftliste 1 and Inventory of Notified New Substances)
 - ASIA-PAC
- <EU Classification and Labelling information>
- Classification: Carc. Cat. 2: R45
 - Symbol(s) and Indication(s) of Danger : T – Toxic
 - Risk Phrases
 - R45: May cause cancer.
 - Safety Phrases
 - S53: Avoid exposure – obtain special instructions before use.
 - S45: In case of accident or if you feel unwell, seek medical advice immediately

16. Other information

a) **Information source and references:**

- 1) C&Lube. Co., Ltd.
- 2) Globally Harmonized System of classification and labeling of chemicals(GHS), First revised edition, United Nations.
- 3) United States National Library of Medicine.
- 4) EINECS (European Inventory of Existing Commercial chemical Substances)
- 5) IARC(International Agency for Research on Cancer.)
- 6) NIOSH (The National Institute for Occupational Safety and Health)
- 7) ACGIH (American Conference of Governmental Industrial Hygienists.)
- 8) IUCLID Data
- 9) ICSC (International Chemical Safety Cards) – ILO
- 10) Transport of Dangerous Goods – UN
- 11) Korea Occupational Safety & Health Agency
- 12) U.S Department of Health and Human Services.
- 13) MADS of raw material from supplier

b) **Issuing date :** 2012-07-01

c) **Revision number and date :**

Revision number : 2
Final revision data : 2017. 09. 01.

