

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

Section 1: IDENTIFICATION OF THE HAZARDOUS CHEMICAL AND OF THE SUPPLIER

PRODUCT IDENTIFIER

Product Name : **Power Up SEMI SYN SN/CJ4**
Product Description : Synthetic Base Stocks and Additives

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE

Recommended Use : Engine oil
Restrictions on Use : For specific application advice see appropriate Technical Data Sheet or consult our company representative.

SUPPLIER DETAILS

Supplier Name & Address : **Lubrimax (M) Sdn Bhd**
HS (M) 3745 PTD 153751 Jalan Berjaya 8
Taman Perindustrian Berjaya Kempas Lama
Kempas 81200 Johor Bahru Johor Malaysia

Supplier Contact : (Tel) +607-554 3000 (Fax) +607-554 1212

24 Hour Environmental /

Health Emergency Telephone 1-800-815-308 / +1-703-527-3887

Poison Centre Malaysia 1-800-888-099

Section 2: HAZARD IDENTIFICATION

CLASSIFICATION OF THE HAZARDOUS CHEMICAL

- Classification of the substance or mixture : Not classified

LABEL ELEMENTS

- HAZARD PICTOGRAMS OR SYMBOL : No hazard pictogram
- SIGNAL WORD : No signal word
- HAZARD STATEMENTS : No significant hazards
- PRECAUTIONARY STATEMENTS :

Prevention Not applicable

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

Response	Not applicable
Storage	Not applicable
Disposal	Not applicable

OTHER HAZARD INFORMATION:

- Other hazards which do not result in classification
Defatting to the skin.
USED ENGINE OILS
Used engine oil may contain hazardous components which have the potential to cause skin cancer.
See Toxicological Information, section 11 of this Safety Data Sheet.

NOTE: This material should not be used for any other purpose than the recommended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

Section 3: COMPOSITION AND INFORMATION OF THE HAZARDOUS CHEMICAL

This material is defined as a mixture.

Products/Ingredient	CAS No.	Percent (5%)	Carcinogen
Distillates petroleum, hydro treated light paraffinic	64742-54-7	60-100	N/E
Distillates petroleum, hydro treated light paraffinic	64742-55-8	>10	Aspiration Toxicity Cat. 1
Alkyl Borate	Confidential	Below 0.8	N/E
Dibutylhydrogen Phosphite	1809-1-94	Below 0.2	N/E
Diphenylamine	122-39-4	Below 0.2	N/E
Ethoxylated amine	Confidential	Below 0.15	N/E

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

* Occupational exposure limits, if available, are listed in Section 8

* Toxicological information, if available, is listed in section 11

Section 4: FIRST-AID MEASURES

INHALATION:

- Generally not an inhalation hazard.

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

- Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

SKIN CONTACT:

- Immediately flush with large amounts of water, use soap if available. Remove contaminated clothing, including shoes, after flushing has begun.
- If irritation persists, get medical attention.

EYE CONTACT:

- Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

INGESTION:

- DO NOT induce vomiting. If individual is conscious, give milk of water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

Section 5: FIRE-FIGHTING MEASURES

FIRE-FIGHTING PROCEDURES:

- In the event of fire, use carbon dioxide, dry chemical powder or foam extinguishers. DO NOT use a water jet, as this may spread the fire. In the absence of suitable extinguishers, sand or earth may be used to smother small fires.

PROTECTION OF FIRE-FIGHTERS:

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SPECIAL FIRE PRECAUTIONS:

- Respiratory and eye protections may be required for the fire-fighting personnel. Avoid spraying water directly into storage containers due to the danger of boil over. See also Section 4 "First Aid Measures" as well as Section 10 "Stability and Reactivity".

HAZARDOUS COMBUSTION PRODUCTS:

- Fumes, smoke, Carbon dioxide (CO₂).

Section 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

PERSONAL PRECAUTIONS:

- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.

PROTECTIVE MEASURES:

- Avoid contact with spilled material. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.
- For emergency responders: Respiratory protection: respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure.
- If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended.
- Large spill: Immediately contact emergency personnel. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
- Small spill: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

ENVIRONMENTAL PRECAUTIONS:

- Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Land Spill:

- Contain spilled liquid with sand or earth.
- Recover by pumping (preferably use an explosion proof or hand pump) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels or pails and place in suitable containers for recycle or disposal.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Water Spill:

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

- Warn other shipping. Notify port or relevant authority and keep public away. Shut off source if possible to do without hazard.
- Material that will sink. No immediate action – consult and expert.
- Consult an expert on disposal of any recovered material and ensure conformity to local disposal regulations.

. See Section 4 “**First Aid Measures**” as well as Section 10 “**Stability and Reactivity**”.

*There is no ingredient present which, within the knowledge of the supplier and in the concentrations applicable are classified as hazardous to the health or environment and hence require reporting under this section.

Section 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

- **Handling:** Put on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas.
- **Storage:**
 - Storage temperature (°C) : between 10 to 40. See Section 16.
 - Transport temperature (°C) : between 10 to 40. See Section 16.
 - Loading/Unloading temperature (°C) : between 10 to 40. See Section 16.
 - Storage/transport pressure (kPa) : Atmospheric.
- Usual shipping containers : Drums, pails, cans.
- Materials and coatings suitable : Stainless steel, carbon steel, cast iron, nickel resistant steel, inorganic zinc coatings, amine epoxy coatings, epoxy phenolic coatings, viton rubber, nitrile rubber, rubber.
- Materials and coatings unsuitable : Compatibility with plastic materials can vary; we therefore recommend that compatibility is tested prior to use.

NOTE:

- Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated place away from incompatible materials.
- Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight.

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

- Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning.

Not suitable Prolonged exposure to elevated temperature.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

- The container choice, for example storage vessel, may effect static accumulation and dissipation. Do not store in open or unlabelled containers. Keep away from incompatible materials.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

CONTROL PARAMETERS / OCCUPATIONAL EXPOSURE LIMITS

Ingredient name Occupational exposure limits (Note: Exposure limits are not additive)

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy paraffinic	DOSH USECHH (Malaysia). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2000 Form:
Base oil - unspecified	DOSH USECHH (Malaysia). TWA: 5 mg/m ³ 8 hours. Issued/Revised: 1/2000 Form: mist

NOTE: Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Limits/standards shown for guidance only. Follow applicable regulations.

Biological limits: No biological limits allocated.

ENGINEERING CONTROLS

- The use of local exhaust ventilation is recommended to control process emissions near the source. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations. No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Where concentration in air may

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

be exceedingly high and engineering, work practice or other means of exposure reduction are not adequate, approved respirators may be necessary to prevent overexposure by inhalation.

- Eye/Face protection:
 - If contact is likely, safety glasses with side shields are recommended.
- Skin and 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: No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
- Hand protection:
 - For open systems where contact is likely, wear long sleeves, chemical resistant gloves
 - Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions.
 - The types of gloves to be considered for this material include:
No protection is ordinarily required under normal conditions of use. Nitrile, Viton
- Respiratory protection:
 - Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.
 - Types of respirators to be considered for this material include:
No special requirements under ordinary conditions of use and with adequate ventilation. Particulate

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Colour: Amber

Physical State: Liquid

Odour: Characteristic

Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.0 °C): 0.88

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

Flammability (Solid, Gas): N/A
Flash Point [Method]: >220°C (392°F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): N/A
Autoignition Temperature: N/D
Boiling Point / Range: > 316°C (601°F)
Decomposition Temperature: N/D
Vapour Density (Air = 1): N/A
Vapour Pressure: N/A
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/A
Solubility in Water: Negligible
Viscosity: [N/D at 40 °C] | 15.1 cSt (15.1 mm²/sec) at 100°C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: -33°C

NOTE: The data above are typical values and do not constitute a specification. Contact the Supplier for additional information.

Section 10: STABILITY AND REACTIVITY

<u>REACTIVITY:</u>	See sub-sections below.
<u>CHEMICAL STABILITY:</u>	Material is stable under normal conditions.
<u>POSSIBILITY OF HAZARDOUS REACTIONS:</u>	Hazardous polymerization will not occur.
<u>CONDITIONS TO AVOID:</u>	Excessive heat. High energy sources of ignition.
<u>HAZARDOUS DECOMPOSITION PRODUCTS:</u>	Material does not decompose at ambient temperatures.
<u>INCOMPATIBLE MATERIALS:</u>	Strong oxidisers

Section 11: TOXICOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

INFORMATION ON TOXICOLOGICAL EFFECTS

Aspiration hazard Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

- **Eye contact** No known significant effects or critical hazards.
- **Inhalation** Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
- **Skin contact** Defatting to the skin. May cause skin dryness and irritation.
- **Ingestion** No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- **Eye contact** No specific data.
- **Inhalation** No specific data
- **Skin contact** Adverse symptoms may include the following:-
Irritation, dryness, cracking
- **Ingestion** No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Potential chronic health effects

General USED ENGINE OILS
Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.

Carcinogenicity No known significant effects or critical hazards.
Mutagenicity No known significant effects or critical hazards.
Teratogenicity No known significant effects or critical hazards.
Developmental effects No known significant effects or critical hazards.
Fertility effects No known significant effects or critical hazards.

OTHER INFORMATION

Contains: Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitising in test animals and humans.

Section 12: ECOLOGICAL INFORMATION

ECOTOXICITY

- Long term adverse effects to aquatic organisms are possible if continuous exposure is maintained. Can be expected to be harmful to aquatic organisms.

PERSISTENCE AND DEGRADABILITY

- No data available.

BIOACCUMULATIVE POTENTIAL

- No data available

MOBILITY IN SOIL

- Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.
- Soil/water partition coefficient (KOC) -- Not available.

OTHER ADVERSE EFFECTS

- No known significant effects or critical hazards.

Section 13: DISPOSAL INFORMATION

The following advice only applies to the products as supplied. Combination with other materials may well indicate another route of disposal. If in doubt, contact the local supplier or authorities. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL METHODS

- Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
- Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Waste packaging should be recycled. Do not mix used oils with solvents, brake fluids or coolants. Incineration or landfill should only be considered when recycling is not feasible.

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

- Material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.
- Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

REGULATORY DISPOSAL INFORMATION

Environmental Quality (Scheduled Wastes) Regulations 2005 waste code: SW 305

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s); This material is considered as hazardous waste pursuant to Environmental Quality (Scheduled Wastes) Regulations 2005.

Empty Container Warning Empty Container Warning (where applicable):

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations.

DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14: TRANSPORTATION INFORMATION

	IMGD	IATA
UN number	Not Regulated	Not Regulated
UN proper shipping name	-	-
Transport hazard class (es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

Section 15: REGULATION INFORMATION

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19Th February 2019

This material is not hazardous as defined by the Occupational Safety and Health (Classification, Labeling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

- Listed or exempt from listing/notification on the following chemical inventories:
 - AICS, DSL, IECSC, KECI, PICCS, TSCA
- National Laws and Regulations:
 - Petroleum (Safety Measures) Act 1984
 - Motor Vehicles (Construction and Use) (Vehicles Carrying Petroleum Products) Rules, 1965 – L.N. 405/65 under Road Transport Act, 1987;
 - Motor Vehicles (Construction, Equipment and Use) (Use Of Liquefied Petroleum Gas Fuel System In Motor Vehicles) Rules 1982 - P.U. (A) 392/82 under Road Transport Act, 1987.

Section 16: OTHER INFORMATION

Heating for the products is usually not necessary except in situations as described below:

With proper facilities, no heating is required for pumping at ambient temperatures. If extreme cold weather conditions necessitate heating, then tempered water or oil, not exceeding 100 °C, are recommended. If heated, product temperature should be constantly monitored, and product should be agitated to avoid localized temperatures in the container above 60 °C.

Product should be stored between 10 and 40 °C (40 to 100 °F). Lower temperatures may result in some crystallization of the product. Higher temperatures will lead to degradation of product quality.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

<u>Acronym</u>	<u>Full text</u>
N/A	Not applicable
N/D	Not determined
NE	Not established
CAS	Chemical Abstracts Service
OEL	Occupational Exposure Limit
STEL	Short-Term Exposure Limits
SCBA	Self Contained Breathing Apparatus
TWA	Time-Weighted Average

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT CODE : **SEMI SYN SN/CJ4**

Date Issue: 19TH February 2019

GHS	Globally Harmonized System of Classification and Labelling of Chemicals
ASTM	ASTM International, originally known as the American Society for Testing and Materials (ASTM)
DSL	Domestic Substance List (Canada)
TSCA	Toxic Substances Control Act (U.S. inventory)
AICS	Australian Inventory of Chemical Substances
IECSC	Inventory of Existing Chemical Substances in China
KECI	Korean Existing Chemicals Inventory
PICCS	Philippine Inventory of Chemicals and Chemical Substances
IATA	International Air Transport Association
IMGD	International Maritime Dangerous Goods
MARPOL73/78	International Convention for the Prevention of Pollution From

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Updates made in accordance with implementation of GHS requirements.

DATE OF ISSUE: 19TH February 2019

VERSION: 2.0

This information related only to the specific material designated and may not be valid for such material used in combination with any other material or in any process. Such information is to the best of Lubrimax (M) Sdn Bhd knowledge and believed to be accurate and reliable as of the indicated. However, no representation, warranty or guarantee is more as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.
