

# Material Safety Data Sheet (MSDS)

## 1. IDENTIFICATION

### A. Product Name

CUMMINS PREMIUM BLUE 8100 SAE 15W-40

### B. Recommended use of the chemical and restrictions on use

Engine Oil

### C. Information of manufacturer, supplier

#### 1) Company

Hanval INCORPORATED.

#### 2) Address

Head Office : 13<sup>th</sup> Floor KSCFC Bldg., 15, Boramae-ro-5-gil, Dongjak-gu, Seoul

Factory : 375 Gongdan-Ro, Onsan-Eup, Ulju-Gun, Ulsan, Korea

#### 3) Emergency Telephone No

82-2-3284-3400

82-52-711-6501

#### 4) Departments

Technical & Marketing Dept.

Technical R&D Center

## 2. HAZARD IDENTIFICATION

### A. Classification

None : None

### B. Label element, including precautionary statements

#### 1) Symbols

None

#### 2) Signal word(s) : None

#### 3) Hazard statement(s):

None

#### 4) Precautionary statement(s)

○ Prevention

- None

○ Response

- None

- Storage
  - None
- Disposal
  - None

**C. Other hazards which do not result in classification**

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical identity	Common name, synonym	Cas No.	Percentages(%)
Distillate, Hydrotreated Heavy Paraffinic	Highly refined mineral oil	64742-54-7 / KE-12546	70 ~ 80
Olefin copolymer		Confidential	~ 10
Mineral Oil		Not determined	~ 15
Additive Package		Confidential	~ 5

※ A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**A. Eye contact**

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

**B. Skin contact**

Wash thoroughly with soap and water.

Remove contaminated clothing and shoes

**C. Inhalation**

If difficulties occur after vapor/aerosol has been inhaled,  
remove to fresh air and seek medical attention.

**D. Ingestion**

Rinse mouth immediately and then drink plenty of water, seek medical attention.

**E. Most important symptoms/effect, acute and delayed**

- Inhalation

Short term exposure: Irritation, headache, sleepiness, dizziness, adjustment (feature) loss,  
a blood disorder

Long-term exposure: Irritation, headache

- Skin contact

Short term exposure: Allergic reactions.

Long-term exposure: Irritation, Allergic reactions.

- Eye contact

Short term exposure: Irritation

Long-term exposure: Allergic reactions.

- On ingestion

Short term exposure : vomiting, shortness of breath, headache, sleepiness, dizziness, emotional disorders, trembling, adjust (feature) loss, impaired vision, a heart condition, convulsions, lethargy

- Long-term exposure:

**F. Indication of immediate medical attention and special treatment needed, if necessary**

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. Flash Point**

224 °C (COC)

**B. FIRE-FIGHTING MEASURES**

- Recommended extinguishing media :

Dry extinguishing media, carbon dioxide, water spray, alcohol-resistant foam

- Prohibited extinguishing media :

High pressure water shoot

- Large fire :

No Data. Water spray, alcohol-resistant foam

**C. Specific hazards arising from the chemical**

Not available

**D. Extinguishment**

- Move containers from fire area, if you can do without the risk.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.

## 6. ACCIDENTAL RELEASE MEASURES

**A. Necessary actions to protect human health**

Eliminate all sources of ignition, adequate ventilation

**B. Necessary actions to protect the environment**

Do not abandon your product to rivers.

**C. Purification and removal methods**

After absorbing material to absorb using the disposal, burning.

## 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 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. Exposure limits and biological exposure limits of chemical**

○ ACGIH TLV

- [Distillates (petroleum), hydrotreated heavy paraffinic] : TWA 5 mg/m<sup>3</sup>, Inhalable particulate matter (Mineral oil, Pure, highly and severely refined)

○ OSHA PEL

- Not available

**B. Engineering management :**

Ventilation: local exhaust ventilation system, install and maintain appropriate control over the wind speed to make it.

**C. Personal protection equipment :**

○ Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

- Respiratory protection is ranked in order from minimum to maximum.

- Consider warning properties before use.

- Any chemical cartridge respirator with organic vapor cartridge(s).

- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

- Any air-purifying respirator with a full facepiece and an organic vapor canister.

- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Eyes protection
- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Hands protection : Chemical resistance protective gloves
  - Human body protection : Wearing of closed work clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### A. Appearance (physical state, color etc.)

Transparent brown

### B. Odor

Mild petroleum odour

### C. Odor threshold

No data available.

### D. pH

No data available.

### E. Melting point/freezing point

No data available.

### F. Initial boiling point and boiling range

More than 300°C

### G. Boiling point(°C)

No data available.

### H. Evaporation rate

No data available.

### I. Flammability(solid, gas)

No data available.

### J. Upper/lower flammability or explosive limits

No data available.

### K. Vapor pressure

Less than 0.1kPa at 20°C

### L. Solubility

No data available.

### M. Vapor density

More than 5 (Air =1)

**N. Specific gravity**

0.8765 g/cm<sup>3</sup> (15°C)

**O. Partition coefficient: n-octanol/water**

No data available.

**P. Auto-ignition temperature**

No data available.

**Q. Decomposition temperature**

No data available.

**R. Viscosity:**

14.57 ~ 16.17 cst(100°C/212F)

**S. Molecular weight**

No data available.

## 10. STABILITY AND REACTIVITY

**A. Chemical stability**

Material is stable under normal conditions

**B. Toxicant generation possibility during reaction**

No hazardous reactions when stored and handled according to instructions.

**C. Prohibited conditions**

Heat, sparks, open flame, other ignition sources, and oxidizing conditions.

**D. Prohibited materials**

An Oxidizing agent

**E. Toxicant during decomposition**

Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

**A. Information on the likely routes of exposures**

○ Inhalation exposure:

- Not available

○ Ingestion exposure:

- Not available

**B. Delayed and immediate effects and also chronic effects from short and long term exposure**

○ Acute toxicity:

\* Oral

- [Distillates (petroleum), hydrotreated heavy paraffinic] : LD50 > 15000 mg/kg Rat
  - \* Dermal
- [Distillates (petroleum), hydrotreated heavy paraffinic] : LD50 > 5000 mg/kg Rabbit
  - \* Inhalation
- [Distillates (petroleum), hydrotreated heavy paraffinic] : LC50 >5.53 mg/l Rat
  - Skin corrosion/irritation:
    - Not available
  - Serious eye damage/irritation:
    - Not available
  - Respiratory sensitization:
    - Not available
  - Skin sensitization:
    - Not available
  - Carcinogenicity:
    - \* IARC
      - Not available
    - \* OSHA
      - Not available
    - \* ACGIH
      - [Distillates (petroleum), hydrotreated heavy paraffinic] : A4
  - \* NTP
    - Not available
  - \* EU CLP
    - [Distillates (petroleum), hydrotreated heavy paraffinic] : Carc.1B
  - Germ cell mutagenicity:
    - Not available
  - Reproductive toxicity:
    - Not available
  - Specific target organ systemic toxicity-single exposure:
    - Not available
  - Specific target organ systemic toxicity-repeated exposure:
    - Not available
  - Aspiration hazard:
    - Not available

**C. Numerical measures of toxicity(such as acute toxicity estimate)**

- No data available.

## 12. ECOLOGICAL INFORMATION

### A. Aquatic, terrestrial organisms toxicity

Fish

- [Distillates (petroleum), hydrotreated heavy paraffinic] : LC50 > 5000 mg/l 96 hr Oncorhynchus mykiss

Crustaceans

- [Distillates (petroleum), hydrotreated heavy paraffinic] : EC50 > 1000 mg/l 48 hr Daphnia magna

Algae

- [Distillates (petroleum), hydrotreated heavy paraffinic] : EC50 > 1000 mg/l 96 hr Scenedesmus subspicatus

### B. Persistence and degradability

Persistence

- [Distillates (petroleum), hydrotreated heavy paraffinic] : log Kow = 3.9 ~ 6 (Estimates)

Degradability

- Not available

### C. Bio-accumulative potential

Bioaccumulative potential

- [Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts] : BCF 3.162

Biodegradation

- [Distillates (petroleum), hydrotreated heavy paraffinic] : Biodegradability = 6 (%) 28 day (Aerobic, Domestic wastewater, does not decompose easily)

### D. Mobility in soil

- Not available

### E. Other adverse effects

- Not available

## 13. DISPOSAL CONSIDERATIONS

### A. Disposal methods

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.

- If water separation is possible, pre-process with Water separation process.

- Dispose by incineration.

- Incinerate the oil by separating the oil and water

- The remainder of the water after separation will be processed in a water pollution prevention facilities.

- Do incineration or stabilization of the residue after disposal as the method of evaporation and



concentration.

- Do incineration of the residue after disposal as the method of agglomeration and precipitation.

**B. Disposal considerations(Specify disposal container and methods)**

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.

- Dispose of waste in accordance with all applicable laws and regulations.

## 14. TRANSPORT INFORMATION

**A. UN Number**

- Not available

**B. UN Proper Shipping Name**

- Not available

**C. Transport hazard class**

- Not available

**D. Packing group, if applicable**

- Not available

**E. Environmental hazards**

- Not available

**F. Special precautions for user**

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.

- EmS FIRE SCHEDULE : Not available

- EmS SPILLAGE SCHEDULE : Not available

## 15. REGULATORY INFORMATION

**A. Safety, health and environmental regulations**

POPs Management Law

- Not applicable

Information of EU Classification

\* Classification

- [Distillates (petroleum), hydrotreated heavy paraffinic] : Carc. Cat. 2 R45

\* Risk Phrases

- [Distillates (petroleum), hydrotreated heavy paraffinic] : R45

\* Safety Phrase

- [Distillates (petroleum), hydrotreated heavy paraffinic] : S53, S45
- U.S. Federal regulations
- \* OSHA PROCESS SAFETY (29CFR1910.119)
- Not applicable
- \* CERCLA Section 103 (40CFR302.4)
- Not applicable
- \* EPCRA Section 302 (40CFR355.30)
- Not applicable
- \* EPCRA Section 304 (40CFR355.40)
- Not applicable
- \* EPCRA Section 313 (40CFR372.65)
- Not applicable
- Rotterdam Convention listed ingredients
- Not applicable
- Stockholm Convention listed ingredients
- Not applicable
- Montreal Protocol listed ingredients
- Not applicable

## 16. OTHER INFORMATION

### A. References and sources for data

- 1) HANVAL Technical R&D Center
- 2) Globally Harmonized System of classification and labelling 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) IUCLID Dataset
- 8) ACGIH (American Conference of Governmental Industrial Hygienists.)
- 9) Transport of Dangerous Goods-UN
- 10) Korea Occupational Safety & Health Agency
- 11) U.S Department of Health and Human Services
- 12) MSDS of raw material from supplier

### B. Originated date

2017. 04. 14

### C. Revision number and date



- 1) Revision number: 0
- 2) Final revision data: 2017. 04. 14

**D. Etcetera**

This data is written on the basis of knowledge in our R&D center. The purpose of this is providing health and environment-related information. (It does not mean the physical properties and warranty of product.)