SDS(Safety Data Sheet)

Product	Kixx CNG 5W-30	
List No.	Issuing date	Last revised date
LB2960	2012-11-30	2018-01-01

1. IDENTIFICATION

1) Product name

Kixx CNG 5W-30

2) Recommended use of the chemical and restriction on use

- Recommended use (Lubricants and additives) Gasoline Engine Oil
- Restrictions on use Do not use for any other purpose.

3) Details of the supplier of the safety data sheet

○ **Manufacturer**

- Company name GS Caltex Corporation
- Address GS Tower, 508, Nonhyeon-ro, Gangnam-gu, Seoul, Korea
- Emergency telephone number +82-1899-5145

2. HAZARDS IDENTIFICATION

1) Classification of the product

- Not applicable

2) Label elements

○ **Hazard pictograms**

- Not applicable

○ **Signal word**

- Not applicable

○ **Hazard statements**

- Not applicable

○ **Precautionary statements**

1) Prevention

- Not applicable

2) Response

- Not applicable

3) Storage

- Not applicable

4) Disposal

- Not applicable

3) Other hazards

○ **Product NFPA Level**

(※ 0-Lack, 1-Low, 2-Moderate, 3-High, 4-Very High)

Product name	Health	Flammable	Reaction
Kixx CNG 5W-30	1	1	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Trade names and Synonyms	CAS No.	EC No.	Contain Ratio(%)
Distillates (petroleum), hydrotreated heavy paraffinic		64742-54-7	265-157-1	85 ~ 95
Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts		68649-42-3	272-028-3	0 ~ 2
Business Secret1				5 ~ 15
arcrylic copolymer				0 ~ 1

4. FIRST AID MEASURES

1) Eye contact

- In case of contact with material, immediately flush eyes with running water for at least 15 minutes.
- Get medical aid immediately.

2) Skin contact

- In case of contact with material, immediately flush skin with running water for at least 15 minutes.
- Remove and isolate contaminated clothing and shoes.
- Launder contaminated clothing and shoes before re-use.
- Get medical aid immediately.

3) Inhalation

- Move to fresh air.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Seek immediate medial assistance.

4) Ingestion

- If unconscious but breathing, never give anything by mouth.
- Get medical aid immediately.

5) Indication of any immediate medical attention and special treatment needed

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Do not apply drugs of the adrenaline ephedrine group.

5. FIRE FIGHTING MEASURES

1) Suitable (and unsuitable) - Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam,

extinguishing media	CO_2 (Suitable extinguishing media). - Large fire: Water spray/fog, regular foam (Suitable extinguishing media). - High-pressure water (Unsuitable extinguishing media).
2) Special hazards arising from the substance or mixture	- May ignited from heat, friction or contamination. - Containers may explode when heated. - Some may burn but none ignite readily. - Fire may produce irritating and/or toxic gases. - May cause toxic effects if inhaled. - Some liquids produce vapors that may cause dizziness or suffocation. - May ignited from heat, friction or contamination. - Containers may explode when heated. - Some may burn but none ignite readily. - Fire may produce irritating and/or toxic gases. - May cause toxic effects if inhaled. - Some liquids produce vapors that may cause dizziness or suffocation.
3) Special protective equipment and precautions for firefighters	- Substance may be transported hot. - Runoff may cause pollution. - Contact may cause burns to skin and eyes. - Dike fire-control water for later disposal; do not scatter the material. - Move containers from fire area if you can do it without risk. - Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out. - Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. - Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.

6. ACCIDENTAL RELEASE MEASURES

1) Health considerations and protective equipment	- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). - Stop leak if you can do it without risk. - Please note that materials and conditions to be avoided. - Ventilate the contaminated area. - Do not touch or walk through spilled material. - Prevent dust cloud. - Do not enter areas which have more than 23.5% oxygen in the atmosphere, without respirator or air supplied mask.
2) Environmental precautions	- Prevent entry into waterways, sewers, basements or confined areas.
3) Methods and material for containment and cleaning up	- Small Spill: Flush area with flooding quantities of water. - Small Spill: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. - Large Spill: Dike far ahead of liquid spill for later disposal. - With clean shovel place material into clean, dry container and cover loosely; move

containers from spill area.
- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

7. HANDLING AND STORAGE

1) Precautions for safe handling

- Please note that materials and conditions to be avoided.
- Wash ... thoroughly after handling.
- Handling refer to engineering control/personal protection section.
- CAUTION: High temperature.
- CAUTION: This material does not contain oxygen and may cause asphyxia if released in a confined area.
- High concentration of this gas will create an oxygen-deficient atmosphere, creating the risk of asphyxiation. Check oxygen content before entering area.
- CAUTION: Vapors displace air and can cause asphyxiation in confined spaces if released material.
- Keep under 20℃. This material evaporate slowly at 20℃ and reach toxic concentration.
- Do not spray. This material does not easily evaporated. But can be reach toxic concentration quickly in air if sprayed.
- Check oxygen content before entering area.
- Use adequate machine for prevention when package handling.
- Avoid any skin and eye contact when insert undiluted solution. Wash ... thoroughly after handling.
- Caution: Dangerous fire hazard when exposed to heat, or flame, sparks.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

2) Conditions for safe storage (including any incompatibilities)

- Store in a dry place. Store in a closed container.
- Please note that materials and conditions to be avoided.
- Store containers: AVOID the place where can be damage and contamination.
- Store in a cool/low-temperature, well-ventilated {dry} place {away from heat and ignition sources}
- Choose a place that can be protected from strong oxidizers and acid.
- Drum Handling: Must work at safe place., Loading more than 3 stack is prohibited.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1) Control parameters

Chemical name	Exposure limits	ACGIH TLV	OSHA PEL	Biological limit values(BLV)

Distillates (petroleum), hydrotreated heavy paraffinic	TWA : Not applicable STEL : Not applicable	5mg/m3 Not applicable	Not available	Not applicable
Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts	TWA : Not applicable STEL : Not applicable	Not applicable Not applicable	Not available	Not applicable
BUSINESS SECRET1	TWA : Not applicable STEL : Not applicable	Not applicable Not applicable	Not available	Not applicable
arcrylic copolymer	TWA : Not applicable STEL : Not applicable	Not applicable Not applicable	Not available	Not applicable

2) Appropriate engineering controls

- Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

3) Personal protection equipment

○ **Respiratory protection**
- If high frequency of use or exposure, wear air respirator.
- Wear breathing protection, which needs a confirmation from the Korea Occupational Safety and Health Agency.

○ **Eye protection**
- Wear suitable protective goggles and face shields.
- Wear face shield to protect eyes from scattering dust or hazardous liquid.
- Wear Non-moisture permeable goggle for dust protection.
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

○ **Hand protection**
- Wear insulated gloves.
- Wear Non-moisture permeable chemical resistance protective gloves(latex, nitrile rubber, PVC) for prevent skin contact.

○ **Body protection**
- When contact is likely wear chemical resistant, oil and grease resistant, non-moisture permeable shoes and clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Item	Input Value
Apperance	Clear, light yellow liquid
Color	No Data
Smell	a specific smell of Hydrocarbon
Smell Threshold	No Data

pH (Numerical value)	No Data
Melting/Freezing Point	No Data
Boilling Point (Numerical value)	No Data
Flash Point (Numerical value)	234 °C
Evaporating Rate	No Data
Flammability(Solid, Gas)	No Data
Explosibility Range	No Data
Steam Pressure	No Data
Solubility (Numerical value)	No Data
Vapor Density	No Data
Specific Gravity	0.86
Distribution Coefficient	No Data
SelfIgnition Temperature	No Data
Pyrolysis Temperature	No Data
Viscosity (Numerical value)	10.5 mm2/s (at 100℃)
Molecular Weight	No Data

10. STABILITY AND REACTIVITY

1) Chemical Stability and hazardous reactivity
- Stable under normal temperatures and pressures.
- Containers may explode when heated.
- Some may burn but none ignite readily.
- Fire may produce irritating and/or toxic gases.
- May cause toxic effects if inhaled.
- Some liquids produce vapors that may cause dizziness or suffocation.

2) Conditions to avoid
- Ignition source(heat, spark, flame, etc.).

3) Incompatible materials
- Combustibles.
- Irritating and/or toxic gas.

4) Hazardous decomposition products
- Not available

11. TOXICOLOGICAL INFORMATION

1) Information on the likely routes of exposures

○ **Inhalation**

- After inhalation: No data

○ **Skin contact**

- Following skin contact: No data

○ **Eye contact**

- After eye contact: No data

○ **Ingestion**

- After ingestion: No data

2) Health hazard information

○ **Acute toxicity**

*** Oral - Not applicable (ATEMix > 2,000 mg/kg)**

- Distillates (petroleum), hydrotreated heavy paraffinic : LD50 >15000 ㎎/㎏ Species : Rat
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

*** Dermal - Not applicable (ATEMix > 2,000 mg/kg)**

- Distillates (petroleum), hydrotreated heavy paraffinic : LD50 >5000 ㎎/㎏ Species : Rabbit
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

*** Inhalation(Gas) - Not applicable**

- Distillates (petroleum), hydrotreated heavy paraffinic : No data
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

*** Inhalation(Vapour) - No data**

- Distillates (petroleum), hydrotreated heavy paraffinic : No data
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

*** Inhalation(Dust, mist) - Not applicable (ATEMix > 5 mg/L)**

- Distillates (petroleum), hydrotreated heavy paraffinic : LC50 > 5.53 mg/L 4h Rat
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

○ **Skin corrosion/Irritation :**

- Distillates (petroleum), hydrotreated heavy paraffinic : Rabbit - slightly irritating
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Irritating

○ **Serious eye damage/irritation :**

- Distillates (petroleum), hydrotreated heavy paraffinic : Rabbit, not irritating, OECD TG 405 GLP (Read-across CAS No. 64742-53-6)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Rabbit - irritating (OECD 405, GLP)

○ **Respiratory sensitization :**

- Distillates (petroleum), hydrotreated heavy paraffinic : No data
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not sensitising (Guinea pig)

○ **Skin sensitization :**

- Distillates (petroleum), hydrotreated heavy paraffinic : Not sensitising (Guinea Pig)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not sensitising (Guinea pig)

○ **Carcinogenicity :**

- Distillates (petroleum), hydrotreated heavy paraffinic : EU CLP:1B The classification as a carcinogen need not apply if it can be shown that the sybstance contains less than 3% DMSO extract as measure by IP 346
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

○ **Germ cell mutagenicity :**

- Distillates (petroleum), hydrotreated heavy paraffinic : CHO cell - Negative
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

○ **Reproductive toxicity :**

- Distillates (petroleum), hydrotreated heavy paraffinic : Reproductive performance was not adversely affected at any dose level evaluated. (Rat)
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

○ **Specific target organ toxicity (single exposure) :**

- Distillates (petroleum), hydrotreated heavy paraffinic : No systemic effects were observed.
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Respiratory tract irritation

○ **Specific target organ toxicity (repeated exposure) :**

- Distillates (petroleum), hydrotreated heavy paraffinic : No systemic effects were observed.
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

○ **Aspiration hazard :**

- Distillates (petroleum), hydrotreated heavy paraffinic : No data

- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

12. ECOLOGICAL INFORMATION

1) Ecotoxicity

- Acute toxicity : Not available
- Chronic toxicity : Not classfied

○ **Acute (short-term) aquatic hazard:**

Fish

Invertebrates

Aquatic algae

○ **Chronic (Long-term) aquatic hazard:**

Fish

Invertebrates

Aquatic algae

2) Persistence and degradability

○ **Persistence**

- Distillates (petroleum), hydrotreated heavy paraffinic : log Kow 6
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

○ **Degradability**

- Distillates (petroleum), hydrotreated heavy paraffinic : No data
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

3) Bioaccumulative potential

○ **Bioaccumulation**

○ **Biodegradation**

4) Mobility in soil

- Distillates (petroleum), hydrotreated heavy paraffinic : No data
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

5) Hazard to the ozone layer

- Distillates (petroleum), hydrotreated heavy paraffinic : Not applicable
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not applicable

6) Other adverse effects

- Distillates (petroleum), hydrotreated heavy paraffinic : Fish: NOEC(Pimephales promelas) >5000 mg/L/7d
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : No data

13. DISPOSAL CONSIDERATIONS

1) Disposal methods

- Every commercial waste producer shall either treat wastes generated from his/her place of business by him/herself or commission the treatment of such wastes to a person who has license for a waste treatment

business under Article 26(3), a person who recycles of such wastes under Article 44(2), a person who has installed and operates a waste disposal facility under Article 4 or 5, a person who has completed the registration of a business of discharging wastes into the sea under Article 18 of the Marine Environment Management Act.

2) Special precaution for disposal

- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)
- Do not allow spill material to enter sewers, storn water drains, soil, etc.
- Empty containers recycled under environmental laws.
- Empty containers may rupture when pressured.
- Empty containers may explode and residues can be ignited when pressured, cut, weld, heated.

14. TRANSPORT INFORMATION

1) UN No.

- Not applicable

2) Proper shipping name

- Not applicable

3) Transport hazard class(es)

- Not applicable

4) Packing group

- Not applicable

5) Marine pollutant

- Not applicable

6) Special safety response for transportation or transportation measure

- Types of Emergency Measures in Case of Fire : Not applicable
- Types of Emergency Measures in Leakage : Not applicable
- This product is not regulated for carriage according to ADR/RID, ADN, IMDG, ICAO/IATA.

15. REGULATORY INFORMATION

EINECS(or ELINCS)

- Distillates (petroleum), hydrotreated heavy paraffinic : Not applicable
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Hazardous SubstancesRequiring Management
- arcrylic copolymer : No data
- Business Secret1 : No data

EU CLP (CLASSIFICATION) - PRODUCT :

- Distillates (petroleum), hydrotreated heavy paraffinic : Existing Commercial Chemical Substances
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Pollutant release and transfer register substances,Existing Commercial Chemical Substances
- arcrylic copolymer : No data
- Business Secret1 : No data

Substances restricted under REACH

- Distillates (petroleum), hydrotreated heavy paraffinic : Not applicable
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not applicable
- arcrylic copolymer : No data

- Business Secret1 : No data

Substances subject to authorization under REACH

REACH SVHC List

○ **U.S.A. management information(OSHA regulation)**

- Distillates (petroleum), hydrotreated heavy paraffinic : Not applicable
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not applicable
- arcrylic copolymer : No data
- Business Secret1 : No data

○ **EU Classification (CLASSIFICATION)**

- Distillates (petroleum), hydrotreated heavy paraffinic : Carc. 1B
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not applicable
- arcrylic copolymer : No data
- Business Secret1 : No data

○ **EU Classification (Risk Phrases)**

- Distillates (petroleum), hydrotreated heavy paraffinic : H350
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not applicable
- arcrylic copolymer : No data
- Business Secret1 : No data

○ **EU Classification (Safety Phrases)**

- Distillates (petroleum), hydrotreated heavy paraffinic : S:53-45
- Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts : Not applicable
- arcrylic copolymer : No data
- Business Secret1 : No data

16. OTHER INFORMATION

1) Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

2) Issue Date

- 2012-11-30

3) Revision number and Last date revised

○ **Number of revised**

- 2

○ **Date of last revision**

- 2018-01-01

○ **Last Revision History**

- revision of chemical composition and company information

4) Other

- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS