

SDS(Safety Data Sheet)

Product	초저유황경유 (ULSD)		
MSDS Number	List No.	Issuing date	Last revised date
-	PD1005	2008-07-25	2024-01-17

1. IDENTIFICATION

1) Product name

초저유황경유 (ULSD)

2) Recommended use of the chemical and restriction on use

- Recommended use Fuels and additives
- 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 1544-5151

2. HAZARDS IDENTIFICATION

1) Classification of the product

- FLAMMABLE LIQUIDS : Category 3
- ACUTE TOXICITY(Inhalation:Dust/mist) : Category 4
- SKIN CORROSION/IRRITATION : Category 2
- CARCINOGENICITY : Category 2
- SPECIFIC TARGET ORGAN TOXICITY FOLLOWING REPEATED EXPOSURE : Category 2
- ASPIRATION HAZARD : Category 1

2) Label elements

○ Hazard pictograms



○ Signal word

Danger

○ Hazard statements

- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.(dermal)
- H373 May cause damage to organs through prolonged or repeated exposure. (dermal)

○ **Precautionary statements**

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P242 Use non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- 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/hearing protection.

2) Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302 + P352 IF ON SKIN: Wash with plenty of water/cleansing agent.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment (see section 5).
- P331 Do not induce vomiting.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P370 + P378 In case of fire: Use manufacturer/supplier or the competent authority to specify appropriate media for extinction.

3) Storage

- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container to

3) Other hazards

○ **Product NFPA Level**

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

Product name	Health	Flammable	Reaction
초저유황경유 (ULSD)	2	2	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Trade names and Synonyms	CAS No.	EC No.	Contain Ratio(%)
Fuels, diesel	Automotive diesel oil ; Diesel fuel oil ; Diesel oil (petroleum)	68334-30-5	269-822-7	99.999 ~ 100
Sulfur, precipitated, sublimed or colloidal	Brimstone;Colloidal sulfur	7704-34-9	231-722-6	0 ~ 0.001

4. FIRST AID MEASURES

- 1) Eye contact**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
 - If eye irritation persists: Get medical advice/attention.
- 2) Skin contact**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.
 - In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
 - If skin irritation occurs: Get medical advice/attention.
 - Take off immediately all contaminated clothing and wash it before reuse.
- 3) Inhalation**
- If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
 - Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
 - Administer oxygen if breathing is difficult.
 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
 - IF exposed or concerned: Get medical advice/attention.
 - Do not induce vomiting.
- 4) Ingestion**
- Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- 5) Indication of any immediate medical attention and special treatment needed**
- Exposures require specialized first aid with contact and medical follow-up.
 - Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

- 1) Suitable (and unsuitable) extinguishing media**
- Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
 - Use dry sand or earth to smother fire.
 - For mixtures containing alcohol or polar solvent: Alcohol-resistant foam

- Direct water (Unsuitable extinguishing media)

2) Special hazards arising from the substance or mixture

- Can form explosive mixtures at temperatures at or above the flashpoint.
- Fire may produce irritating, corrosive and/or toxic gases.
- Flammable liquid and vapour.
- Heating may cause a fire or explosion.

3) Special protective equipment and precautions for firefighters

- Rescuers should put on appropriate protective gear.
- Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
- Eliminate all ignition sources if safe to do so.

6. ACCIDENTAL RELEASE MEASURES

1) Health considerations and protective equipment

- Clean up spills immediately, observing precautions in Protective Equipment section.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Please note that materials and conditions to be avoided.

2) Environmental precautions

- Large spill: Prevent entry into waterways, sewers, basements or confined areas.

3) Methods and material for containment and cleaning up

- Dike and collect water used to fight fire.
- Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Reduce airborne dust and prevent scattering by moistening with water.
- Absorb the liquid and scrub the area with detergent and water.
- Large Spill: Dike far ahead of liquid spill for later disposal.

7. HANDLING AND STORAGE

1) Precautions for safe handling

- Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Avoid prolonged or repeated contact with skin.
- Avoid breathing vapors from heated material.
- All equipment used when handling the product must be grounded.
- Please note that materials and conditions to be avoided.
- Handling refer to engineering control/personal protection section.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.

2) Conditions for safe

- Please note that materials and conditions to be avoided.

storage (including any incompatibilities)

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Store in a well-ventilated place. Keep container tightly closed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1) Control parameters

Chemical name	Exposure limits	ACGIH TLV	OSHA PEL	Biological limit values(BLV)
Fuels, diesel	Not available	Not available	Not available	Not available
Sulfur, precipitated, sublimed or colloidal	Not available	Not available	Not available	Not available

2) Appropriate engineering controls

- Install local exhaust ventilation system.
- Check legal suitability of exposure level.

3) Personal protection equipment

- **Respiratory protection**
 - If exposure concentration of the material is lower than 100 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposed particulate material ; such
 - If exposure concentration of the particle material is lower than 250 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposed particulate material
 - If exposure concentration of the particle material is lower than 500 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposed particulate materia
 - If exposure concentration of the particle material is lower than 10000 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposed particulate mater
 - If exposure concentration of the material is lower than 100000 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposed particulate material ; su
 - If exposure concentration of the material exceeds the permitted exposure standards, Wear European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment.
- **Eye protection**
 - An eye wash unit and safety shower station should be available nearby work place.
 - Wear breathable safety goggles to protect from vapour state organic material causing eye irritation or other disorder.
- **Hand protection**
 - Wear appropriate protective gloves by considering physical and chemical properties of chemicals.

○ **Body protection**

- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Item	Input Value
Appearance	Liquid
Color	No Data
Smell	석유냄새
Smell Threshold	0.7ppm
pH (Numerical value)	No Data
Melting/Freezing Point	-64 °C
Boiling Point	130 ~ 360 °C
Flash Point	40 °C
Evaporating Rate	No Data
Flammability(Solid, Gas)	No Data
Explosibility Range	LEL:0.6%, UEL : 6.5%
Steam Pressure	1 mmHg 이하 @ 25°C
Solubility	20 mg/l
Vapor Density	3~7 (공기=1)
Specific Gravity	0.815~0.835
Distribution Coefficient	> 3(추정치)
Selfignition Temperature	≥240 °C
Pyrolysis Temperature	No Data
Viscosity	3 mm ² /s (at 40°C)
Molecular Weight	No Data

10. STABILITY AND REACTIVITY

1) Chemical Stability and hazardous reactivity - Can form explosive mixtures at temperatures at or above the flashpoint.
 - HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
 - Fire may produce irritating, corrosive and/or toxic gases.

2) Conditions to avoid - Ignition source(heat, spark, flame, friction, shock, contamination)

3) Incompatible materials - Combustibles

4) Hazardous decomposition products - During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

11. TOXICOLOGICAL INFORMATION

1) Information on the likely routes of exposures

Inhalation

- Harmful if inhaled.
- Absorbable through the inhalation

Skin contact

- Causes skin irritation.
- Absorbable through the skin

Eye contact

- Causes serious eye irritation.
- Possible exposure through the eye

Ingestion

- May be fatal if swallowed and enters airways.
- Absorbable through the inhalation

2) Health hazard information

Acute toxicity

* Oral - Not classified (ATEmix > 2000 mg/kg)

- Fuels, diesel : rat(male/female); LD50 > 5000 mg/kg (OECD TG 401, GLP)(ECHA)
- Sulfur, precipitated, sublimed or colloidal : rat(male/female); LD50 > 2000 mg/kg bw, no deaths (OECD TG 401, GLP) (ECHA)

* Dermal - Not classified (ATEmix > 2000 mg/kg)

- Fuels, diesel : rabbit(male/female); LD50 > 4300 mg/kg; No deaths (OECD TG 434)(ECHA)
- Sulfur, precipitated, sublimed or colloidal : rat(male/female); LD50 > 2000 mg/kg bw, no deaths (OECD TG 402, GLP) (ECHA)

* Inhalation(Gas) - Not applicable

- Fuels, diesel : Not applicable
- Sulfur, precipitated, sublimed or colloidal : Not applicable

* Inhalation(Vapour) - Not classified (ATEmix > 20 mg/L)

- Fuels, diesel : Not available
- Sulfur, precipitated, sublimed or colloidal : Not available

* Inhalation(Dust, mist) - Category 4 (ATEmix = 4.1 mg/L)

- Fuels, diesel : Rat(male/female);inhalation: aerosol and vapour mixture, LC50 = 4.1 mg/L 4h (OECD TG 403, GLP)(ECHA)
- Sulfur, precipitated, sublimed or colloidal : rat(male/female); LC50 > 5.43 mg/L air/4h (OECD TG 403, GLP) (ECHA)

Skin corrosion/Irritation : Category 2 (SKIN IRRITATION Cat.2)

- Fuels, diesel : Rabbit; Irritating (OECD TG 404) (ECHA)
- Sulfur, precipitated, sublimed or colloidal : rabbit; irritating (OECD TG 404, GLP) (ECHA)

Serious eye damage/irritation : Not classified

- Fuels, diesel : Rabbit; not irritating (OECD TG 405) (ECHA)

- Sulfur, precipitated, : rabbit; not irritating (OECD TG 405, GLP) (ECHA)
sublimed or colloidal

○ **Respiratory sensitization : Not classified**

- Fuels, diesel : Not available

- Sulfur, precipitated, : Not available
sublimed or colloidal

○ **Skin sensitization : Not classified**

- Fuels, diesel : Guinea pig; not sensitizing (OECD TG 406) (ECHA)

- Sulfur, precipitated, : guinea pig; not sensitising (OECD TG 406, GLP) (ECHA)
sublimed or colloidal

○ **Carcinogenicity : Category 2**

- Fuels, diesel : IARC : Group 2B (Possibly Carinogenic to Humans)
ACGIH : A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
OSHA : applicable
EU CLP 1272/2008 : Carc. 2 (Note N : The classification as a carcinogen need not apply if it the full refining history is known and it can be shown that the substance from which it is produced is not a carcinogen.)

- Sulfur, precipitated, : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed
sublimed or colloidal

○ **Germ cell mutagenicity : Not classified**

- Fuels, diesel : In vitro bacterial reverse mutation assay: negative (ASTM E 1687, GLP) (ECHA)
in vitro mammalian cell gene mutation assay : negative (OECD TG 476) (ECHA)
In vivo Mouse Erythrocyte Micronucleus Test: negative (OECD TG 474, GLP) (ECHA)

- Sulfur, precipitated, : in vitro mammalian chromosome aberration test : negative (OECD TG 473, GLP) (ECHA), in vitro Bacterial Reverse Mutation Assay : negative (OECD TG 471, GLP) (ECHA)
In vivo Mammalian Erythrocyte Micronucleus Test : negative (OECD TG 474, GLP) (ECHA)

○ **Reproductive toxicity : Not classified**

- Fuels, diesel : rat(male/female); two-generation reproductive toxicity; Based on the absence of adverse, test item-related findings on the integrity and performance of the male and female reproductive systems, the absence of adverse findings directly attributable to the test item in nonreproductive tissues, and the absence of adverse effects on in-life parameters (such as body weight, feed consumption, and clinical observations), a dosage level of 1000 mg/kg/day was considered to be the no-observed-adverse-effect level (NOAEL) for reproductive and systemic toxicity. (US EPA, GLP) (ECHA)

rat; developmental toxicity; 0, 86.9, or 408.8 ppm; There were no statistically significant or treatment related adverse effects on reproductive or developmental toxicity in this study leading to a NOAEC of 2,150 mg/m³ (408.8 ppm), the highest dose tested. (OECD TG 414)(ECHA)

- Sulfur, precipitated, : Not available
sublimed or colloidal

○ **Specific target organ toxicity (single exposure) : Not classified**

- Fuels, diesel : inhalation; Rat(male/female); Signs included labored breathing and gasping during exposure, which continued in the week following exposure, as well as reduced activity, eyes closed, oral and nasal discharge, and matted coats. All surviving animals were normal by day 15. LC50 = 4.1 mg/L 4h (OECD TG 403, GLP)(ECHA)
- Sulfur, precipitated, sublimed or colloidal : oral; rat(male/female); Findings were considered to reflect the normal spectrum of spontaneous lesions present in rats of this strain and age. LD50 > 2000 mg/kg bw, no deaths (OECD TG 401, GLP) (ECHA)
dermal; rat(male/female); Findings were considered to reflect the normal spectrum of spontaneous lesions present in rats of this strain and age. LD50 > 2000 mg/kg bw, no deaths (OECD TG 402, GLP) (ECHA)
inhalation; rat(male/female); Within one week after exposure all surviving rats recovered and no clinical signs were observed anymore. LC50 > 5.43 mg/L air/4h (OECD TG 403, GLP) (ECHA)

○ **Specific target organ toxicity (repeated exposure) : Category 2, 구분 2**

- Fuels, diesel : oral; rat(male/female); two-generation reproductive toxicity; Based on the absence of adverse, test item-related findings on the integrity and performance of the male and female reproductive systems, the absence of adverse findings directly attributable to the test item in nonreproductive tissues, and the absence of adverse effects on in-life parameters (such as body weight, feed consumption, and clinical observations), a dosage level of 1000 mg/kg/day was considered to be the no-observed-adverse-effect level (NOAEL) for reproductive and systemic toxicity. (US EPA, GLP) (ECHA)
dermal; rat(male/female); 13weeks; 30, 125, 500 mg/kg/day; NOAEL = 30 mg/kg/day; substances affect both haematology and serum parameters as well as the body, thymus and liver weights of exposed animals (OECD TG 411)(ECHA)
- Sulfur, precipitated, sublimed or colloidal : oral; rat(male/female); 100, 400, 1000 mg/kg bw/day; 90 days; Based on the lack of treatment-related effects, the subchronic toxicity NOAEL was determined to be 1000 mg/kg bw/day. (OECD TG 408, GLP) (ECHA)
dermal; rat(male/female); 100, 400, 1000 mg/kg bw/day; 21-23 days; Based on the lack of systemic toxicity effects observed in this study, the NOAEL for systemic effects was determined to be 1000 mg/kg bw/day. The NOAEL for local dermal effects was 400 mg/kg bw/day. (OECD TG 410, GLP) (ECHA)

○ **Aspiration hazard : Category 1**

- Fuels, diesel : viscosity $\geq 1.5 \text{ mm}^2/\text{s}$ (40 °C) & hydrocarbons (ECHA)
- Sulfur, precipitated, sublimed or colloidal : Not applicable

12. ECOLOGICAL INFORMATION

1) Ecotoxicity

- Acute toxicity : Not classified (ATEmix > 1mg/L)
- Chronic toxicity : Not classified

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

Fish

- Fuels, diesel : No toxic effect observed within the range of water solubility(0.0022 mg/L) (ECHA).
- Sulfur, precipitated, sublimed or colloidal : Not available

Invertebrates

- Fuels, diesel : No toxic effect observed within the range of water solubility(0.0022 mg/L) (ECHA).
- Sulfur, precipitated, sublimed or colloidal : No toxic effects occur within the range of water solubility. (ECHA)

Aquatic algae

- Fuels, diesel : No toxic effect observed within the range of water solubility(0.0022 mg/L) (ECHA).
- Sulfur, precipitated, sublimed or colloidal : No toxic effects occur within the range of water solubility. (ECHA)

○ Chronic (Long-term) aquatic hazard:

Fish

- Fuels, diesel : No toxic effect observed within the range of water solubility(0.0022 mg/L) (ECHA).
- Sulfur, precipitated, sublimed or colloidal : Not available

Invertebrates

- Fuels, diesel : No toxic effect observed within the range of water solubility(0.0022 mg/L) (ECHA).
- Sulfur, precipitated, sublimed or colloidal : No toxic effects occur within the range of water solubility. (ECHA)

Aquatic algae

- Fuels, diesel : No toxic effect observed within the range of water solubility(0.0022 mg/L) (ECHA).
- Sulfur, precipitated, sublimed or colloidal : Not available

2) Persistence and degradability

○ Persistence

- Fuels, diesel : log Kow = 7.2 (exp.) (EPISUITE)
- Sulfur, precipitated, sublimed or colloidal : log Kow = -1.38 (experimental) (EPISUITE)

○ Degradability

- Fuels, diesel : Not available
- Sulfur, precipitated, sublimed or colloidal : Sulfur pure test material showed a half life of 4.25 hours when illuminated with 80000 lux at 25°C. (ECHA)

3) Bioaccumulative potential

○ Bioaccumulation

- Fuels, diesel : BCF = 2688 (estimated)(EPISUITE)
- Sulfur, precipitated, sublimed or colloidal : BCF = 3.162 (estimated) (EPISUITE)

○ Biodegradation

- Fuels, diesel : 60% degradation after 28days; readily biodegradable (OECD TG 301F) (ECHA)
- Sulfur, precipitated, sublimed or colloidal : Not available

4) Mobility in soil

- Fuels, diesel : Koc = 1772000 (estimated)(EPISUITE)
- Sulfur, precipitated, sublimed or colloidal : Koc = 0.06337 (EPISUITE)

5) Hazard to the ozone layer

- Fuels, diesel : Not applicable
- Sulfur, precipitated, sublimed or colloidal : Not applicable

6) Other adverse effects

- Fuels, diesel : Not available
- Sulfur, precipitated, sublimed or colloidal : Not available

13. DISPOSAL CONSIDERATIONS

1) Disposal methods

- Waste must be disposed of in accordance with federal, state and local environmental control regulation.

2) Special precaution for disposal

- Consider the required attentions in accordance with waste treatment management regulation.

14. TRANSPORT INFORMATION

1) UN No.

- 1202

2) Proper shipping name

- GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT

3) Transport hazard class(es)

- 3

4) Packing group

- III

5) Marine pollutant

- Not applicable

6) Special safety response for transportation or transportation measure

- Types of Emergency Measures in Case of Fire : F-E
- Types of Emergency Measures in Leakage : S-E

15. REGULATORY INFORMATION

EINECS(or ELINCS)

- Fuels, diesel : European EINECS phase-in substance
- Sulfur, precipitated, sublimed or colloidal : European EINECS phase-in substance

EU CLP (CLASSIFICATION) - PRODUCT : Not applicable

- Fuels, diesel : Not applicable
- Sulfur, precipitated, sublimed or colloidal : Not applicable

Substances restricted under REACH

- Fuels, diesel : Not applicable
- Sulfur, precipitated, sublimed or colloidal : Not applicable

Substances subject to authorization under REACH

REACH SVHC List

Korea

○ Occupational Safety and Health Act

- Fuels, diesel : Substance subject to submission of process safety reports

- Sulfur, precipitated, sublimed or colloidal : Not applicable

K-REACH

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

Chemical Control Act in Korea

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : List of substance subjected to the PRTR

Safety Control of Dangerous Substances Act

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Dangerous substance

U.S.A

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

CERCLA Designation of hazardous substances (40 CFR 302.4)

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

CERCLA Section 302 regulation

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

CERCLA Section 304 regulation

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

CERCLA Section 313 regulation

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

Interntional Convention on Environment

Rotterdam Convention list

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

Stockholm Convention list

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

Montreal Protocol list

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

National Inventory

Korea

- Fuels, diesel : Not applicable

- Sulfur, precipitated, sublimed or colloidal : Not applicable

U.S.A

- Fuels, diesel : US TSCA phase-in substance

- Sulfur, precipitated, sublimed or colloidal : US TSCA phase-in substance

China

- Fuels, diesel : China phase-in substance
- Sulfur, precipitated, sublimed or colloidal : China phase-in substance
- **Japan**
 - Fuels, diesel : Not applicable
 - Sulfur, precipitated, sublimed or colloidal : Not applicable

16. OTHER INFORMATION

1) Reference

- Sources of information used in preparing this SDS included one or more of the following: Internal technical data, data from OECD eChemPortal, ECHA, NITE, TOXNET, IPCS and KOSHA search results.

2) Issue Date

- 2008-07-25

3) Revision number and Last date revised

○ Number of revised

- 15

○ Date of last revision

- 2024-01-11

○ Last Revision History

- We have reviewed the ingredient content and revised the 9. PHYSICAL AND CHEMICAL PROPERTIES sections. No changes to the hazard classification.

4) Other

- The information contained in the Safety Data Sheet is at the date of its issuance to the best of our knowledge correct according to the data available to us. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.