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1 Identification · Product identifier

- · Product Name: Sulfur Oil Standard in 2 Diesel Fuel
- · Part Number: SDFS-5-Y
- $\cdot \textit{Application of the substance / the mixture Certified Reference Material}$
- · Details of the supplier of the safety data sheet · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen, NJ 08840 USA
- · Information department: product safety department · Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Carc. 2

H351 Suspected of causing cancer.



Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation.

Flam. Liq. 4 H227 Combustible liquid.

· Label elements

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms



· Signal word Warning

- · Hazard-determining components of labeling:
- Fuels, diesel, No 2
- Hazard statements
- Combustible liquid.
- Causes skin irritation.
- Causes serious eye irritation.
- Suspected of causing cancer.
- · Precautionary statements

Keep away from flames and hot surfaces. - No smoking.

Wear protective gloves / eye protection / face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 2Fire = 2Reactivity = 0

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100.0%

0.001%

Product Name: Sulfur Oil Standard in <u>2 Diesel Fuel</u>

= 0

· HMIS-ratings (scale 0 - 4)

HEALTH	*2	Health = *2
FIRE		Fire = 2
REACTIVITY	0	Reactivity =

· Other hazards

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:
- 68476-34-6 Fuels, diesel, No 2
- · Chemical identification of the substance/preparation

544-40-1 dibutyl sulphide

4 First-aid measures

- · Description of first aid measures
- General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. • After inhalation:
- Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately rinse with water.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Immediately call a doctor.
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- · For safety reasons unsuitable extinguishing agents: Water
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Dilute with plenty of water.
- · Methods and material for containment and cleaning up:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.
- Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents
- Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling
- Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care.

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Safety Data Sheet acc. to OSHA HCS

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Prevent formation of aerosols.

- Information about protection against explosions and fires: Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- \cdot Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

- 68476-34-6 Fuels, diesel, No 2
- TLV Long-term value: 100* mg/m³

as total hydrocarbons;Skin;*inh. fraction + vapor

• Additional information: The lists that were valid during the creation were used as basis.

- · Exposure controls
- · Personal protective equipment:
- \cdot General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work. Store protective clothing separately.
- · Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

• Information on basic physical and • General Information • Appearance:	chemical properties	
Form: Color: • Odor: • Odour Threshold:	Liquid According to product specification Characteristic Not applicable.	
· pH-value:	Not applicable.	
• Change in condition Melting point/Melting range:	Undetermined.	
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Boiling point/Boiling range:	204 °C (399 °F)
· Flash point:	69 °C (156 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits: Lower: Upper:	Not applicable. Not applicable.
· Vapor pressure:	Not determined.
· Density · Relative density · Vapour density · Evaporation rate	Not applicable. Not applicable. Not applicable. Not applicable.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/wat	ter): Not applicable.
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.
· Solvent content: Organic solvents: · Other information	0.0 % No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
68476-34-6 Fuels, diesel, No 2	2B
· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

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Carcinogenic.

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12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- \cdot General notes: Generally not hazardous for water
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information	
· UN-Number · DOT, ADR, IMDG, IATA	Not Regulated
· UN proper shipping name · DOT, ADR, IMDG, IATA	Not Regulated
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA · Class	Not Regulated
· Packing group · DOT, ADR, IMDG, IATA	Not Regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
• Transport in bulk according to Annex II of MARI Code	POL73/78 and the IBC Not applicable.
· UN "Model Regulation":	Not Regulated

15 Regulatory information

\cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara	
· Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
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· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
Carcinogenic categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	-
TLV (Threshold Limit Value established by ACGIH)	=
	13
NIOSH-Ca (National Institute for Occupational Safety and Health)	=
None of the ingredients is listed.	-
 GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms GHS07 GHS08 	
· Signal word Warning	
 Hazard-determining components of labeling: Fuels, diesel, No 2 Hazard statements Combustible liquid. Causes skin irritation. Causes serious eye irritation. Causes serious eye irritation. Suspected of causing cancer. Precautionary statements Keep away from flames and hot surfaces. – No smoking. Wear protective gloves / eye protection / face protection. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see on this label). Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. 	
· National regulations:	
Information about limitation of use: Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authority	ties

in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:
- SPEX CertiPrep, LLC.
- 1-732-549-7144
- · Date of preparation / last revision 11/12/2015 / -
- Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

- DOT: US Department of Transportation IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic
- PDI: Tersisten, Boaccumulative and Toxic VPvB: very Persistent and very Bioaccumulative Flam. Lig. 4: Flammable liquids, Hazard Category 4 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A Carc. 2: Carcinogenicity, Hazard Category 2