

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/16/2024

Reviewed on 05/16/2024

1 Identification

- **Product identifier**
- **Trade name:** Sulfur Standard
5 ppm w/w in Diesel
- **Article number:** LY367
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Germ Cell Mutagenicity 1A H340 May cause genetic defects.

Carcinogenicity 2 H351 Suspected of causing cancer.

Flammable Liquids 4 H227 Combustible liquid.

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



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Fuels, diesel
Biphenyl
Naphthalene
- **Hazard statements**
Combustible liquid.
May cause genetic defects.
Suspected of causing cancer.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

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Keep away from flames and hot surfaces. – No smoking.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF exposed or concerned: Get medical advice/attention.
 In case of fire: Use CO₂, powder or water spray to extinguish.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

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

· **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:**

CAS: 68334-30-5	Fuels, diesel	90.0%
CAS: 91-20-3	Naphthalene	3.0%
CAS: 92-52-4	Biphenyl	1.5%

· **Table of Nonhazardous Ingredients**

CAS: 2551-13-7	trimethyl benzene	1.5%
CAS: 544-40-1	Butyl sulfide	0.002%

4 First-aid measures

· **Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult 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.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground 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 section 13.
- **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.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

CAS: 68334-30-5	Fuels, diesel	300 mg/m ³
CAS: 91-20-3	Naphthalene	15 ppm
CAS: 92-52-4	Biphenyl	0.87 ppm

- **PAC-2:**

CAS: 68334-30-5	Fuels, diesel	3,300 mg/m ³
CAS: 91-20-3	Naphthalene	83 ppm
CAS: 92-52-4	Biphenyl	9.6 ppm

- **PAC-3:**

CAS: 68334-30-5	Fuels, diesel	20,000 mg/m ³
CAS: 91-20-3	Naphthalene	500 ppm
CAS: 92-52-4	Biphenyl	300 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Open and handle receptacle with care.
- **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.

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· **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 section 7.

· **Control parameters**

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

CAS: 68334-30-5 Fuels, diesel

TLV Long-term value: 100* mg/m³
 as total hydrocarbons; Skin; *inh. fraction+vapor, A3

CAS: 91-20-3 Naphthalene

PEL Long-term value: 50 mg/m³, 10 ppm

REL Short-term value: 75 mg/m³, 15 ppm
 Long-term value: 50 mg/m³, 10 ppm

TLV Long-term value: 10 ppm
 Skin; BEI, A3

CAS: 92-52-4 Biphenyl

PEL Long-term value: 1 mg/m³, 0.2 ppm

REL Long-term value: 1 mg/m³, 0.2 ppm

TLV Long-term value: 0.2 ppm

· **Ingredients with biological limit values:**

CAS: 91-20-3 Naphthalene

BEI -
 LD50 Intraperitoneal: -
 Time: end of shift
 LD50: 1-Naphthol with hydrolysis + 2-Naphthol with hydrolysis (Nq,Ns)

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.

· **Breathing equipment:** Not required.

· **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.

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- **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:** *Goggles recommended during refilling.*
- **Body protection:** *Protective work clothing*

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - **Form:** *Liquid*
 - **Color:** *Clear, colorless to light amber*
 - **Odor:** *Diesel*
 - **Odor threshold:** *Not determined.*
- **pH-value:** *Not determined.*
- **Change in condition**
 - **Melting point/Melting range:** *Undetermined.*
 - **Boiling point/Boiling range:** *Undetermined.*
- **Flash point:** *>60 °C (>140 °F)*
- **Flammability (solid, gaseous):** *Not applicable.*
- **Decomposition temperature:** *Not determined.*
- **Ignition temperature:** *Product is not selfigniting.*
- **Danger of explosion:** *Not determined.*
- **Explosion limits:**
 - **Lower:** *Not determined.*
 - **Upper:** *Not determined.*
- **Vapor pressure:** *Not determined.*
- **Density:** *Not determined.*
- **Relative density** *Not determined.*
- **Vapor density** *Not determined.*
- **Evaporation rate** *Not determined.*
- **Solubility in / Miscibility with**
 - **Water:** *Not miscible or difficult to mix.*
- **Partition coefficient (n-octanol/water):** *Not determined.*
- **Viscosity:**
 - **Dynamic:** *Not determined.*
 - **Kinematic at 40 °C (104 °F):** *5 mm²/s*
- **Solvent content:**
 - **VOC content:** *0.00 %*
0.0 g/l / 0.00 lb/gal
- **Solids content:** *4.5 %*

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· **Other information** 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:**

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	16,333 mg/kg (rat)
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- **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:

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

CAS: 68334-30-5	Fuels, diesel	2B
CAS: 91-20-3	Naphthalene	2B

- **NTP (National Toxicology Program)**

CAS: 91-20-3	Naphthalene	R
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- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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:**
 - **General notes:**
- Water hazard class 2 (Self-assessment): hazardous for water

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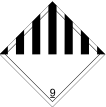
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- Do not allow product to reach ground water, water course or sewage system.
- Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **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.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT · IMDG, IATA | <p>NA1993
UN1993</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG · IATA | <p>COMBUSTIBLE LIQUID, N.O.S (Fuels, diesel)
 FLAMMABLE LIQUID, N.O.S. (Fuels, diesel, Naphthalene, Biphenyl), MARINE POLLUTANT
 FLAMMABLE LIQUID, N.O.S. (Fuels, diesel)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <p></p> |
| <ul style="list-style-type: none"> · Class · Label | <p>3 Combustible liquids
3</p> |
| <ul style="list-style-type: none"> · IMDG | <p></p> |
| <ul style="list-style-type: none"> · Class · Label | <p>9 Miscellaneous dangerous substances and articles
9</p> |
| <ul style="list-style-type: none"> · IATA | <p></p> |
| <ul style="list-style-type: none"> · Class | <p>9 Miscellaneous dangerous substances and articles</p> |

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· Label	9
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	Product contains environmentally hazardous substances: Naphthalene
· Marine pollutant:	Symbol (fish and tree)
· Special precautions for user	Warning: Miscellaneous dangerous substances and articles
· Hazard identification number (Kemler code):	90
· EMS Number:	F-E, <u>S-E</u>
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (FUELS, DIESEL), 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

· Section 355 (extremely hazardous substances):	None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):		
CAS: 91-20-3	Naphthalene	
CAS: 92-52-4	Biphenyl	
· TSCA (Toxic Substances Control Act):		
Fuels, diesel		ACTIVE
Naphthalene		ACTIVE
Biphenyl		ACTIVE
Butyl sulfide		ACTIVE
· Hazardous Air Pollutants		
CAS: 91-20-3	Naphthalene	
CAS: 92-52-4	Biphenyl	
· Proposition 65		
· Chemicals known to cause cancer:		
CAS: 91-20-3	Naphthalene	
· Chemicals known to cause reproductive toxicity for females:		
None of the ingredients is listed.		

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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 91-20-3	Naphthalene	C, CBD
CAS: 92-52-4	Biphenyl	SC

· **TLV (Threshold Limit Value)**

CAS: 68334-30-5	Fuels, diesel	A3
CAS: 91-20-3	Naphthalene	A4

· **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**



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Fuels, diesel

Biphenyl

Naphthalene

· **Hazard statements**

Combustible liquid.

May cause genetic defects.

Suspected of causing cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **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:** Environment protection department.

· **Contact:**

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Date of Preparation / Last Revision:

· **Date of preparation / last revision**

Revision 1.2, 05/16/2024: Reviewed SDS for accuracy. MH/STN

Revision 0.0, 10-31-2016: Creation date for SDS. STN

05/16/2024

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable Liquids 4: Flammable liquids – Category 4

Germ Cell Mutagenicity 1A: Germ cell mutagenicity – Category 1A

Carcinogenicity 2: Carcinogenicity – Category 2

· *** Data compared to the previous version altered.**

US