

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/30/2017

Reviewed on 11/30/2017

1 Identification

- **Product identifier**
- **Trade name:** Sulfur Standard
10 ppm w/w in Diesel
- **Article number:** LY368
- **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 sherman@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

- Muta. 1A H340 May cause genetic defects.
Carc. 2 H351 Suspected of causing cancer.
.....
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**



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.

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IF exposed or concerned: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

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	n-Butyl Sulfide 99%	0.0046%

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**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** 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 item 13.
Ensure adequate ventilation.
- **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** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **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 item 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/m ³ as total hydrocarbons; Skin; *inh. fraction + vapor
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CAS: 91-20-3 Naphthalene

PEL	Long-term value: 50 mg/m ³ , 10 ppm
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REL	Short-term value: 75 mg/m ³ , 15 ppm Long-term value: 50 mg/m ³ , 10 ppm
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TLV	Long-term value: 52 mg/m ³ , 10 ppm Skin; BEI
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CAS: 92-52-4 Biphenyl

PEL	Long-term value: 1 mg/m ³ , 0.2 ppm
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REL	Long-term value: 1 mg/m ³ , 0.2 ppm
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TLV	Long-term value: 1.3 mg/m ³ , 0.2 ppm
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· **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.

· **Breathing equipment:** Not required.

· **Protection of hands:**

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:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

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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.	
· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting: 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 mm ² /s
· Solvent content:	
· VOC content:	0.00 % 0.0 g/l / 0.00 lb/gl
· Solids content:	4.5 %
· 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.

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- **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	14,655 mg/kg (rat)
Dermal	LD50	166,667 mg/kg (rat)

CAS: 91-20-3 Naphthalene

Oral	LD50	500 mg/kg (ATE)
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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
- 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.

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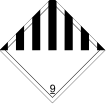

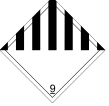
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· **Other adverse effects** No further relevant information available.

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, CRUDE, Biphenyl), MARINE POLLUTANT FLAMMABLE LIQUID, N.O.S. (Fuels, diesel)</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT · Class 	<p>Not regulated</p>
<ul style="list-style-type: none"> · IMDG 	<div style="display: flex; align-items: center; gap: 10px;">   </div>
<ul style="list-style-type: none"> · Class · Label 	<p>9 Miscellaneous dangerous substances and articles 9</p>
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; align-items: center; gap: 10px;">  </div>
<ul style="list-style-type: none"> · Class · Label 	<p>9 Miscellaneous dangerous substances and articles 9</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p>III</p>
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	<p>Product contains environmentally hazardous substances: Naphthalene Symbol (fish and tree)</p>
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: 	<p>Warning: Miscellaneous dangerous substances and articles 90 F-E,<u>S-E</u></p>

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· 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 LIQUIDS, N.O.S. (FUELS, DIESEL), 9, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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

Naphthalene

Biphenyl

n-Butyl Sulfide 99%

- **TSCA new (21st Century Act) (Substances not listed)**

- **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.

- **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 established by ACGIH)**

CAS: 68334-30-5 Fuels, diesel

A3

CAS: 91-20-3 Naphthalene

A4

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· **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 for extinction: CO2, powder or water spray.

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:**

· **Date of preparation / last revision**

11-30-2017: review SDS for accuracy. STN

Revision 0.0. 02-17-2016: Creation date for SDS. STN

11/30/2017 / -

· **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)

VOC: Volatile Organic Compounds (USA, EU)

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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
Flam. Liq. 4: Flammable liquids – Category 4
Muta. 1A: Germ cell mutagenicity – Category 1A
Carc. 2: Carcinogenicity – Category 2

US