

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/14/2020

Reviewed on 05/14/2020

## 1 Identification

- **Product identifier**
- **Trade name:** Sulfur Standard 5.0 ppm w/v in n-Hexane
- **Article number:** ND626
- **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**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

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

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

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

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- **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes skin irritation.*

*Suspected of damaging fertility or the unborn child.*

*May cause drowsiness or dizziness.*

*May cause damage to organs through prolonged or repeated exposure.*

*May be fatal if swallowed and enters airways.*

- **Precautionary statements**

*Obtain special instructions before use.*

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

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

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

*If swallowed: Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF exposed or concerned: Get medical advice/attention.*

*Call a poison center/doctor if you feel unwell.*

*Get medical advice/attention if you feel unwell.*

*Take off contaminated clothing and wash it before reuse.*

*If skin irritation occurs: Get medical advice/attention.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

*Store in a well-ventilated place. Keep container tightly closed.*

*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)**



Health = 1

Fire = 3

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

|               |        |         |
|---------------|--------|---------|
| CAS: 110-54-3 | Hexane | 99.998% |
|---------------|--------|---------|

- **Table of Nonhazardous Ingredients**

|               |               |          |
|---------------|---------------|----------|
| CAS: 544-40-1 | Butyl sulfide | 0.00228% |
|---------------|---------------|----------|

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **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.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
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.

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See Section 13 for disposal information.

**· Protective Action Criteria for Chemicals**

**· PAC-1:**

|               |        |         |
|---------------|--------|---------|
| CAS: 110-54-3 | Hexane | 260 ppm |
|---------------|--------|---------|

**· PAC-2:**

|               |        |           |
|---------------|--------|-----------|
| CAS: 110-54-3 | Hexane | 2900* ppm |
|---------------|--------|-----------|

**· PAC-3:**

|               |        |            |
|---------------|--------|------------|
| CAS: 110-54-3 | Hexane | 8600** ppm |
|---------------|--------|------------|

## 7 Handling and storage

**· Handling:**

**· Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

**· Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

**· Conditions for safe storage, including any incompatibilities**

**· Storage:**

**· Requirements to be met by storerooms and receptacles:** Store in a cool location.

**· Information about storage in one common storage facility:** Not required.

**· Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

**· 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: 110-54-3 Hexane**

|     |   |
|-----|---|
| PEL | Long-term value: 1800 mg/m <sup>3</sup> , 500 ppm |
|-----|---|

|     |   |
|-----|---|
| REL | Long-term value: 180 mg/m <sup>3</sup> , 50 ppm |
|-----|---|

|     |   |
|-----|---|
| TLV | Long-term value: 176 mg/m <sup>3</sup> , 50 ppm |
|     | Skin; BEI                                       |

**· Ingredients with biological limit values:**

**CAS: 110-54-3 Hexane**

|     |          |
|-----|----------|
| BEI | 0.4 mg/L |
|-----|----------|

LD50 Intraperitoneal: urine

Time: end of shift at end of workweek

LD50: 2.5-Hexanedione without hydrolysis

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

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- **Exposure controls**

- **Personal protective equipment:**

- **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.*

*Avoid contact with the skin.*

*Avoid contact with the eyes and skin.*

- **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

- **Body protection: Protective work clothing**

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Liquid

**Color:** Colorless

- **Odor:** Sweetish

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

**Melting point/Melting range:** -95 °C (-139 °F)

**Boiling point/Boiling range:** 69 °C (156.2 °F)

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|   |  |
|---|--|
| · <b>Flash point:</b>   | -26 °C (-14.8 °F)  |
| · <b>Flammability (solid, gaseous):</b>                               | Not applicable.  |
| · <b>Ignition temperature:</b>  | 240 °C (464 °F)  |
| · <b>Decomposition temperature:</b>                                   | Not determined.  |
| · <b>Auto igniting:</b>   | Product is not selfigniting.   |
| · <b>Danger of explosion:</b>   | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · <b>Explosion limits:</b>  |  |
| <b>Lower:</b>   | 1.2 Vol %  |
| <b>Upper:</b>   | 7.4 Vol %  |
| · <b>Vapor pressure at 20 °C (68 °F):</b>                             | 160 hPa (120 mm Hg)  |
| · <b>Density at 20 °C (68 °F):</b>                                    | 0.66001 g/cm <sup>3</sup> (5.50778 lbs/gal)  |
| · <b>Relative density</b>   | Not determined.  |
| · <b>Vapor density</b>  | Not determined.  |
| · <b>Evaporation rate</b>   | Not determined.  |
| · <b>Solubility in / Miscibility with<br/>Water at 20 °C (68 °F):</b> | 0.1 g/l  |
| · <b>Partition coefficient (n-octanol/water):</b>                     | Not determined.  |
| · <b>Viscosity:</b>   |  |
| <b>Dynamic:</b>   | Not determined.  |
| <b>Kinematic:</b>   | Not determined.  |
| · <b>Solvent content:</b>   |  |
| <b>Organic solvents:</b>  | 100.0 %  |
| <b>VOC content:</b>   | 100.00 %<br>660.0 g/l / 5.51 lb/gal  |
| <b>Solids content:</b>  | 0.0 %  |
| · <b>Other information</b>  | 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.

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## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **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:  
Irritant

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **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.
- **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.

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## 14 Transport information

· **UN-Number**  
· **DOT, IMDG, IATA**

UN1208

· **UN proper shipping name**  
· **DOT**  
· **IMDG**  
· **IATA**

Hexanes mixture  
HEXANES mixture, MARINE POLLUTANT  
HEXANES mixture

· **Transport hazard class(es)**

· **DOT**



· **Class**  
· **Label**

3 Flammable liquids  
3

· **IMDG**



· **Class**  
· **Label**

3 Flammable liquids  
3

· **IATA**



· **Class**  
· **Label**

3 Flammable liquids  
3

· **Packing group**  
· **DOT, IMDG, IATA**

II

· **Environmental hazards:**  
· **Marine pollutant:**

Product contains environmentally hazardous substances: Hexane  
Symbol (fish and tree)

· **Special precautions for user**  
· **Hazard identification number (Kemler code):** 33  
· **EMS Number:**  
· **Stowage Category**

Warning: Flammable liquids  
F-E,S-D  
E

· **Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **DOT**  
· **Quantity limitations**

On passenger aircraft/rail: 5 L  
On cargo aircraft only: 60 L

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· **IMDG**

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

IL

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1208 HEXANES MIXTURE, ENVIRONMENTALLY  
HAZARDOUS, 3, II

## 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: 110-54-3 | Hexane

· **TSCA (Toxic Substances Control Act):**

Hexane

ACTIVE

Butyl sulfide

ACTIVE

· **Hazardous Air Pollutants**

CAS: 110-54-3 | Hexane

· **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:**

CAS: 110-54-3 | Hexane

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

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 110-54-3 | Hexane

II

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **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).

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· **Hazard pictograms**



GHS02    GHS07    GHS08

· **Signal word** *Danger*

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

*Hexane*

· **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes skin irritation.*

*Suspected of damaging fertility or the unborn child.*

*May cause drowsiness or dizziness.*

*May cause damage to organs through prolonged or repeated exposure.*

*May be fatal if swallowed and enters airways.*

· **Precautionary statements**

*Obtain special instructions before use.*

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

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*Do not breathe dust/fume/gas/mist/vapors/spray.*

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

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

*If swallowed: Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*IF exposed or concerned: Get medical advice/attention.*

*Call a poison center/doctor if you feel unwell.*

*Get medical advice/attention if you feel unwell.*

*Take off contaminated clothing and wash it before reuse.*

*If skin irritation occurs: Get medical advice/attention.*

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

*Store in a well-ventilated place. Keep container tightly closed.*

*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**

Revision 0.0 05-14-2020: Creation date for SDS. STN  
05/14/2020 / -

· **Abbreviations and acronyms:**

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)  
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  
Flam. Liq. 2: Flammable liquids – Category 2  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Repr. 2: Reproductive toxicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Asp. Tox. 1: Aspiration hazard – Category 1

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