

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/14/2024

Reviewed on 06/14/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Isatin, 0.625 g/L  
in Chloroform
- **Article number:** CIT017
- **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](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity - Inhalation 3

H331 Toxic if inhaled.



GHS08 Health hazard

Carcinogenicity 2

H351 Suspected of causing cancer.

Toxic to Reproduction 2

H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to the central nervous system, the kidneys, the liver and the respiratory system through prolonged or repeated exposure.



GHS07

Acute Toxicity - Oral 4

H302 Harmful if swallowed.

Skin Irritation 2

H315 Causes skin irritation.

Eye Irritation 2A

H319 Causes serious eye irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS06



GHS07



GHS08

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**Trade name: Isatin, 0.625 g/L  
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- **Signal word** *Danger*

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

*Chloroform*

- **Hazard statements**

*Harmful if swallowed.*

*Toxic if inhaled.*

*Causes skin irritation.*

*Causes serious eye irritation.*

*Suspected of causing cancer.*

*Suspected of damaging fertility or the unborn child.*

*Causes damage to the central nervous system, the kidneys, the liver and the respiratory system through prolonged or repeated exposure.*

- **Precautionary statements**

*Obtain special instructions before use.*

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

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

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

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

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

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

*Rinse mouth.*

*If on skin: Wash with plenty of water.*

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

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

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

*Specific treatment (see on this label).*

*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.*

*If eye irritation persists: Get medical advice/attention.*

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

*Store locked up.*

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

- **Classification system:**

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



*Health = 2*

*Fire = 0*

*Reactivity = 0*

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



*Health = 2*

*Fire = 0*

*Reactivity = 0*

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** *Not applicable.*

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· **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: 67-66-3 | Chloroform | 99.958% |
|--------------|------------|---------|

- **Table of Nonhazardous Ingredients**

|              |                           |        |
|--------------|---------------------------|--------|
| CAS: 91-56-5 | Isatin, 2,3-Indolinedione | 0.042% |
|--------------|---------------------------|--------|

### 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.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
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. If symptoms persist, consult a doctor.
- **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:** Use fire fighting measures that suit the environment.
- **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.
- **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 section 13.

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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: 67-66-3 | Chloroform | 2 ppm |
|--------------|------------|-------|

· **PAC-2:**

|              |            |        |
|--------------|------------|--------|
| CAS: 67-66-3 | Chloroform | 64 ppm |
|--------------|------------|--------|

· **PAC-3:**

|              |            |           |
|--------------|------------|-----------|
| CAS: 67-66-3 | Chloroform | 3,200 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 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.

· **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: 67-66-3 Chloroform**

|     |  |
|-----|--|
| PEL | Ceiling limit value: 240 mg/m <sup>3</sup> , 50 ppm                                    |
| REL | Short-term value: 9.78* mg/m <sup>3</sup> , 2* ppm<br>*60-min; See Pocket Guide App. A |
| TLV | Long-term value: 10 ppm<br>A3  |

· **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.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

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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:**

Safety glasses



Tightly sealed goggles

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

|                        |                 |
|------------------------|-----------------|
| <b>Form:</b>           | Liquid          |
| <b>Color:</b>          | Colorless       |
| <b>Odor:</b>           | Pungent         |
| <b>Odor threshold:</b> | Not determined. |

· **pH-value:** Not determined.

· **Change in condition**

|                                     |                     |
|-------------------------------------|---------------------|
| <b>Melting point/Melting range:</b> | -63.5 °C (-82.3 °F) |
| <b>Boiling point/Boiling range:</b> | 61 °C (141.8 °F)    |

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Auto igniting:** 982 °C (1,799.6 °F)

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

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|   |   |
|---|---|
| · <b>Danger of explosion:</b>   | Product does not present an explosion hazard. |
| · <b>Explosion limits:</b>  |   |
| <b>Lower:</b>   | Not determined.                               |
| <b>Upper:</b>   | Not determined.                               |
| · <b>Vapor pressure at 20 °C (68 °F):</b>                             | 210 hPa (157.5 mm Hg)                         |
| · <b>Density at 20 °C (68 °F):</b>                                    | 1.4799 g/cm <sup>3</sup> (12.34977 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 25 °C (77 °F):</b> | 5 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>VOC content:</b>   | 0.00 %<br>0.0 g/l / 0.00 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.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

|                                      |         |           |
|--------------------------------------|---------|-----------|
| <b>ATE (Acute Toxicity Estimate)</b> |         |           |
| Oral                                 | LD50    | 500 mg/kg |
| Inhalative                           | LC50/4h | 3 mg/l    |

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

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· **Additional toxicological information:**

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

Toxic  
Harmful  
Irritant

· **Carcinogenic categories**

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

|              |            |    |
|--------------|------------|----|
| CAS: 67-66-3 | Chloroform | 2B |
|--------------|------------|----|

· **NTP (National Toxicology Program)**

|              |            |   |
|--------------|------------|---|
| CAS: 67-66-3 | Chloroform | R |
|--------------|------------|---|

· **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 3 (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely 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

· **UN-Number**

· **DOT, IMDG, IATA** UN2810

· **UN proper shipping name**

· **DOT** Toxic, liquids, organic, n.o.s. (Chloroform)  
· **IMDG, IATA** TOXIC LIQUID, ORGANIC, N.O.S. (Chloroform)

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· **Transport hazard class(es)**

· **DOT**



· **Class** 6.1 Toxic substances  
 · **Label** 6.1

· **IMDG, IATA**



· **Class** 6.1 Toxic substances  
 · **Label** 6.1

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

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Toxic substances  
 · **EMS Number:** F-A,S-A

· **Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code** Not applicable.

· **UN "Model Regulation":** UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (CHLOROFORM),  
6.1, 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):**

CAS: 67-66-3 Chloroform

· **Section 313 (Specific toxic chemical listings):**

CAS: 67-66-3 Chloroform

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

Chloroform

ACTIVE

Isatin, 2,3-Indolinedione

ACTIVE

· **Hazardous Air Pollutants**

CAS: 67-66-3 Chloroform

· **Proposition 65**

· **Chemicals known to cause cancer:**

CAS: 67-66-3 Chloroform

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**Trade name: Isatin, 0.625 g/L  
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· **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:**

CAS: 67-66-3 Chloroform

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 67-66-3 Chloroform

B2, L, NL

· **TLV (Threshold Limit Value)**

CAS: 67-66-3 Chloroform

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

CAS: 67-66-3 Chloroform

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

· **Hazard pictograms**



GHS06

GHS07

GHS08

· **Signal word** *Danger*

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

Chloroform

· **Hazard statements**

Harmful if swallowed.

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to the central nervous system, the kidneys, the liver and the respiratory system through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

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

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

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

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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.  
 If eye irritation persists: Get medical advice/attention.  
 Store in a well-ventilated place. Keep container tightly closed.  
 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:

· **Date of preparation / last revision**

Revision 0.1, 06/14/2024: Reviewed SDS for accuracy. MH/STN

Revision 0.0, 05-29-2024: Creation date for SDS. STN

06/14/2024 / 1.0

· **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

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Acute Toxicity - Inhalation 3: Acute toxicity – Category 3

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Carcinogenicity 2: Carcinogenicity – Category 2

Toxic to Reproduction 2: Reproductive toxicity – Category 2

Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

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