

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

## 1 Identification

- **Product identifier**
- **Trade name:** 4,6-Dinitro-o-Cresol
- **Article number:** D5003
- **CAS Number:**  
534-52-1
- **EC number:**  
208-601-1
- **Index number:**  
609-020-00-X
- **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:**  
Chemtec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity - Oral 2      H300 Fatal if swallowed.  
 Acute Toxicity - Dermal 1      H310 Fatal in contact with skin.  
 Acute Toxicity - Inhalation 2      H330 Fatal if inhaled.



GHS08 Health hazard

Germ Cell Mutagenicity 2      H341 Suspected of causing genetic defects.



GHS05 Corrosion

Eye Damage 1      H318 Causes serious eye damage.



GHS07

Skin Irritation 2      H315 Causes skin irritation.  
 Sensitization - Skin 1      H317 May cause an allergic skin reaction.

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

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: 4,6-Dinitro-o-Cresol

(Contd. of page 1)

· **Hazard pictograms**



· **Signal word** *Danger*

· **Hazard statements**

*Fatal if swallowed, in contact with skin or if inhaled.*

*Causes skin irritation.*

*Causes serious eye damage.*

*May cause an allergic skin reaction.*

*Suspected of causing genetic defects.*

· **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.*

*Do not get in eyes, on skin, or on clothing.*

*Wash thoroughly after handling.*

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

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

*Contaminated work clothing must not be allowed out of the workplace.*

*Avoid release to the environment.*

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

*[In case of inadequate ventilation] wear respiratory protection.*

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

*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.*

*Specific treatment is urgent (see on this label).*

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

*Take off immediately all contaminated clothing.*

*Collect spillage.*

*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 = 4*

*Fire = 0*

*Reactivity = 0*

· **HMIS-ratings (scale 0 - 4)**



*Health = \*4*

*Fire = 0*

*Reactivity = 0*

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: 4,6-Dinitro-o-Cresol**

(Contd. of page 2)

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
CAS: 534-52-1 4,6-Dinitro-o-Cresol
- **Identification number(s)**
- **EC number:** 208-601-1
- **Index number:** 609-020-00-X

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
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. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **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** 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**  
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:**  
Use neutralizing agent.  
Dispose contaminated material as waste according to section 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.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: 4,6-Dinitro-o-Cresol**

(Contd. of page 3)

- **Protective Action Criteria for Chemicals**
- **PAC-1:** 0.6 mg/m<sup>3</sup>
- **PAC-2:** 0.65 mg/m<sup>3</sup>
- **PAC-3:** 5 mg/m<sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.  
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.
- **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: 534-52-1 4,6-Dinitro-o-Cresol**

PEL	Long-term value: 0.2 mg/m <sup>3</sup> Skin
REL	Long-term value: 0.2 mg/m <sup>3</sup> Skin
TLV	Long-term value: 0.2* mg/m <sup>3</sup> *inhalable fraction + vapor; Skin

- **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.  
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.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: 4,6-Dinitro-o-Cresol

(Contd. of page 4)

· **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.

· **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:**

· <b>Form:</b>	Powder
· <b>Color:</b>	Dark yellow
· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· <b>Melting point/Melting range:</b>	84 °C (183.2 °F)
· <b>Boiling point/Boiling range:</b>	312 °C (593.6 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 0.00005 hPa (0 mm Hg)

· **Density:** Not determined.

· **Relative density** Not determined.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: 4,6-Dinitro-o-Cresol

(Contd. of page 5)

- |  |  |
|--|--|
| · Vapor density  | Not applicable.                            |
| · Evaporation rate   | Not applicable.                            |
| · Solubility in / Miscibility with Water at 20 °C (68 °F): | 0.13 g/l                                   |
| · Partition coefficient (n-octanol/water):                 | Not determined.                            |
| · Viscosity:   |  |
| Dynamic:   | Not applicable.                            |
| Kinematic:   | Not applicable.                            |
| · 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:**

Oral	LD50	5 mg/kg (ATE)
Dermal	LD50	5 mg/kg (ATE)
Inhalative	LC50/4h	0.05 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:** Danger through skin absorption.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not 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.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

**Trade name: 4,6-Dinitro-o-Cresol**



(Contd. of page 6)

- **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.
  - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
  - 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

- |   |                                    |
|---|------------------------------------|
| <b>· UN-Number</b>  | UN1598                             |
| <b>· DOT, IMDG, IATA</b>  |                                    |
| <b>· UN proper shipping name</b>  | Dinitro-o-cresol                   |
| <b>· DOT</b>  | DINITRO-o-CRESOL                   |
| <b>· IMDG</b>   | DINITRO-o-CRESOL, MARINE POLLUTANT |
| <b>· IATA</b>   | DINITRO-o-CRESOL                   |
| <b>· Transport hazard class(es)</b>   |                                    |
| <b>· DOT</b>  |                                    |
|  |                                    |
| <b>· Class</b>  | 6.1 Toxic substances               |
| <b>· Label</b>  | 6.1                                |
| <hr style="border-top: 1px dashed black;"/>   |                                    |
| <b>· IMDG</b>   |                                    |
|  |                                    |
| <b>· Class</b>  | 6.1 Toxic substances               |
| <b>· Label</b>  | 6.1                                |

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

Trade name: 4,6-Dinitro-o-Cresol

(Contd. of page 7)

## · IATA



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

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

· **Environmental hazards:** Environmentally hazardous substance, solid; Marine Pollutant  
 · **Marine pollutant:** No  
 Symbol (fish and tree)

· **Special precautions for user** Warning: Toxic substances  
 · **Hazard identification number (Kemler code):** 60  
 · **EMS Number:** F-A,S-A  
 · **Stowage Category** A

· **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: 25 kg  
 On cargo aircraft only: 100 kg  
 · **Hazardous substance:** 10 lbs, 4.54 kg

· **IMDG**  
 · **Limited quantities (LQ)** 500 g  
 · **Excepted quantities (EQ)** Code: E4  
 Maximum net quantity per inner packaging: 1 g  
 Maximum net quantity per outer packaging: 500 g

· **UN "Model Regulation":** UN 1598 DINITRO-O-CRESOL, 6.1, II

## 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):** Substance is listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 07/19/2024

Trade name: 4,6-Dinitro-o-Cresol

(Contd. of page 8)

- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** *Danger*
- **Hazard statements**
  - Fatal if swallowed, in contact with skin or if inhaled.*
  - Causes skin irritation.*
  - Causes serious eye damage.*
  - May cause an allergic skin reaction.*
  - Suspected of causing genetic defects.*
- **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.*
  - Do not get in eyes, on skin, or on clothing.*
  - Wash thoroughly after handling.*
  - Do not eat, drink or smoke when using this product.*
  - Use only outdoors or in a well-ventilated area.*
  - Contaminated work clothing must not be allowed out of the workplace.*
  - Avoid release to the environment.*
  - Wear protective gloves/protective clothing/eye protection/face protection.*
  - [In case of inadequate ventilation] wear respiratory protection.*
  - If swallowed: Immediately call a poison center/doctor.*
  - 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.*
  - Specific treatment is urgent (see on this label).*
  - If skin irritation or rash occurs: Get medical advice/attention.*
  - Take off immediately all contaminated clothing.*
  - Collect spillage.*
  - 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 1.2 07/18/2024: Reviewed SDS for accuracy. MH/STN*
  - Creation date for SDS 10-15-2015. STN*

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

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**Trade name: 4,6-Dinitro-o-Cresol**

(Contd. of page 9)

07/19/2024 / 1.1

**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**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**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 2: Acute toxicity – Category 2**Acute Toxicity - Dermal 1: Acute toxicity – Category 1**Skin Irritation 2: Skin corrosion/irritation – Category 2**Eye Damage 1: Serious eye damage/eye irritation – Category 1**Sensitization - Skin 1: Skin sensitisation – Category 1**Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2***\* Data compared to the previous version altered.**

US