

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/07/2024

Reviewed on 06/07/2024

1 Identification

- **Product identifier**
- **Trade name:** 2,4,6-trinitrophenol
- **Article number:** P2525
- **CAS Number:**
88-89-1
- **EC number:**
201-865-9
- **Index number:**
609-009-00-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
- **Emergency telephone number:**
Chemtec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS01 Exploding bomb

Explosives 1.1

H201 Explosive; mass explosion hazard.



GHS06 Skull and crossbones

Acute Toxicity - Oral 3

H301 Toxic if swallowed.

Acute Toxicity - Dermal 3

H311 Toxic in contact with skin.

Acute Toxicity - Inhalation 3

H331 Toxic if inhaled.

- **Label elements**

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

- **Hazard pictograms**



GHS01



GHS06

- **Signal word** *Danger*

- **Hazard statements**

Explosive; mass explosion hazard.

Toxic if swallowed, in contact with skin or if inhaled.

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- **Precautionary statements**

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep wetted.
- Ground/bond container and receiving equipment.
- Do not subject to grinding/shock/friction.
- Avoid breathing 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.
- Wear face protection.
- If swallowed: Immediately call a poison center/doctor.
- Specific treatment (see on this label).
- Rinse mouth.
- If on skin: Wash with plenty of water.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center/doctor.
- Call a poison center/doctor if you feel unwell.
- Take off immediately all contaminated clothing and wash it before reuse.
- In case of fire: Evacuate area.
- Explosion risk in case of fire.
- DO NOT fight fire when fire reaches explosives.
- Store in accordance with local/regional/national/international regulations.
- 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)**



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



- **Other hazards**

- **Results of PBT and vPvB assessment**

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

* 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
CAS: 88-89-1 2,4,6-trinitrophenol
- **Identification number(s)**
- **EC number:** 201-865-9
- **Index number:** 609-009-00-X

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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** Remove persons from danger area.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
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.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 0.3 mg/m³
- **PAC-2:** 17 mg/m³
- **PAC-3:** 100 mg/m³

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 ignition sources away - Do not smoke.

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*Prevent impact and friction.**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.*
 - Protect from heat and direct sunlight.*
- **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: 88-89-1 2,4,6-trinitrophenol	
PEL	Long-term value: 0.1 mg/m ³ Skin
REL	Short-term value: 0.3 mg/m ³ Long-term value: 0.1 mg/m ³ Skin
TLV	Long-term value: 0.1 mg/m ³

- **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 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.

- **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.

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- **Eye protection:** Not required.
- **Body protection:** Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solid
Color:	Light yellow
Odor:	Odorless
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· Change in condition

Melting point/Melting range:	121 °C (249.8 °F)
Boiling point/Boiling range:	Undetermined.

· **Flash point:** 150 °C (302 °F)

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

· **Auto igniting:** 300 °C (572 °F)

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Not determined.

· **Danger of explosion:** Extreme risk of explosion by shock, friction, fire or other sources of ignition.
Forms very sensitive explosive metallic compounds.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not applicable.

· **Density at 20 °C (68 °F):** 1.763 g/cm³ (14.71224 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with Water at 20 °C (68 °F):**

14 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.

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- **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	100 mg/kg (ATE)
Dermal	LD50	300 mg/kg (ATE)
Inhalative	LC50/4h	0.5 mg/l (ATE)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **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.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 2 (Assessment by list): 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.

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- **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 style="margin-left: 20px;">UN1344</p>
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	<p style="margin-left: 20px;">Trinitrophenol, wetted TRINITROPHENOL (PICRIC ACID), WETTED</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	<p style="margin-left: 20px;">4.1 Flammable solids, self-reactive substances and solid desensitised explosives 4.1</p>
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	<p style="margin-left: 20px;">4.1 Flammable solids, self-reactive substances and solid desensitised explosives 4.1</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p style="margin-left: 20px;">I</p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p style="margin-left: 20px;">Not applicable.</p>
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): - · EMS Number: · Stowage Category · Segregation Code 	<p style="margin-left: 20px;">Warning: Flammable solids, self-reactive substances and solid desensitised explosives F-B,S-J E SG7 Stow "away from" class 3 SG30 Stow "away from" SGG7-heavy metals and their salts</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p style="margin-left: 20px;">Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	<p style="margin-left: 20px;">On passenger aircraft/rail: 1 kg On cargo aircraft only: 15 kg</p>

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· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1344 TRINITROPHENOL (PICRIC ACID), WETTED, 4.1, I

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 not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is not 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.
- **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**



GHS01 GHS06

- **Signal word** Danger
- **Hazard statements**
Explosive; mass explosion hazard.
Toxic if swallowed, in contact with skin or if inhaled.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep wetted.
Ground/bond container and receiving equipment.
Do not subject to grinding/shock/friction.
Avoid breathing 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.
Wear face protection.
If swallowed: Immediately call a poison center/doctor.
Specific treatment (see on this label).
Rinse mouth.
If on skin: Wash with plenty of water.

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

Call a poison center/doctor.

Call a poison center/doctor if you feel unwell.

Take off immediately all contaminated clothing and wash it before reuse.

In case of fire: Evacuate area.

Explosion risk in case of fire.

DO NOT fight fire when fire reaches explosives.

Store in accordance with local/regional/national/international regulations.

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, 06/05/2024: Reviewed SDS for accuracy. MH/STN

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

06/07/2024

· **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

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

Explosives 1.1: Explosives – Division 1.1

Acute Toxicity - Oral 3: Acute toxicity – Category 3

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