

## 1 Identification

- **Product identifier**
- **Trade name:** 2,4-Dinitrophenol Neat
- **Part number:** RCC-159
- **CAS Number:**  
51-28-5
- **EC number:**  
200-087-7
- **Index number:**  
609-041-00-4
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
ULTRA Scientific, Inc.  
250 Smith Street  
North Kingstown, RI 02852  
USA
- **Information department:**  
Telephone: (401) 294-9400  
Fax: (401) 295-2300  
E-mail: regulatory@ultrasci.com
- **Emergency telephone number:**  
US: (800) 424-9300  
Outside US: (703) 527-3887

## 2 Hazard identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity (Oral) - Category 3

H301 Toxic if swallowed.

Acute Toxicity (Dermal) - Category 3

H311 Toxic in contact with skin.

Acute Toxicity (Inhalation) - Category 3

H331 Toxic if inhaled.



GHS08 Health hazard

Specific Target Organ Toxicity - Repeated Exposure -  
Category 2

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

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS06 GHS08

- **Signal word** Danger

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**Trade name: 2,4-Dinitrophenol Neat**

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

2,4-dinitrophenol

· **Hazard statements**

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

May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapours/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: Immediately call a POISON CENTER/ doctor.

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.

Get medical advice/attention if you feel unwell.

Specific measures (see on this label).

Rinse mouth.

Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

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.

· **Hazard description:**

· **WHMIS-symbols:**

D1A - Very toxic material causing immediate and serious toxic effects

F - Dangerously reactive material



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 08/18/2017

Version Number 1

Reviewed on 08/18/2017

**Trade name: 2,4-Dinitrophenol Neat**

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### 3 Composition/Information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
51-28-5 2,4-dinitrophenol
- **Identification number(s)**
- **EC number:** 200-087-7
- **Index number:** 609-041-00-4

### 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. 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 Firefighting 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:**  
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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**Trade name: 2,4-Dinitrophenol Neat**

See Section 13 for disposal information.

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## 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 item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **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:**



Tightly sealed goggles

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Solid
<b>Color:</b>	Not determined.
· <b>Odor:</b>	Characteristic
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

<b>Melting point/Melting range:</b>	112°C
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

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

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** 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:** Not applicable.

· <b>Density at 20°C:</b>	1.683 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.

· **Solubility in / Miscibility with**

**Water at 18°C:** 5.6 g/l

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.

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

**Trade name: 2,4-Dinitrophenol Neat**

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### 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:**

**ATE (Acute Toxicity Estimate)**

Oral	LD50	30 mg/kg (rat)
Dermal	LD50	300 mg/kg
Inhalative	LC50/4 h	0.5 mg/L

**51-28-5 2,4-dinitrophenol**

Oral	LD50	30 mg/kg (rat)
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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:**

- **Carcinogenic categories**

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

Substance is not listed.

- **NTP (National Toxicology Program)**

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 (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.

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- **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, TDG, IMDG, IATA** UN1320
- **UN proper shipping name**
- **DOT** Dinitrophenol, wetted
- **TDG** 1320 Dinitrophenol, wetted, ENVIRONMENTALLY HAZARDOUS
- **IMDG** DINITROPHENOL, WETTED, MARINE POLLUTANT
- **IATA** DINITROPHENOL, WETTED

- **Transport hazard class(es)**

- **DOT**



- **Class**

4.1 Flammable solids, self-reactive substances and solid desensitised explosives

- **Label**

4.1, 6.1

- **TDG (Transport dangerous goods):**



- **Class**

4.1 Flammable solids, self-reactive substances and solid desensitised explosives

- **Label**

4.1+6.1

- **IMDG**




- **Class**

4.1 Flammable solids, self-reactive substances and solid desensitised explosives

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**Trade name: 2,4-Dinitrophenol Neat**

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· <b>Label</b>	4.1/6.1
· <b>IATA</b>	
	
· <b>Class</b>	4.1 Flammable solids, self-reactive substances and solid desensitised explosives
· <b>Label</b>	4.1 (6.1)
· <b>Packing group</b>	
· <b>DOT, TDG, IMDG, IATA</b>	I
· <b>Environmental hazards:</b>	Product contains environmentally hazardous substances: 2,4-dinitrophenol
· <b>Marine pollutant:</b>	Yes (DOT) Symbol (fish and tree)
· <b>Special marking (TDG):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b>	Warning: Flammable solids, self-reactive substances and solid desensitised explosives
· <b>EMS Number:</b>	F-B,S-J
· <b>Stowage Category</b>	E
· <b>Segregation Code</b>	SG7 Stow "away from" class 3 SG30 Stow "away from" heavy metals and their salts
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 1 kg On cargo aircraft only: 15 kg
· <b>Remarks:</b>	Special marking with the symbol (fish and tree).
· <b>TDG</b>	
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 1320 DINITROPHENOL, WETTED, 4.1 (6.1), I, ENVIRONMENTALLY HAZARDOUS

**15 Regulatory information**

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

**Section 355 (extremely hazardous substances):**

Substance is not listed.

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

Substance is listed.

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

Substance is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

Substance is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

· **GHS label elements**

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

· **Hazard pictograms**



GHS06    GHS08

· **Signal word** Danger

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

2,4-dinitrophenol

· **Hazard statements**

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

May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapours/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: Immediately call a POISON CENTER/ doctor.

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.

Get medical advice/attention if you feel unwell.

Specific measures (see on this label).

Rinse mouth.

Take off immediately all contaminated clothing.

Wash contaminated clothing before reuse.

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.

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## Safety Data Sheet according to HPR, Schedule 1

Printing date 08/18/2017

Version Number 1

Reviewed on 08/18/2017

**Trade name: 2,4-Dinitrophenol Neat**

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· **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:** Document Control / Regulatory
- **Contact:** regulatory@ultrasci.com
- **Date of preparation / last revision** 08/18/2017 / -
- **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)
  - WHMIS: Workplace Hazardous Materials Information System (Canada)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
- **\* Data compared to the previous version altered.**

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