



TCI AMERICA

SAFETY DATA SHEET

Revision number: 1
Revision date: 07/06/2018

1. IDENTIFICATION

Product name: 2,4-Dinitrophenol (wetted with ca. 20% Water) (unit weight on dry weight basis)
Product code: D0109

Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

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2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Acute Toxicity - Oral [Category 2]
WHMIS 2015: Acute Toxicity - Dermal [Category 1]
Skin Corrosion/Irritation [Category 2]
Germ Cell Mutagenicity [Category 2]
Toxic to Reproduction [Category 2]
Specific Target Organ Toxicity (Single Exposure) [Category 1]
Specific Target Organ Toxicity (Repeated Exposure) [Category 1]
Specific Target Organ Toxicity (Repeated Exposure) [Category 2]
Flammable Solids [Category 1]
Aquatic Hazard (Acute) [Category 1]
Aquatic Hazard (Long-Term) [Category 1]

Signal word: Danger!

Hazard Statement(s): Flammable solid
Fatal if swallowed or in contact with skin
Causes skin irritation
Suspected of causing genetic defects
Suspected of damaging fertility or the unborn child
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects
Causes damage to: Nervous System Kidney
Causes damage to organs through prolonged or repeated exposure: Liver Blood System Visual System
Digestive Tract Nervous System Cardiovascular System Kidney
May cause damage to organs through prolonged or repeated exposure: Testis

Pictogram(s) or Symbol(s):



Precautionary Statement(s):
[Prevention]

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Do not breathe dust, fume, mist, vapors or spray. Do not get in eyes, on skin, or on clothing. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wear protective gloves, protective clothing, face protection. If swallowed: Immediately call a poison center or doctor. Rinse mouth. If on skin: Wash with plenty of soap and water. Immediately call a poison center or doctor. Take off immediately all contaminated clothing and wash it before reuse. If exposed: Call a poison center or doctor. Collect spillage.

[Response]

[Storage] Store locked up.
[Disposal] Dispose of contents and container in accordance with local, regional, national regulations (e.g. US: 40 CFR Part 261, EU:91/156/EEC, JP: Waste Disposal and Cleaning Act, etc.).

Hazards not otherwise classified: None.
[HNOC]

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Mixture
Components: 2,4-Dinitrophenol (wetted with ca. 20% Water) (unit weight on dry weight basis)
Percent: >98.0%(GC)(T)
CAS RN: 51-28-5
Molecular Weight: 184.11
Chemical Formula: C₆H₄N₂O₅
Hazardous ingredient(s): 2,4-Dinitrophenol (80%) 51-28-5
Water (20%) 7732-18-5

4. FIRST-AID MEASURES

Description of first aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Skin contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Symptoms/effects:

Acute: Redness.

Delayed: May cause heritable genetic damage in humans.

Indication of any immediate medical attention:

Not available.

Notes to physician:

No data available

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.

Specific hazards arising from the chemical: Explosion risk in case of fire. Fight fire remotely due to the risk of explosion. Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

Hazardous combustion products: These products include: Carbon oxides Nitrogen oxides

Other specific hazards: Closed containers may explode from heat of a fire.

Advice for firefighters: Wear self-contained breathing apparatus if possible.
Combat fire from a sheltered position.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions: Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.

Methods and materials for containment and cleaning up: Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

Prevention of secondary hazards: Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for safe handling:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated. Avoid all contact!
Conditions for safe storage, including any incompatibilities	
Storage conditions:	Keep container tightly closed. Store in a cool and dark place. Store locked up. Be sure not to give the container unexpected impacts, such as falling down or falling off. Keep wetted with water for desensitized. Store away from incompatible materials such as oxidizing agents.
Packaging material:	Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls:	Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust. Also install safety shower and eye bath.
Personal protective equipment	
Respiratory protection:	Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
Hand protection:	Impervious gloves.
Eye protection:	Safety goggles. A face-shield, if the situation requires.
Skin and body protection:	Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Solid		
Form:	Crystal - Powder		
Colour:	Pale yellow - Yellow green		
Odour:	Characteristic		
Odor threshold:	No data available		
Odour threshold:	No data available		
Melting point/freezing point:	113°C (235°F)	pH:	No data available
Boiling point/range:	No data available	Vapour pressure:	No data available.
Decomposition temperature:	No data available	Vapour density:	6.36
Relative density:	No data available	Dynamic Viscosity:	No data available
Kinematic viscosity:	No data available		
Log Pow:	No data available	Evaporation rate(Butyl Acetate=1):	No data available
Flash point:	No data available	Autoignition temperature:	No data available
Flammability(solid, gas):	No data available	Flammability or explosive limits:	
		Lower:	No data available
		Upper:	No data available
Solubility(ies):			
[Water]	Very slightly soluble (2.7g/L, 20°C)		
[Other solvents]			
Soluble:	Alcohols, Acetone, Chloroform, Toluene, Ethyl acetate, Pyridine		

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	Dust explosion possible if in powder or granular form, mixed with air. May explosively decompose on heating, shock, friction, etc.
Conditions to avoid:	Heat, Spark, Open flame, Static discharge, Shock, Friction
Incompatible materials:	Oxidizing agents, Strong bases, Metals
Hazardous decomposition products:	Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

RTECS Number: SL2800000

Acute Toxicity:

ipr-rat LD50:20 mg/kg
orl-rat LD50:30 mg/kg

orl-hmn LDLo:36 mg/kg
scu-rat LD50:25 mg/kg

Skin corrosion/irritation:

skn-rbt 300 mg/4W-I MLD

Serious eye damage/irritation:

No data available

Respiratory or skin sensitization:

No data available

Germ cell mutagenicity:

cyt-mus-ipr 10 g/kg
mmo-esc 200 ppm/3H (-S9)

dnd-mus-oth 50 mg/L/3H (-S9)

Carcinogenicity:

No data available

IARC: No data available

NTP: No data available

OSHA: No data available

Reproductive toxicity:

ipr-mus TDLo:40800 ug/kg (10-12D preg)

orl-rat TDLo:2040 mg/kg (8D pre-21D post)

Target organ(s):

Causes damage to: Nervous System Kidney

Causes damage to organs through prolonged or repeated exposure: Liver Blood System Visual System Digestive Tract Nervous System

Cardiovascular System Kidney

May cause damage to organs through prolonged or repeated exposure: Testis

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: 48h LC50:19.1 mg/L (Oryzias latipes)

Crustacea: No data available

Algae: No data available

Persistence / degradability:

0% (by BOD) , 5% (by HPLC) , 0% (by TOC)

Bioaccumulative potential(BCF):

<0.4 - 0.7 (conc. 50 ug/L) , <3.7 (conc. 5 ug/L)

Mobility in soil

Log Pow: 1.67

Soil adsorption (Koc): 200

Henry's Law (PaM³/mol): 8.7 x 10⁻³

13. DISPOSAL CONSIDERATIONS

Disposal of product:

Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. Consult an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.

Disposal of container:

Dispose of as unused product. Do not re-use empty containers.

Other considerations:

Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

DOT (US)

UN number: UN1320	Proper Shipping Name: Dinitrophenol, wetted	Class or Division: 4.1 Flammable solid	Subrisk(s): 6.1 Toxic material.	Packing Group: I
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IATA

UN number: UN1320	Proper Shipping Name: Dinitrophenol, wetted	Class or Division: 4.1 Flammable solid	Subrisk(s): 6.1 Toxic material.	Packing Group: I
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IMDG

UN number: UN1320	Proper Shipping Name: Dinitrophenol, wetted	Class or Division: 4.1 Flammable solid	Subrisk(s): 6.1 Toxic material.	Packing Group: I
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Marine Pollutant:	Marine Pollutant
EmS number:	F-B, S-J
Reportable Quantity:	10 pounds (4.54 Kilograms)

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.):

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations

CERCLA Hazardous substance and Reportable Quantity:

SARA 313:	Listed
SARA 302:	Not Listed

State Regulations

State Right-to-Know

Massachusetts	Listed
New Jersey	Listed
Pennsylvania	Listed
California Proposition 65:	Not Listed

Other Information

NFPA Rating:		HMIS Classification:	
Health: 3		Health: 3	
Flammability: 0		Flammability: 0	
Instability: 4		Physical: 4	

International Inventories

Canada: DSL	On DSL
EC-No:	200-087-7

16. OTHER INFORMATION

Revision date: 07/06/2018

Revision number: 1

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.