



TCI AMERICA

SAFETY DATA SHEET

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

1. IDENTIFICATION

Product name: 1,4-Dinitrobenzene
Product code: D0819
Product use: For laboratory research purposes.
Restrictions on use: Not for drug or household use.

Company:
TCI America
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Portland, OR 97203 U.S.A.
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Emergency telephone number:
Chemical Emergencies:
TCI America (8:00am - 5:00pm) PST
+1-503-286-7624
Transportation Emergencies:
Chemtrec 24-Hour
+1-800-424-9300 (U.S.A.)
+1-703-527-3887 (International)
Responsible department:
TCI America
Environmental Health Safety and Security
+1- 503-286-7624

2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Acute Toxicity - Oral [Category 2]
WHMIS 2015: Acute Toxicity - Dermal [Category 1]
Acute Toxicity - Inhalation [Category 2]
Eye Damage/Irritation [Category 2B]
Specific Target Organ Toxicity (Single Exposure) [Category 1]
Specific Target Organ Toxicity (Single Exposure) [Category 3]
Specific Target Organ Toxicity (Repeated Exposure) [Category 2]
Aquatic Hazard (Acute) [Category 1]
Aquatic Hazard (Long-Term) [Category 1]

Signal word: Danger!

Hazard Statement(s): Fatal if swallowed, in contact with skin or if inhaled
Causes eye irritation
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects
Causes damage to: Blood
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure: Liver Blood

Pictogram(s) or Symbol(s):



Precautionary Statement(s):
[Prevention]

Do not breathe dust, fume, mist, vapors or spray. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wear respiratory protection. Wear protective gloves, protective clothing.

[Response]

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 inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. If exposed: Call a poison center or doctor. Collect spillage.

[Storage]

Store in a well-ventilated place. Keep container tightly closed. 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:	Substance
Components:	1,4-Dinitrobenzene
Percent:	>99.0%(GC)
CAS RN:	100-25-4
Molecular Weight:	168.11
Chemical Formula:	C ₆ H ₄ N ₂ O ₄

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 have effects on the respiratory tract.

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 extra personal protective equipment (self-contained breathing apparatus). 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.

7. HANDLING AND STORAGE

Precautions for safe handling:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Be careful not to cause leakage, overflow, or dispersion. Steam should not be generated unnecessarily. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Avoid shock and friction. Wash hands and face before breaks and immediately after handling the product. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated. Avoid contact with skin, eyes and clothing.
Conditions for safe storage, including any incompatibilities	
Storage conditions:	Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Be sure not to give the container unexpected impacts, such as falling down or falling off. Store away from incompatible materials such as oxidizing agents.
Packaging material:	Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:

ACGIH TLV(TWA):	0.15 ppm (skin)
OSHA PEL(TWA):	1 mg/m ³ (skin)
JSOH OELs(TWA):	0.15 ppm (skin)

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 red

Odour:

No data available

Odor threshold:

No data available

Odour threshold:

No data available

Melting point/freezing point:

173°C (343°F)

pH:

No data available

Boiling point/range:

No data available

Vapour pressure:

No data available.

Decomposition temperature:

No data available

Vapour density:

5.8

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]**

Insoluble

[Other solvents]**Soluble:**

Alcohols, Benzene, Toluene, Acetic acid

10. STABILITY AND REACTIVITY

Reactivity:

No data available

Chemical stability:

Stable under proper conditions.

Possibility of hazardous reactions:

May explosively decompose on heating, shock, friction, etc.

Conditions to avoid:

Heat, Shock, Friction

Incompatible materials:

Oxidizing agents

Hazardous decomposition products:

Carbon dioxide, Carbon monoxide, Nitrogen oxides (NO_x)

11. TOXICOLOGICAL INFORMATION**RTECS Number:** CZ7525000**Acute Toxicity:**

ipr-rat LD50:56 mg/kg

orl-rat LDLo:50 mg/kg

Skin corrosion/irritation:

No data available

Serious eye damage/irritation:

No data available

Respiratory or skin sensitization:

No data available

Germ cell mutagenicity:

mmo-sat 5 ug/plate (+S9)

Carcinogenicity:

No data available

IARC: No data available**NTP:** No data available**OSHA:** No data available**Reproductive toxicity:**

No data available

Target organ(s):

Causes damage to: Blood

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure: Liver Blood

12. ECOLOGICAL INFORMATION**Ecotoxicity:****Fish:**

No data available

Crustacea:

No data available

Algae:

No data available

Persistence / degradability:

No data available

Bioaccumulative potential(BCF):

5

Mobility in soil**Log Pow:**

1.46

Soil adsorption (Koc):

150

Henry's Law (PaM³/mol):8.5 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: UN3443	Proper Shipping Name: Dinitrobenzenes, solid	Class or Division: 6.1 Toxic material.	Packing Group: II
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IATA

UN number: UN3443	Proper Shipping Name: Dinitrobenzenes, solid	Class or Division: 6.1 Toxic material.	Packing Group: II
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IMDG

UN number: UN3443	Proper Shipping Name: Dinitrobenzenes, solid	Class or Division: 6.1 Toxic material.	Packing Group: II
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EmS number: F-A, S-A

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: Listed

Other Information**NFPA Rating:**

Health:	4
Flammability:	1
Instability:	0

HMIS Classification:

Health:	4
Flammability:	1
Physical:	0

International Inventories

Canada: DSL	On DSL
EC-No:	202-833-7

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.