

SECTION 1. IDENTIFICATION

| | |
|--------------------------------|--|
| Product/Chemical Name: | 1,3-Dinitrobenzene |
| Synonym(s): | None |
| Recommended Use: | For laboratory research purposes. |
| Restrictions on Use: | None. |
| Manufacturer/Supplier: | Acros Organics (Acros Organics no longer produces this material) |
| Emergency Phone Number: | CANUTEC 24-HR Response: 613-996-6666 or *666 on a cellular phone |

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity, Oral (Category 2)
Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 1)
Specific target organ toxicity - repeated exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label Elements (pictograms)



Signal Word: Danger

Hazard Statement(s):

H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing.
P284 Wear respiratory protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P302 + P350 + P310 IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/ physician.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P501 Dispose of contents/ container to an approved waste disposal plant.

Other Hazards

None identified

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | % | Other Identifiers |
|-------------------|---------|----|-------------------|
| 1,3-Dinitrophenol | 99-65-0 | 99 | |

Notes:

None.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Eye Contact

Flush eyes with water as a precaution.

Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms and Effects, Acute and Delayed

None listed

Immediate Medical Attention and Special Treatment

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Conditions of Flammability

Not flammable or combustible.

Extinguishing Media

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media

None listed

Specific Hazards Arising from the Chemical

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x)

Special Protective Equipment and Precautions for Fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment, and Emergency Procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and Materials for Containment and Cleaning Up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Other Information

None

SECTION 7. HANDLING AND STORAGE**Precautions for Safe Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value | Control Parameters | Basis |
|--------------------|---|-------|--------------------------------|---|
| 1,3-Dinitrobenzene | 99-65-0 | TWA | 0.150000 ppm 1.000000 mg/m3 | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| Remarks | Substance may be readily absorbed through intact skin. | | | |
| | | TWAEV | 0.150000 ppm 1.000000 mg/m3 | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| | Skin (percutaneous) | | | |
| | | TWA | 0.150000 ppm | Canada. British Columbia OEL |
| | Contributes significantly to the overall exposure by the skin route | | | |
| | | TWA | 0.150000 ppm | USA. ACGIH Threshold Limit Values (TLV) |

Consult local authorities for provincial or state exposure limits.

Key to abbreviations

OEL = Occupational Exposure Limit; TLV = Threshold Limit Value; TWA = Time-Weighted Average; TWAEV = Time-Weighted Average Exposure Value; STEL = Short-term Exposure Limit; OSHA = US Occupational Safety and Health Administration; PEL = Permissible Exposure Limits; AIHA = AIHA Guideline Foundation; WEEL = Workplace Environmental Exposure Limit.

Appropriate Engineering Controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

Individual Protection Measures

Eye/Face Protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Skin Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of

contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves.

This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Respiratory Protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protection Measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|--|---|
| Physical State | crystalline |
| Colour | yellow |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | No data available |
| Melting Point/Freezing Point | Melting point/range: 84 - 86 °C (183 - 187 °F) - lit. |
| Initial Boiling Point/Range | 297 °C (567 °F) - lit. |
| Flash Point | 150 °C (302 °F) - closed cup |
| Evaporation Rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/Lower Flammability or Explosive Limit | No data available |

| | |
|-------------------------------------|-----------------------------|
| Vapour Pressure | No data available |
| Vapour Density (air = 1) | No data available |
| Relative Density (water = 1) | 1.368 g/mL at 25 °C (77 °F) |
| Solubility | No data available |
| Partition Coefficient | No data available |
| Auto-ignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |

Other Information

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SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

No data available

Incompatible Materials

Oxidizing agents, Reducing agents, Strong bases

Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) Other decomposition products - No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin, eyes, ingestion, inhalation

Acute Toxicity

| Chemical Name | LC50 (inhalation) | LD50 (oral) | LD50 (dermal) |
|--------------------------|-------------------|-------------------|-------------------|
| 1,3-Dinitrophenol | No data available | No data available | No data available |

Other Information on Acute Toxicity

No data available

Skin Corrosion/Irritation

No data available

Serious Eye Damage/Irritation

No data available

Respiratory or Skin Sensitisation

No data available

Germ Cell Mutagenicity

No data available

Carcinogenicity

| | |
|----------------------|---|
| Chemical Name | 1,3-Dinitrophenol |
| IARC | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| ACGIH | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |

Key to abbreviations

IARC = International Agency for Research on Cancer

ACGIH = American Conference of Governmental Industrial Hygienists

Reproductive Toxicity

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation

May be fatal if inhaled. May cause respiratory tract irritation.

Ingestion

May be fatal if swallowed.

| | |
|-------------|---|
| Skin | May be fatal if absorbed through skin. May cause skin irritation. |
| Eyes | May cause eye irritation. |

Signs and Symptoms of Exposure

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Cough, Shortness of breath, Headache, Nausea, Vomiting

Synergistic effects

No data available

Additional Information

RTECS: CZ7350000

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS 2015

This section is not required by OSHA

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

UN number: 3443 Class: 6.1 Packing group: II

Proper shipping name: Dinitrobenzenes, solid

Reportable Quantity (RQ): 100 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 3443 Class: 6.1 Packing group: II EMS-No: F-A, S-A

Proper shipping name: DINITROBENZENES, SOLID

Marine pollutant: No

IATA

UN number: 3443 Class: 6.1 Packing group: II

Proper shipping name: Dinitrobenzenes, solid

SECTION 15. REGULATORY INFORMATION**Canada****WHMIS Classification**

| | | |
|-----|---|---|
| D1A | Very Toxic Material Causing Immediate and Serious Toxic Effects | Highly toxic by ingestion |
| D2B | Toxic Material Causing Other Toxic Effects | Highly toxic by skin absorption Highly toxic by inhalation Chronic toxicity |

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

SECTION 16. OTHER INFORMATION

| | |
|-----------------------------|---|
| SDS Prepared by: | Dave A. Vadnais |
| Phone Number: | 705-474-3450 ext 4180 |
| Date of Preparation: | March 14, 2019 |
| Revision Date: | Click here to enter a date. |

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