SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 2,4-Dinitrotoluene
Product Number: S3028

Sarchem Laboratories, Inc.
5012 Industrial Road
Farmingdale, NJ 07727

Emergency Phone No: 800-255-3924
International: +1-813-248-0585
ChemTel Inc

2. HAZARDS INFORMATION:

2.1 Classification of the substance or mixture
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350
Reproductive toxicity (Category 2), H361
Specific target organ toxicity - repeated exposure (Category 2), H373
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements Pictogram Signal word
Warning
Emergency Overview

Pictogram

\[\text{Signal word Danger}\]

Hazard statement(s)
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled
H341 Suspected of causing genetic defects.
H350 May cause cancer.
2,4-Dinitrotoluene

H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C7H6N2O4
Molecular weight : 182.13 g/mol
CAS-No. : 121-14-2
EC-No. : 204-450-0
Index-No. : 609-007-00-9

2,4-Dinitrotoluene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

4. FIRST AID MEASURES:
General Advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangers area.
If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

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

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Carbon oxides, Nitrogen oxides (NOx)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
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
Do not let product enter drains

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

7. Handling and Storage

Handling
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (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).

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.

Eye 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 and body protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance

Form crystalline
Color light yellow
2,4-Dinitrotoluene | 2016

Safety data

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<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
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<tr>
<td>Melting Point</td>
<td>Melting point/range: 67 - 70 °C (153 - 158 °F)</td>
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<tr>
<td>Boiling Point</td>
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<td>Flash Point</td>
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<td>Ignition temperature</td>
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<tr>
<td>Lower exposure limit</td>
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<tr>
<td>Upper exposure limit</td>
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<tr>
<td>Vapor pressure</td>
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<tr>
<td>Water solubility</td>
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</tr>
</tbody>
</table>

10. Stability and Reactivity

Storage stability
Stable under recommended storage conditions.

Materials to avoid
no data available

Incompatible materials
Oxidizing agents, Reducing agents, Strong bases, Metals

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. -
Other decomposition products - no data available

11. Toxicological Information

Acute toxicity
LD50 Oral - Rat - 268.0 mg/kg
LD50 Dermal - Guinea pig - > 1,000 mg/kg

Skin corrosion/irritation
Skin - Rabbit Result: Mild skin irritation - 24 h

Serious eye damage/eye irritation
no data available

Germ cell mutagenicity
no data available
Carcinogenicity

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,4-Dinitrotoluene)

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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
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

Potential health effects
Inhalation Toxic if inhaled. May cause respiratory tract irritation.
Ingestion Toxic if swallowed.
Skin Toxic if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

12. Ecological Information

Elimination information (persistence and degradability)
No data available

Ecotoxicity effects

Toxicity to Fish
LC0 - Oryzias latipes - > 16 mg/l - 96.0 h
LC50 - Pimephales promelas (fathead minnow) - 31 mg/l - 96.0 h
NOEC - other fish - 1.8 mg/l - 96.0 h

Further information on ecology
No data available

13. Disposal Considerations
Product
Observe all federal, state, and local environmental regulations. 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

14. Transportation Information

DOT (US)
UN number: 3454 Class: 6.1 Packing group: II
Proper shipping name: Dinitrotoluenes, solid
Reportable Quantity (RQ): 10 lbs
Marine pollutant: yes
Poison Inhalation Hazard: No

IMDG
UN number: 3454 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: DINITROTOLUENES, SOLID
Marine pollutant: yes

IATA
UN number: 3454 Class: 6.1 Packing group: II
Proper shipping name: Dinitrotoluenes, solid

15. Regulatory Information

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Not SARA HAZARD

16. OTHER INFORMATION:

Full text of H-Statements referred to under sections 2 and 3.
Acute Tox. Acute toxicity
Aquatic Acute Acute aquatic toxicity
Aquatic Chronic Chronic aquatic toxicity
Carc. Carcinogenicity
H301 Toxic if swallowed.
H301 + H311 +
H331
Toxic if swallowed, in contact with skin or if inhaled
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.

HMIS Rating
Health hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical Hazard 0

NFPA Rating
Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0
Health hazard: 2
Fire Hazard: 1
Reactivity Hazard: 0

Further Information
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