

## SAFETY DATA SHEET

Version 6.6  
Revision Date 08/06/2024  
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : 2,6-Dinitrotoluene

Product Number : D200603

Brand : Aldrich

Index-No. : 609-049-00-8

CAS-No. : 606-20-2

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765

Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

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Germ cell mutagenicity (Category 2), H341  
 Carcinogenicity (Category 1B), H350  
 Reproductive toxicity (Category 2), H361  
 Specific target organ toxicity - repeated exposure (Category 2), H373  
 Short-term (acute) aquatic hazard (Category 3), H402  
 Long-term (chronic) aquatic hazard (Category 3), H412

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

Danger

Hazard Statements

H301 + H311 + H331

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

H341

Suspected of causing genetic defects.

H350

May cause cancer.

H361

Suspected of damaging fertility or the unborn child.

H373

May cause damage to organs through prolonged or repeated exposure.

H412

Harmful to aquatic life with long lasting effects.

Precautionary Statements

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe dust.

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/ doctor. Rinse mouth.

P302 + P352 + P312

IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P311

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

P362

Take off contaminated clothing and wash before reuse.

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

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula : C<sub>7</sub>H<sub>6</sub>N<sub>2</sub>O<sub>4</sub>  
Molecular weight : 182.13 g/mol  
CAS-No. : 606-20-2  
EC-No. : 210-106-0  
Index-No. : 609-049-00-8

Component	Classification	Concentration
<b>2,6-Dinitrotoluene</b>		
	Acute Tox. 3; Muta. 2; Carc. 1B; Repr. 2; STOT RE 2; Aquatic Acute 3; Aquatic Chronic 3; H301, H331, H311, H341, H350, H361, H373, H402, H412	<= 100 %

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

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

No data available

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

No data available

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Combustible.

### 5.3 Advice for firefighters

No data available

### 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

### 6.2 Environmental precautions

No data available

### 6.3 Methods and materials for containment and cleaning up

No data available

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Avoid formation of dust and aerosols.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

No data available

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
2,6-Dinitrotoluene	606-20-2	TWA	1.5 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
	Remarks	Potential Occupational Carcinogen Potential for dermal absorption		

### 8.2 Exposure controls

No data available

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |               |  |
|---------------|--|
| a) Appearance | Form: crystalline<br>Color: light yellow |
| b) Odor       | No data available                        |

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c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/ range: 56 - 61 °C (133 - 142 °F)
f) Initial boiling point and boiling range	285.0 °C 545.0 °F
g) Flash point	206.7 °C (404.1 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	0.008 hPa at 25.0 °C (77.0 °F)
l) Vapor density	No data available
m) Density	1.28 g/cm <sup>3</sup> at 111.00 °C (231.80 °F) - (HSDB)
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	log Pow: 2.10 - Bioaccumulation is not expected., (HSDB)
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:  
Oxidizing agents

Reducing agents  
Strong bases

#### **10.4 Conditions to avoid**

No data available

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

LD50 Oral - Rat - 177.0 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 4 h - 0.51 mg/l - dust/mist

(Expert judgment)

Acute toxicity estimate Dermal - 300 mg/kg

(Expert judgment)

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: Mild skin irritation - 24 h

Remarks: (RTECS)

##### **Serious eye damage/eye irritation**

No data available

##### **Respiratory or skin sensitization**

No data available

##### **Germ cell mutagenicity**

Suspected of causing genetic defects.

##### **Carcinogenicity**

Presumed to have carcinogenic potential for humans

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2,6-Dinitrotoluene)

NTP: No ingredient 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 on OSHA's list of regulated carcinogens.

##### **Reproductive toxicity**

Suspected of damaging fertility.

##### **Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Aspiration hazard**

No data available

**11.2 Additional Information**

RTECS: XT1925000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Spleen. -

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**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish                      LC50 - Pimephales promelas (fathead minnow) - 17.2 - 50 mg/l - 96.0 h  
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates                      EC50 - Daphnia magna (Water flea) - 21.70 mg/l - 48 h  
Remarks: (ECOTOX Database)

Toxicity to algae                      EC50 - Desmodesmus subspicatus (green algae) - 11.00 - 20.00 mg/l - 72 h  
Remarks: (ECOTOX Database)

**12.2 Persistence and degradability**

Biodegradability                      Result: - According to the results of tests of biodegradability this product is not readily biodegradable.

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Endocrine disrupting properties**

No data available

**12.7 Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

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## SECTION 14: Transport information

### DOT (US)

UN number: 3454    Class: 6.1    Packing group: II  
Proper shipping name: Dinitrotoluenes, solid  
Reportable Quantity (RQ): 100 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  
Marine pollutant : yes

### IATA

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

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## SECTION 15: Regulatory information

### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2,6-Dinitrotoluene	606-20-2	100	100

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

2,6-Dinitrotoluene	606-20-2	>= 90 - <= 100 %
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### US State Regulations

#### Massachusetts Right To Know



2,6-Dinitrotoluene

606-20-2

**Pennsylvania Right To Know**

2,6-Dinitrotoluene

606-20-2

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

WARNING: This product can expose you to chemicals including 2,6-Dinitrotoluene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The ingredients of this product are reported in the following inventories:**

TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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**SECTION 16: Other information**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

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