

## SAFETY DATA SHEET

Revision Date 14-Feb-2020

Revision Number 2

### 1. Identification

**Product Name** 2-Chloro-4-nitrotoluene

**Cat No. :** B23542

**CAS-No** 121-86-8  
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                                  |            |
|--------------------------------------------------|------------|
| Acute oral toxicity                              | Category 4 |
| Acute dermal toxicity                            | Category 4 |
| Acute Inhalation Toxicity - Dusts and Mists      | Category 4 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

**Label Elements**

**Signal Word**

Warning

**Hazard Statements**

Causes skin irritation  
Causes serious eye irritation

May cause respiratory irritation  
Harmful if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
Call a POISON CENTER or doctor/physician if you feel unwell  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse

**Eyes**

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/attention

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

**Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component                           | CAS-No   | Weight % |
|-------------------------------------|----------|----------|
| Benzene, 2-chloro-1-methyl-4-nitro- | 121-86-8 | 99       |

### 4. First-aid measures

|                     |                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.              |
| <b>Skin Contact</b> | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. |
| <b>Inhalation</b>   | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.   |
| <b>Ingestion</b>    | Clean mouth with water. Get medical attention.                                                                               |

|                                            |                           |
|--------------------------------------------|---------------------------|
| <b>Most important symptoms and effects</b> | No information available. |
| <b>Notes to Physician</b>                  | Treat symptomatically     |

## 5. Fire-fighting measures

|                                         |                                                                              |
|-----------------------------------------|------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>     | Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                                     |
| <b>Flash Point</b>                      | > 150 °C / > 302 °F                                                          |
| <b>Method -</b>                         | No information available                                                     |
| <b>Autoignition Temperature</b>         | Not applicable 473 °C / 883.4 °F                                             |
| <b>Explosion Limits</b>                 |                                                                              |
| <b>Upper</b>                            | No data available                                                            |
| <b>Lower</b>                            | No data available                                                            |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                                     |
| <b>Sensitivity to Static Discharge</b>  | No information available                                                     |

### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen chloride gas.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
2

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                             |                                                                                                            |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Ensure adequate ventilation. Use personal protective equipment as required.                                |
| <b>Environmental Precautions</b>            | See Section 12 for additional Ecological Information.                                                      |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. |

## 7. Handling and storage

|                 |                                                                                                                                                                              |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.                                                   |
| <b>Storage</b>  | Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. |

## 8. Exposure controls / personal protection

|                             |                                                                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure Guidelines</b>  | This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies. |
| <b>Engineering Measures</b> | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations                                                      |

and safety showers are close to the workstation location.

### Personal Protective Equipment

|                                 |                                                                                                                                                                                                                                                   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye/face Protection</b>      | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.                                                                       |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                                                                                         |
| <b>Respiratory Protection</b>   | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

## 9. Physical and chemical properties

|                                               |                                  |
|-----------------------------------------------|----------------------------------|
| <b>Physical State</b>                         | Powder Solid                     |
| <b>Appearance</b>                             | Light yellow                     |
| <b>Odor</b>                                   | Odorless                         |
| <b>Odor Threshold</b>                         | No information available         |
| <b>pH</b>                                     | No information available         |
| <b>Melting Point/Range</b>                    | 61 - 64 °C / 141.8 - 147.2 °F    |
| <b>Boiling Point/Range</b>                    | 260 °C / 500 °F @ 760 mmHg       |
| <b>Flash Point</b>                            | > 150 °C / > 302 °F              |
| <b>Evaporation Rate</b>                       | Not applicable                   |
| <b>Flammability (solid,gas)</b>               | No information available         |
| <b>Flammability or explosive limits</b>       |                                  |
| Upper                                         | No data available                |
| Lower                                         | No data available                |
| <b>Vapor Pressure</b>                         | 3 mbar @ 100 °C                  |
| <b>Vapor Density</b>                          | Not applicable                   |
| <b>Specific Gravity</b>                       | No information available         |
| <b>Solubility</b>                             | No information available         |
| <b>Partition coefficient; n-octanol/water</b> | No data available                |
| <b>Autoignition Temperature</b>               | Not applicable 473 °C / 883.4 °F |
| <b>Decomposition Temperature</b>              | 320 °C                           |
| <b>Viscosity</b>                              | Not applicable                   |
| <b>Molecular Formula</b>                      | C7 H6 Cl N O2                    |
| <b>Molecular Weight</b>                       | 171.58                           |

## 10. Stability and reactivity

|                                         |                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                            |
| <b>Stability</b>                        | Stable.                                                                                               |
| <b>Conditions to Avoid</b>              | Incompatible products.                                                                                |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong bases                                                                 |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen chloride gas |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                                              |
| <b>Hazardous Reactions</b>              | None under normal processing.                                                                         |

## 11. Toxicological information

**Acute Toxicity****Product Information  
Component Information**

| Component                           | LD50 Oral                 | LD50 Dermal               | LC50 Inhalation                          |
|-------------------------------------|---------------------------|---------------------------|------------------------------------------|
| Benzene, 2-chloro-1-methyl-4-nitro- | LD50 = 3020 mg/kg ( Rat ) | LD50 > 2000 mg/kg ( Rat ) | LC50 > 528 mg/m <sup>3</sup> ( Rat ) 4 h |

**Toxicologically Synergistic Products** No information available**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Irritation** No information available**Sensitization** No information available**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                              | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------------------------------|----------|------------|------------|------------|------------|------------|
| Benzene,<br>2-chloro-1-methyl-4-nitro- | 121-86-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available**Reproductive Effects** No information available.**Developmental Effects** No information available.**Teratogenicity** No information available.**STOT - single exposure** Respiratory system**STOT - repeated exposure** None known**Aspiration hazard** No information available**Symptoms / effects, both acute and delayed** No information available**Endocrine Disruptor Information** No information available**Other Adverse Effects** The toxicological properties have not been fully investigated.**12. Ecological information****Ecotoxicity**

Do not empty into drains. .

| Component                              | Freshwater Algae                                | Freshwater Fish | Microtox                                        | Water Flea                             |
|----------------------------------------|-------------------------------------------------|-----------------|-------------------------------------------------|----------------------------------------|
| Benzene,<br>2-chloro-1-methyl-4-nitro- | EC50: = 9 mg/L, 4h<br>(Haematococcus pluvialis) | Not listed      | EC50 = 3.3 mg/L 5 min<br>EC50 = 3.9 mg/L 15 min | EC50: = 4 mg/L, 24h<br>(Daphnia magna) |

**Persistence and Degradability** Persistence is unlikely**Bioaccumulation/ Accumulation** No information available.**Mobility** . Will likely be mobile in the environment due to its water solubility.

| Component                           | log Pow |
|-------------------------------------|---------|
| Benzene, 2-chloro-1-methyl-4-nitro- | 3.2     |

**13. Disposal considerations****Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a

hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No UN3457  
Hazard Class 6.1  
Packing Group III

### TDG

UN-No UN3457  
Hazard Class 6.1  
Packing Group III

### IATA

UN-No UN3457  
Proper Shipping Name CHLORONITROTOLUENES, SOLID  
Hazard Class 6.1  
Packing Group III

### IMDG/IMO

UN-No UN3457  
Proper Shipping Name CHLORONITROTOLUENES, SOLID  
Hazard Class 6.1  
Packing Group III

## 15. Regulatory information

### United States of America Inventory

| Component                              | CAS-No   | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|----------------------------------------|----------|------|-----------------------------------------------|-----------------------------|
| Benzene,<br>2-chloro-1-methyl-4-nitro- | 121-86-8 | X    | INACTIVE                                      | -                           |

#### Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component                              | CAS-No   | DSL | NDSL | EINECS    | PICCS | ENCS | AICS | IECSC | KECL |
|----------------------------------------|----------|-----|------|-----------|-------|------|------|-------|------|
| Benzene,<br>2-chloro-1-methyl-4-nitro- | 121-86-8 | -   | X    | 204-501-7 | X     | X    | -    | X     | -    |

### U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations** Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Health, Safety and Environmental Department  
Email: tech@alfa.com  
www.alfa.com

**Revision Date** 14-Feb-2020

**Print Date** 14-Feb-2020

**Revision Summary** SDS authoring systems update, replaces ChemGes SDS No. 121-86-8/2.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**