

## Chemical Safety Data Sheet MSDS / SDS

**3-Nitrobenzenesulfonyl chloride**

Revision Date:2026-06-06 Revision Number:1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : 3-Nitrobenzenesulfonyl chloride  
CBnumber : CB4454678  
CAS : 121-51-7  
EINECS Number : 204-476-2  
Synonyms : 3-nitrobenzenesulfonyl chloride,3-nitrobenzenesulphonyl chloride

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P501 Dispose of contents/container to.....  
P406 Store in corrosive resistant/... container with a resistant inner liner.  
P405 Store locked up.  
P390 Absorb spillage to prevent material damage.  
P264 Wash skin thoroughly after handling.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P234 Keep only in original container.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continuerinsing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

#### **Hazard statements**

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: 3-Nitrobenzenesulfonyl chloride
Synonyms	: 3-nitrobenzenesulfonyl chloride,3-nitrobenzenesulphonyl chloride
CAS	: 121-51-7
EC number	: 204-476-2
MF	: C6H4ClNO4S
MW	: 221.62

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## SECTION 4: First aid measures

### **4.1 Description of first-aid measures**

#### **General advice**

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

After inhalation: fresh air. Call in physician.

#### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### **In case of eye contact**

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

#### **If swallowed**

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### **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) and/or in section 11

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

No data available

### **4.4 Notes to physician**

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

Foam Water

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

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Sulfur oxides

Hydrogen chloride gas

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

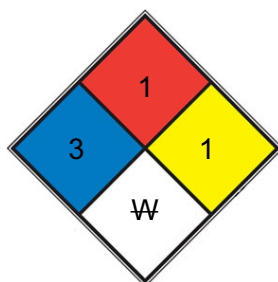
Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### NFPA 704



■ HEALTH	3	Short exposure could cause serious temporary or moderate residual injury (e.g. <a href="#">liquid hydrogen</a> , <a href="#">sulfuric acid</a> , <a href="#">calcium hypochlorite</a> , hexafluorosilicic acid)
■ FIRE	1	Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. <a href="#">mineral oil</a> , ammonia)
■ REACT	1	Normally stable, but can become unstable at elevated temperatures and pressures (e.g. <a href="#">propene</a> )
□ SPEC. HAZ.	W	

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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 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

For precautions see section 2.2.

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

#### Storage conditions

Tightly closed. Dry.

Moisture sensitive.

#### Storage class

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 L

### Body Protection

protective clothing

### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

a) Physical state	crystalline
b) Color	light yellow
c) Odor	No data available
d) Melting point/freezing point	Melting point/range: 61 - 62 °C - lit.
e) Initial boiling point and boiling range	approximate 341°C
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	> 110 °C
i) Autoignition temperature	No data available
j) Decomposition temperature	No data available

k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	Decomposes
n) Partition coefficient n-octanol/water	No data available
o) Vapor pressure	No data available
p) Density	1.602 (estimate)
Relative density	1.602 (estimate)
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.2 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

Water

Bases

### 10.3 Conditions to avoid

Avoid moisture.

Strong heating.

### 10.4 Incompatible materials

No data available

### 10.5 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath

Symptoms: Possible damages:, Lung edema

Dermal: No data available

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

Remarks: Causes skin burns.

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

Remarks: Causes serious eye damage.

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

Classified based on available data. For more details, see section 2

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

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

Classified based on available data. For more details, see section 2

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

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

### **11.2 Additional Information**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

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

Decomposition of the substance with tissue moisture.

The following applies to aromatic nitro compounds in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmias, drop in blood pressure, dyspnoea, and spasms; principal sign: cyanosis (blue discolouration of the blood).

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12: Ecological information**

### **12.1 Toxicity**

No data available

### **12.2 Persistence and degradability**

No data available

### **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**

Discharge into the environment must be avoided.

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## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## **SECTION 14: Transport information**

### **14.1 UN number**

ADR/RID: 3261

IMDG: 3261

IATA-DGR: 3261

### **14.2 UN proper shipping name**

ADR/RID: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (3-nitrobenzenesulphonyl chloride)

IMDG: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (3-nitrobenzenesulphonyl chloride)

IATA-DGR: Corrosive solid, acidic, organic, n.o.s. (3-nitrobenzenesulphonyl chloride)

### **14.3 Transport hazard class(es)**

ADR/RID: 8

IMDG: 8

IATA-DGR: 8

### **14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA-DGR: II

### **14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

## 14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

## 14.7 Incompatible materials

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# SECTION 15: Regulatory information

## 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

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# SECTION 16: Other information

## Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.