

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3-Nitroaniline

Product Number : N9829  
Brand : Aldrich

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

No known OSHA hazards

##### Target Organs

Blood, Heart, Kidney, Liver

##### GHS Classification

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Dermal (Category 3)

Acute toxicity, Oral (Category 4)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 4)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H311 + H331

Toxic in contact with skin or if inhaled

H400

Very toxic to aquatic life.

H413

May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing.

P311

Call a POISON CENTER or doctor/ physician.

##### HMIS Classification

Health hazard:

2

**Flammability:** 1  
**Physical hazards:** 0

**NFPA Rating**

**Health hazard:** 2  
**Fire:** 1  
**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes** May cause eye irritation.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C<sub>6</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub>  
Molecular Weight : 138.12 g/mol

Component	Concentration
<b>m-Nitroaniline</b>	
CAS-No. 99-09-2	-
EC-No. 202-729-1	
Index-No. 612-012-00-9	

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**4. FIRST AID MEASURES**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

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

**In case of skin contact**

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

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

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

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**5. FIREFIGHTING 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 firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, 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.

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## 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.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
m-Nitroaniline	99-09-2	TWA	5 ppm 19 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
Remarks	Skin contact does contribute to exposure.			
		TWA	2 ppm 8 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin contact does contribute to exposure.			

### 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.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: > 480 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

#### Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: > 30 min

Material tested: Dermatril® (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 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.

#### 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

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.

#### Hygiene measures

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

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

Form crystalline

Colour yellow

#### Safety data

pH no data available

Melting point/freezing point Melting point/range: 111 - 114 °C (232 - 237 °F) - lit.

Boiling point 306.0 °C (582.8 °F)

Flash point 196.0 °C (384.8 °F) - closed cup

Ignition temperature no data available

Autoignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Vapour pressure no data available

Density 0.90 g/cm<sup>3</sup> at 25.00 °C (77.00 °F)

Water solubility no data available

Partition coefficient: log Pow: 1.37

n-octanol/water

log Pow: 5

Relative vapour density no data available

Odour no data available

Odour Threshold no data available

Evaporation rate no data available

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### 10. STABILITY AND REACTIVITY

#### Chemical stability

Stable under recommended storage conditions.

#### Possibility of hazardous reactions

no data available

#### Conditions to avoid

no data available

#### Materials to avoid

acids, Acid chlorides, Acid anhydrides, Chloroformates, Strong oxidizing agents

#### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

Other decomposition products - no data available

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### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity****Oral LD50**

LD50 Oral - rat - 535.0 mg/kg

**Inhalation LC50****Dermal LD50****Other information on acute toxicity**

no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

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.

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

**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)**

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	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., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**  
RTECS: BY6825000

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## 12. ECOLOGICAL INFORMATION

### Toxicity

Toxicity to fish LC50 - other fish - 81.2 mg/l - 96.0 h

### Persistence and degradability

no data available

### Bioaccumulative potential

Bioaccumulation Danio rerio (zebra fish) - 96 h  
Bioconcentration factor (BCF): 8.3

### Mobility in soil

no data available

### PBT and vPvB assessment

no data available

### Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

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## 13. DISPOSAL CONSIDERATIONS

### Product

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

### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 1661 Class: 6.1 Packing group: II  
Proper shipping name: Nitroanilines  
Marine pollutant: No  
Poison Inhalation Hazard: No

### IMDG

UN number: 1661 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: NITROANILINES (o-, m-, p-)  
Marine pollutant: No

### IATA

UN number: 1661 Class: 6.1 Packing group: II  
Proper shipping name: Nitroanilines

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## 15. REGULATORY INFORMATION

### OSHA Hazards

No known OSHA hazards

### 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

No SARA Hazards

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

m-Nitroaniline

CAS-No.  
99-09-2

Revision Date

**New Jersey Right To Know Components**

m-Nitroaniline

CAS-No.  
99-09-2

Revision Date

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION****Further information**

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