

**SIGMA-ALDRICH****Material Safety Data Sheet**Version 3.0  
Revision Date 01/05/2009  
Print Date 09/14/2010**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : 2-Nitroaniline

Product Number : 72660  
Brand : Fluka

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

Telephone : +18003255832  
Fax : +18003255052  
Emergency Phone # : (314) 776-6555

**2. 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

CAS-No.	EC-No.	Index-No.	Concentration
<b>o-Nitroaniline</b>			
88-74-4	201-855-4	612-012-00-9	-

**3. HAZARDS IDENTIFICATION****Emergency Overview****OSHA Hazards**

Toxic by inhalation.

**Target Organs**

Heart, Lungs, Liver, Blood

**HMIS Classification****Health Hazard:** 3**Chronic Health Hazard:** \***Flammability:** 1**Physical hazards:** 0**NFPA Rating****Health Hazard:** 3**Fire:** 1**Reactivity Hazard:** 0**Potential Health Effects****Inhalation** Toxic if inhaled. May cause respiratory tract irritation.**Skin** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes**  
**Ingestion**

May cause eye irritation.  
May be harmful if swallowed.

#### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous 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**

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

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

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

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point 167.0 °C (332.6 °F) - closed cup

Ignition temperature no data available

**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.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**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 for cleaning up**

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

#### 7. HANDLING AND STORAGE

**Handling**

Avoid contact with skin and eyes. 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.

Light sensitive.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
o-Nitroaniline	88-74-4	TWA	5 ppm 19 mg/m3	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.
Remarks	Skin contact does contribute to exposure.				
		TWA	2 ppm 8 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
	Skin contact does contribute to exposure.				

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. 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.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form crystalline

### Safety data

pH no data available

Melting point 70 - 73 °C (158 - 163 °F)  
70 - 72 °C (158 - 162 °F)

Boiling point 284 °C (543 °F)

Flash point 167.0 °C (332.6 °F) - closed cup

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Water solubility no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 1,600 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Convulsions or effect on seizure threshold.

LC50 Inhalation - rat - 4 h - > 2,529 mg/m<sup>3</sup>

Remarks: Respiratory disorder Nutritional and Gross Metabolic:Weight loss or decreased weight gain. Nutritional and Gross Metabolic:Changes in:Body temperature decrease.

### Irritation and corrosion

no data available

### Sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

### Chronic exposure

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.

### 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.

### Potential Health Effects

<b>Inhalation</b>	Toxic if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Target Organs</b>	Heart, Lungs, Liver, Blood,



**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**

Acute Health Hazard

**Massachusetts Right To Know Components**

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

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
o-Nitroaniline	88-74-4	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
o-Nitroaniline	88-74-4	

**California Prop. 65 Components**

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

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

Copyright 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.