

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : *N*<sub>ω</sub>Nitro-L-arginine benzyl ester *p*-toluenesulfonate salt

Product Number : N2644  
Brand : Sigma

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

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C<sub>13</sub>H<sub>19</sub>N<sub>5</sub>O<sub>4</sub> · C<sub>7</sub>H<sub>8</sub>O<sub>3</sub>S  
Molecular Weight : 481.52 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b><i>N</i><sub>ω</sub>Nitro-L-arginine benzyl ester <i>p</i>-toluenesulfonate</b>			
7672-27-7	-	-	-

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

Harmful by ingestion.

**HMIS Classification**

**Health Hazard:** 1  
**Flammability:** 0  
**Physical hazards:** 0

**NFPA Rating**

**Health Hazard:** 1  
**Fire:** 0  
**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** Harmful if swallowed.

#### 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. 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 no data available

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**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

**Environmental precautions**

Do not let product enter drains.

**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 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.

Recommended storage temperature: -20 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### 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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. For prolonged or repeated contact use protective gloves.

#### Eye protection

Safety glasses with side-shields conforming to EN166

#### Skin and body protection

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

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form                      solid

### Safety data

pH                              no data available

Melting point              no data available

Boiling point                no data available

Flash point                 no data available

Ignition temperature      no data available

Lower explosion limit      no data available

Upper explosion limit      no data available

Water solubility            no data available

Partition coefficient:      log Pow: -0.645  
n-octanol/water

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents, acids

### Hazardous decomposition products

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

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Irritation and corrosion

no data available

### Sensitisation

no data available

### 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

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

### Potential Health Effects

<b>Inhalation</b>	May be harmful 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>	Harmful if swallowed.

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**15. REGULATORY INFORMATION****OSHA Hazards**

Harmful by ingestion.

**DSL Status**

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

NωNitro-L-arginine benzyl ester p-toluenesulfonate	CAS-No. 7672-27-7
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**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**

Acute Health Hazard

**Massachusetts Right To Know Components**

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

**Pennsylvania Right To Know Components**

NωNitro-L-arginine benzyl ester p-toluenesulfonate	CAS-No. 7672-27-7	Revision Date
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**New Jersey Right To Know Components**

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**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**

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