

## SAFETY DATA SHEET

Version 4.4  
Revision Date 07/03/2014  
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1. PRODUCT AND COMPANY IDENTIFICATION

## 1.1 Product identifiers

Product name : Ethylenediamine tetrakis(ethoxylate-*block*-propoxylate) tetrol

Product Number : 435546  
Brand : Aldrich

CAS-No. : 26316-40-5

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 1.3 Details of the supplier of the safety data sheet

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

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

## 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

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2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Eye irritation (Category 2A), H319  
Skin sensitisation (Category 1), H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)

H317 : May cause an allergic skin reaction.  
H319 : Causes serious eye irritation.

Precautionary statement(s)

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 : Wash skin thoroughly after handling.  
P272 : Contaminated work clothing should not be allowed out of the workplace.  
P280 : Wear protective gloves/ eye protection/ face protection.  
P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 : Specific treatment (see supplemental first aid instructions on this label).  
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313  
P363  
P501

If eye irritation persists: Get medical advice/ attention.  
Wash contaminated clothing before reuse.  
Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms : Tetronic 90R4

Formula :  $(C_3H_6O \cdot C_2H_8N_2 \cdot C_2H_4O)_x$   
CAS-No. : 26316-40-5

#### Hazardous components

Component	Classification	Concentration
<b>Ethylenediamine tetrakis(ethoxylate-block-propoxylate) tetrol</b>		
	Eye Irrit. 2A; Skin Sens. 1; H317, H319	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of 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. 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.

### 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 2.2) and/or in section 11

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

no data available

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.  
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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.  
For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

##### Eye/face 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 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.

##### 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.

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

##### Control of environmental exposure

Do not let product enter drains.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |                    |  |
|--------------------|--|
| a) Appearance      | Form: viscous liquid<br>Colour: colourless |
| b) Odour           | Ammonia odor                               |
| c) Odour Threshold | no data available                          |

d) pH	no data available
e) Melting point/freezing point	Melting point/range: 21 °C (70 °F)
f) Initial boiling point and boiling range	no data available
g) Flash point	> 250 °C (> 482 °F) - closed cup
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.05 g/cm <sup>3</sup> at 25 °C (77 °F)
n) Water solubility	completely miscible
o) Partition coefficient: n-octanol/water	log Pow: 0.3 - 1.5 at 23 °C (73 °F)
p) Auto-ignition temperature	305 °C (581 °F)
q) Decomposition temperature	235 °C (455 °F) -
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

## 9.2 Other safety information

Surface tension	63.17 mN/m at 20 °C (68 °F)
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - male and female - > 5,000 mg/kg

Inhalation: no data available

LD50 Dermal - rabbit - male and female - > 5,000 mg/kg

no data available

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

Skin - rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

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

Eyes - rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

#### **Respiratory or skin sensitisation**

- mouse

Result: May cause sensitisation by skin contact.

(OECD Test Guideline 429)

#### **Germ cell mutagenicity**

Ames test

S. typhimurium

Result: negative

#### **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

Reproductive toxicity - rat - male and female - Oral

No adverse effect has been observed in chronic toxicity tests.

no data available

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

no data available

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

no data available

#### **Aspiration hazard**

no data available

#### **Additional Information**

RTECS: Not available

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

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## **12. ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish                      static test LC50 - Pimephales promelas (fathead minnow) - 25,600 mg/l - 96 h  
(OECD Test Guideline 203)

Toxicity to daphnia and              static test EC50 - Daphnia magna (Water flea) - 103 mg/l - 48 h  
other aquatic                              (OECD Test Guideline 202)

invertebrates

Toxicity to algae                      static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h  
(OECD Test Guideline 201)

Toxicity to bacteria                      Respiration inhibition - Sludge Treatment - > 10,000 mg/l - 3 h

#### 12.2 Persistence and degradability

Biodegradability                      aerobic - Exposure time 28 d  
Result: 2 % - Not readily biodegradable.  
(Directive 67/548/EEC Annex V, C.4.D.)

#### 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 Other adverse effects

no data available

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### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

##### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

##### Contaminated packaging

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### DOT (US)

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

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### 15. REGULATORY INFORMATION

#### 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

	CAS-No.	Revision Date
Ethylenediamine tetrakis(ethoxylate-block-propoxylate) tetrol	26316-40-5	

#### New Jersey Right To Know Components

	CAS-No.	Revision Date
Ethylenediamine tetrakis(ethoxylate-block-propoxylate) tetrol	26316-40-5	

**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****Full text of H-Statements referred to under sections 2 and 3.**

Eye Irrit.	Eye irritation
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
Skin Sens.	Skin sensitisation

**HMIS Rating**

Health hazard:	2
Chronic Health Hazard:	
Flammability:	1
Physical Hazard	0

**NFPA Rating**

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

**Further information**

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**Preparation Information**

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Product Safety – Americas Region  
1-800-521-8956

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