

## Safety Data Sheet

according to UK REACH Regulation

### Tris(1-aziridinyl)phosphine oxide (TEPA)

Revision date: 27.02.2024

Product code: PS339

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#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Tris(1-aziridinyl)phosphine oxide (TEPA)

##### Further trade names

TEPA

Substance name: Tris(1-aziridinyl)phosphine oxide (TEPA)  
CAS No: 545-55-1

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

##### Use of the substance/mixture

Reference standard for analysis.

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

Company name: WITEGA Laboratorien Berlin-Adlershof GmbH  
Street: James-Franck-Strasse 4  
Place: D-12489 Berlin  
Telephone: +493063922001      Telefax: +493063922007  
E-mail: witega@witega.de  
Internet: www.witega.de

##### 1.4. Emergency telephone number:

+493063922001

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

##### GB CLP Regulation

Skin Irrit. 2; H315  
Eye Irrit. 2; H319  
STOT SE 3; H335  
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

##### GB CLP Regulation

Signal word: Warning

Pictograms:



##### Hazard statements

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

##### Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P262 Do not get in eyes, on skin, or on clothing.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C6H12N3OP

Molecular weight: 173.15 g/mol

#### Relevant ingredients

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
545-55-1	Tris(1-aziridinyl)phosphine oxide (TEPA)			100 %
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2; H315 H319 H335 H411			

Full text of H and EUH statements: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

##### After contact with skin

Remove contaminated, saturated clothing immediately. Subsequently wash off with: Water and soap

##### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Get immediate medical advice/attention.

Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps.

#### 4.2. Most important symptoms and effects, both acute and delayed

No data available

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Water spray jet. Foam. Dry extinguishing powder. Carbon dioxide (CO2).

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

In case of fire may be liberated: Pyrolysis products, toxic. In case of fire and/or explosion do not breathe fumes.

#### 5.3. Advice for firefighters

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In case of fire: Wear self-contained breathing apparatus.

#### SECTION 6: Accidental release measures

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

###### General advice

Use personal protection equipment. Do not breathe gas/fumes/vapour/spray.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

##### 6.3. Methods and material for containment and cleaning up

###### Other information

Take up dust-free and set down dust-free.

##### 6.4. Reference to other sections

Disposal: see section 13

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

###### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

###### Advice on general occupational hygiene

Use personal protection equipment.

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

###### Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Avoid: UV-radiation/sunlight

###### Further information on storage conditions

storage temperature: 2-8°C

##### 7.3. Specific end use(s)

none

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

##### 8.2. Exposure controls

###### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

###### Individual protection measures, such as personal protective equipment

###### Eye/face protection

Eye glasses with side protection

###### Hand protection

Wear suitable gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

###### Skin protection

lab coat

###### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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#### SECTION 9: Physical and chemical properties

##### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	colourless	
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Water solubility:		No data available
Solubility in other solvents		
No data available		
Partition coefficient n-octanol/water:		No data available
Vapour pressure:		No data available
Density:		No data available
Relative vapour density:		No data available

##### 9.2. Other information

###### Information with regard to physical hazard classes

Explosive properties	
No data available	
Self-ignition temperature	
Solid:	No data available
Gas:	No data available

###### Other safety characteristics

Evaporation rate:	No data available
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###### Further Information

none

#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

Reacts with : Oxidising agent, Alkali (lye), Etchant and acids

##### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

##### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

##### 10.4. Conditions to avoid

Do not expose to temperatures exceeding 50 °C/122 °F.

##### 10.5. Incompatible materials

Oxidising agent, Alkali (lye), Etchant and acids

##### 10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic.

#### SECTION 11: Toxicological information

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#### 11.1. Information on hazard classes as defined in GB CLP Regulation

##### **Acute toxicity**

Based on available data, the classification criteria are not met.

##### **Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye irritation.

##### **Sensitising effects**

Based on available data, the classification criteria are not met.

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

##### **STOT-single exposure**

May cause respiratory irritation. (Tris(1-aziridinyl)phosphine oxide (TEPA))

##### **STOT-repeated exposure**

Based on available data, the classification criteria are not met.

##### **Aspiration hazard**

Based on available data, the classification criteria are not met.

##### **Specific effects in experiment on an animal**

No data available

## SECTION 12: Ecological information

#### 12.1. Toxicity

Toxic to aquatic life with long lasting effects.

No data available

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of UK REACH.

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

#### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### **Disposal recommendations**

Dispose of waste according to applicable legislation.

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

##### **Contaminated packaging**

This material and its container must be disposed of as hazardous waste.

## SECTION 14: Transport information

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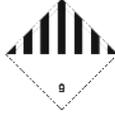
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#### Land transport (ADR/RID)

**14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**  
Hazard label:

UN 3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
9  
III  
9



Classification code: M6  
Special Provisions: 274 335 375 601  
Limited quantity: 5 L  
Excepted quantity: E1  
Transport category: 3  
Hazard No: 90  
Tunnel restriction code: -

#### Inland waterways transport (ADN)

**14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**  
Hazard label:

UN 3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
9  
III  
9



Classification code: M6  
Special Provisions: 274 335 375 601  
Limited quantity: 5 L  
Excepted quantity: E1

#### Marine transport (IMDG)

**14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**  
Hazard label:

UN 3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
9  
III  
9



Special Provisions: 274 335 969  
Limited quantity: 5 L  
Excepted quantity: E1  
EmS: F-A, S-F

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**  
Hazard label:

UN 3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
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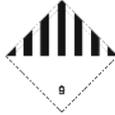
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Special Provisions:	A97 A158 A197 A215
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y964
Excepted quantity:	E1
IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

#### **14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes



#### **14.6. Special precautions for user**

No data available

#### **14.7. Maritime transport in bulk according to IMO instruments**

No data available

### SECTION 15: Regulatory information

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

##### **EU regulatory information**

Restrictions on use (REACH, annex XVII):  
Entry 7

##### **National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

#### **15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### **Abbreviations and acronyms**

Skin Irrit: Skin irritation  
Eye Irrit: Eye irritation  
STOT SE: Specific target organ toxicity - single exposure  
Aquatic Chronic: Chronic aquatic hazard

#### **Relevant H and EUH statements (number and full text)**

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

#### **Further Information**

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship. The substances are only for

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R&D. Do not use as a drug, in household or other applications.