



## **SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

### **1.1 Product identifier**

Product Identifier : Beta-Zearalanol  
Product Number : Z008  
CAS Number : [42422-68-4]  
EC Number : [636-982-8]  
REACH Registration Number : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

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

Identified Uses : For research use only - restricted to professional users.  
Uses Advised Against : Not for human or animal use

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

Company : TOKU-E Company  
4112 Bakerview Spur  
Bellingham, WA 98226  
Phone Number : (360) 734-1789  
E-mail Address : info@toku-e.com  
Safety Data Sheet Issued by : TOKU-E Company (USA)

### **1.4 Emergency telephone number**

Emergency Phone Number (Internat.) : +1 (352) 353-3500 (INFOTRAC, 24-Hour Number)  
Emergency Phone Number (US Only) : 1 (800) 535-5053 (INFOTRAC, 24-Hour Number)

## **SECTION 2: HAZARDS IDENTIFICATION**

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

#### **Classification according to Regulation (EC) No. 1272/2008**

Skin Corrosion/Irritation (Category 2) H315  
Serious eye damage/irritation (Category 2A) H319  
Specific Target Organ Toxicity (Single Exposure) Respiratory tract irritation (Category 3) H335  
Toxic to Reproduction (Category 1B) H360  
For the full text of the H-Statements mentioned in this section, see Section 16.

### **2.2 Label elements**

#### **Labelling according to Regulation (EC) No. 1272/2008**

##### **Hazard Pictogram(s):**



**Signal Word:** Danger

##### **Hazard Statement(s)**

H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H360 May damage fertility or the unborn child

### Precautionary Statement(s)

P264	Wash hands/skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/soap
P321	Specific treatment, see applicable response statements on this label
P332+P313	IF SKIN irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P305+P351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P261	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed
P405	Store locked up.
P501	Dispose of contents/container in accordance with governmental regulation
P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P308+P313	IF exposed or concerned: Get medical advice/attention.

### Supplemental Hazard Information

No data available

### 2.3 Other hazards

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonym(s)	: B-Zearalanol, Beta-Zeranol, Taleranol (4S,8S)-8,16,18-trihydroxy-4-methyl-3-oxabicyclo[12.4.0]octadeca-1(14),15,17-trien-2-one
Formula	: C <sub>18</sub> H <sub>26</sub> O <sub>5</sub>
Molecular weight	: 322.4 g/mol

### Hazardous ingredients according to Regulation (EC) No. 1272/2008

Component	Classification	Concentration
<b>Beta-Zearalanol</b>		
CAS Number [42422-68-4]	Skin Irrit. 2 H317 Eye Irrit. 2 H319	≤ 100%
EC Number [636-982-8]	STOT SE 3 (Resp) H335 Rep. 1B H360	

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

## SECTION 4: FIRST-AID MEASURES

### 4.1 Description of first-aid measures

#### General information

Consult a doctor/physician if exposed - additional medical care may be required. Show this safety data sheet to the medical provider.

#### If inhaled

If inhaled, move to fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash skin thoroughly with soap and water. Remove any contaminated clothing. Consult a physician.

#### In case of eye contact

Flush eye with water. After initial flush, remove any contact lenses and continue flushing for at least 15 minutes.

**If swallowed**

Rinse mouth with water. Immediately call a doctor, physician, or poison control center. Never give anything by mouth to an unconscious person.

**Self-protection of the first aider**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent the spread of contamination.

**4.2 Most important symptoms/effects, 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

**SECTION 5: FIRE-FIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Select fire fighting media appropriate to the other materials involved in the fire.

**Unsuitable extinguishing media**

No data available

**5.2 Special hazards arising from the substance or mixture****Hazardous Combustion Products**

No data available

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus if necessary.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Consult the safety measures listed in Section 7 and 8. Use personal protective equipment. Avoid breathing dust, vapors, mist or gas. Avoid direct contact with spilled substances. Ensure adequate ventilation. Avoid dust formation.

For personal protection see Section 8.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel.

**6.4 Reference to other sections**

Refer to section 8 for exposure control and personal protection. Refer to section 13 for disposal information.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes.

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

Keep container tightly closed in a dry and well-ventilated place. Protect from humidity. Protect from light. Recommended storage temperature: -20 °C. Protect from light.

**Incompatibilities:**

No data available

### 7.3 Specific end use(s)

Refer to section 1.2

## **SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION**

### 8.1 Control parameters

#### **Components with workplace control parameters:**

No OEL data available

### 8.2 Exposure controls

#### **Appropriate engineering controls:**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

#### **Personal Protective Equipment (PPE):**

##### **Respiratory protection**

Wear respiratory protection. Use type N95 (US) or type P1 (EN 143) dust masks as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal techniques 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the selected EN 374 derived from it.

##### **Eye/Face protection**

Wear eye protection. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

##### **Body protection**

Wear protective clothing. The type of protective equipment must be selected according to the concentration of the dangerous substance at the specific work place.

##### **Environmental exposure controls**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

Appearance	:	White solid
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	No data available
Melting Point/Freezing Point	:	No data available
Initial Boiling Point and Range	:	No data available
Flash Point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/Lower Flammability or Explosive Limits	:	No data available
Vapor Pressure	:	No data available
Vapor Density	:	No data available
Relative Density	:	No data available
Solubility(ies)	:	Soluble in ethanol, methanol, DMF or DMSO.
Partition Coefficient: n-octanol/water	:	No data available

Auto-Ignition Temperature : No data available  
Decomposition Temperature : No data available  
Viscosity : No data available  
Explosive Properties : No data available  
Oxidizing Properties : No data available

## 9.2 Other information

No additional information relevant to safe use of the substance.

## **SECTION 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  
Exposure to moisture

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

No data available

See Section 5 for hazardous combustion products.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### 11.1 Information on toxicological effects

#### **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**

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 the International Agency for Research on Cancer Monograph.

#### **Reproductive Toxicity**

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: No data available

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

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

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other adverse effects**

No data available

In the absence of complete ecological information, treat product as environmentally hazardous.

Use proper storage, handling, and disposal to prevent unintentional release into the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable products to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Avoid disposal of material in drains or sewers. Waste material must be disposed of in accordance with the Directive on Waste 2008/98/EC as well as other national and local regulations.

**Contaminated Packaging**

Dispose of as unused product.

**SECTION 14: TRANSPORT INFORMATION**

		ADR/RID	IMDG	IATA
14.1	UN Number	-	-	-
14.2	UN Proper Shipping Name	Not Dangerous Goods	Not Dangerous Goods	Not Dangerous Goods
14.3	Transport Hazard Class(es)	-	-	-
14.4	Packing Group	-	-	-
14.5	Environmental Hazards	No	Marine Pollutant: No	No

## 14.6 Special precautions for user

### Further Information

No data available

## 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

## SECTION 15: REGULATORY INFORMATION

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

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

#### Authorizations and/or restrictions on use

Restricted to professional users.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16: OTHER INFORMATION

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

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child

### Abbreviations and acronyms

ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Road (ADR) and Rail (RID)

CAS No: Chemical Abstracts Service number

EC: European Commission

EC No: European Commission number

EHS: Environmentally Hazardous Substance

EU: European Union

H-Statement: Hazard Statement

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IBC: International Bulk Chemical

IMDG: International Maritime Dangerous Goods Code

LC50: Lethal concentration, 50%

LD50: Median Lethal dose

MARPOL 73/78: International Convention for the Prevention of Pollution from Ships

NIOSH: National Institute for Occupation Safety and Health

OEL: Occupational Exposure Limit

PBT: Persistent, Bioaccumulative and Toxic

REACH: Registration, Evaluation, Authorisation and restrictions of Chemicals

RTECS: Registry of Toxic Effects of Chemical Substances

SDS: Safety Data Sheet

UN: United Nations

vPvB: Very Persistent and Very Bioaccumulative

### Further information

Revision Date: 2023-05-10

The above information is based upon the present state of our knowledge and is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information is believed to be correct but does not purport to be all inclusive. It does not represent any guarantees of the properties of the product. TOKU-E Company shall not be held liable for damage or injury resulting from contact, handling, or storage of the above product.