



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

### **1.1 Product identifier**

Product Identifier : Nitrocefın  
Product Number : N005  
CAS Number : [41906-86-9]

### **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**

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

Skin corrosion/irritation (Category 2), H315  
Skin sensitization (Category 1) (H317)  
Serious eye damage/Eye irritation (Category 1) (H318)  
For the full text of the H-Statements mentioned in this section, see Section 16.

### **2.2 GHS label elements, including precautionary statements**

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



**Signal Word:** Danger

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

H315 Causes skin irritation  
H317 May cause an allergic skin reaction  
H318 Causes serious eye damage

#### **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.  
P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.

P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.  
P501 Dispose of contents/container in accordance with governmental regulation  
P305+P351+ IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.

**2.3 Hazards otherwise not classified (HNOC) or not covered by GHS**  
None

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Synonym(s) : (6R)-3-[(1E)-2-(2,4-dinitrophenyl)ethenyl]-8-oxo 7R-[(2-thienylacetyl)amino]-5-thia-1 azabicyclo  
[4.2.0]oct-2-ene-carboxylic acid; Nitrocephin  
Formula : C<sub>21</sub>H<sub>16</sub>N<sub>4</sub>O<sub>8</sub>S<sub>2</sub>  
Molecular weight : 516.5 g/mol

**Hazardous components**

Component	Classification	Concentration
<b>Nitrocefin</b>		
CAS Number [41906-86-9]	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Dam. 1 H318	≤ 100%
EC Number [636-988-0]		

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.

**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**

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

**Unsuitable extinguishing media**

No data available

## 5.2 Special hazards arising from the substance or mixture

### Hazardous Combustion Products

Carbon and nitrogen oxides, sulfur oxides, hydrogen fluoride

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus if necessary.

## 5.4 Further information

No data available

## **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. 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. Keep in suitable, closed containers for disposal.

### 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. For precautionary statements see section 2.2

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

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

#### Incompatibilities:

Strong oxidizing agents

### 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:

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls:

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

#### Personal Protective Equipment (PPE):

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (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).

Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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.

#### **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**

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	:	Orange or yellow powder/lyophilized film (depends on Qty)
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	No data available
Melting Point/Freezing Point	:	167 - 169 °C (333 - 336 °F)
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)	:	55.1 ug/ml
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 safety information**

No data available

### **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**

Exposure to light.

#### 10.5 Incompatible materials

Strong oxidizing agents

#### 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**

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 the International Agency for Research on Cancer Monograph.

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 the National Toxicology Program.

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 the Occupational Health and Safety Association.

##### **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

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### 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.

##### **Contaminated Packaging**

Dispose of as unused product.

### **SECTION 14: TRANSPORT INFORMATION**

#### **DOT (US)**

Not Dangerous Goods

#### **IMDG**

Not Dangerous Goods

#### **IATA**

Not Dangerous Goods

#### **Additional transport information**

### **SECTION 15: REGULATORY INFORMATION**

#### **SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### **SARA 313 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

#### **SARA 311/312 Hazards**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 311/312.

#### **Massachusetts Right to Know**

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

#### **Pennsylvania Right to Know**

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

#### **New Jersey Right to Know**

No components are subject to the New Jersey Right to Know Act.

#### **California Prop. 65 Components**

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

### **SECTION 16: OTHER INFORMATION**

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

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage

**Further information**

Revision Date: 2023-04-03

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.