

Material Safety Data Sheet

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Version 1.1

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name CITRININ FROM PENICILLIUM CITRINUM
Product Number 00302

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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
CITRININ FROM PENICILLIUM CITRINUM	518-75-2	208-257-2	None

Formula C₁₃H₁₄O₅
Molecular Weight 250.25 AMU
Synonyms Citrinin *
(3R,4S)-4,6-Dihydro-8-hydroxy-3,4,5-trimethyl-6-o
xo-3H-2-benzopyran-7-carboxylic acid

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Toxic by inhalation, in contact with skin and if swallowed.
Limited evidence of a carcinogenic effect.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give
artificial respiration. If breathing is difficult, give oxygen.

AFTER EYE CONTACT

Assure adequate flushing of the eyes by separating the eyelids
with fingers.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is
conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or

appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.
Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Special Protective Measures: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	

Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: Sensitive to light.

Materials to Avoid: Strong oxidizing agents, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: DJ2275000

ACUTE TOXICITY

LD50
Intraperitoneal
Rat
50 MG/KG

LD50
Subcutaneous
Rat
67 MG/KG
Remarks: Lungs, Thorax, or Respiration:Dyspnea. Lungs, Thorax,
or Respiration:Respiratory stimulation. Blood:Other changes.

LD50
Oral
Mouse
112 mg/kg

LD50
Intraperitoneal
Mouse
35 MG/KG
Remarks: Lungs, Thorax, or Respiration:Respiratory stimulation.

LD50
Subcutaneous
Mouse
73 MG/KG

LD50
Oral

Rabbit
134 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity).
Gastrointestinal:Hypermotility, diarrhea. Kidney, Ureter,
Bladder:Changes in tubules (including acute renal failure, acute
tubular necrosis).

LD50
Intraperitoneal
Rabbit
50 MG/KG
Remarks: Behavioral:Somnolence (general depressed activity).
Kidney, Ureter, Bladder:Changes in tubules (including acute
renal failure, acute tubular necrosis).

LD50
Intravenous
Rabbit
19 MG/KG
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and
Taste):Eye:Miosis (pupillary constriction). Lungs, Thorax, or
Respiration:Dyspnea. Gastrointestinal:Changes in structure or
function of salivary glands.

LD50
Subcutaneous
Guinea pig
37 MG/KG
Remarks: Lungs, Thorax, or Respiration:Respiratory stimulation.

LD50
Oral
Hamster
75 mg/kg

LD50
Intraperitoneal
Hamster
66 MG/KG

IRRITATION DATA

Skin
Guinea pig
40 mg
24H
Remarks: Severe irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE

Symptoms of exposure may include burning sensation, coughing,
wheezing, laryngitis, shortness of breath, headache, nausea, and
vomiting. Can cause CNS depression. Exposure can cause: Nausea,
headache, and vomiting. Narcotic effect. Damage to the heart. To
the best of our knowledge, the chemical, physical, and
toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Multiple Routes: Harmful if swallowed, inhaled, or absorbed
through skin. High concentrations are extremely destructive to
tissues of the mucous membranes and upper respiratory tract,
eyes, and skin.

TARGET ORGAN INFORMATION

Damage to the heart. Kidneys. Nerves. Liver.

CHRONIC EXPOSURE - CARCINOGEN

Rat

Route of Application: Oral

Exposure Time: 60W

Result: Tumorigenic:Neoplastic by RTECS criteria. Kidney, Ureter, Bladder:Kidney tumors.

Rat

Route of Application: Oral

Exposure Time: 32W

Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Kidney, Ureter, Bladder:Kidney tumors.

IARC CARCINOGEN LIST

Rating: Group 3

CHRONIC EXPOSURE - MUTAGEN

Human

300 UMOL/L

Cell Type: HeLa cell

DNA inhibition

Rat

200 MG/L

Cell Type: fibroblast

DNA damage

Rat

100 MG/L

Cell Type: fibroblast

DNA inhibition

Hamster

30 UMOL/L

Cell Type: lung

Micronucleus test

Hamster

200 MG/L

Cell Type: ovary

DNA damage

Hamster

100 MG/L

Cell Type: ovary

DNA inhibition

CHRONIC EXPOSURE - TERATOGEN

Species: Rat

Dose: 30 MG/KG

Route of Application: Subcutaneous

Exposure Time: (8D PREG)

Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat
Dose: 35 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D PREG)
Result: Specific Developmental Abnormalities: Urogenital system.

Species: Rat
Dose: 35 MG/KG
Route of Application: Subcutaneous
Exposure Time: (12D PREG)
Result: Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Species: Rat
Dose: 35 MG/KG
Route of Application: Subcutaneous
Exposure Time: (15D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.

Species: Mouse
Dose: 20 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (10D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Mouse
Dose: 30 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (10D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Species: Rat
Dose: 35 MG/KG
Route of Application: Subcutaneous
Exposure Time: (10D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811

Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811
Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2811
Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: T

Toxic.

R-PHRASES: 23/24/25 40

Toxic by inhalation, in contact with skin and if swallowed.
Limited evidence of a carcinogenic effect.

S-PHRASES: 26 36/37/39 45

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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