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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

**1.1 Product Code:** 11428

Product Name: Deoxynivalenol

**Synonyms:** 12,13-epoxy-3a,7a,15-trihydroxy-trichothec-9-en-8-one; Vomitoxin; NSC 269144;

DON:

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

**Relevant identified uses:** For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: Cayman Chemical Company

1180 E. Ellsworth Rd. Ann Arbor, MI 48108

Web site address: www.caymanchem.com

Information: Cayman Chemical Company +1 (734)971-3335

1.4 Emergency telephone number:

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

CHEMTREC Outside USA and Canada: +1 (703)527-3887

### Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:

Acute Toxicity: Oral, Category 2

2.1.2 Classification according to Directive 1999/45/EC:

T+: Very Toxic Risk Phrases: R28

For full text of R- phrases: see SECTION 15.

2.2 Label Elements:

2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:



GHS Signal Word: Danger

GHS Hazard Phrases: H300: Fatal if swallowed. GHS Precaution Phrases:

P264: Wash {hands} thoroughly after handling.

**GHS Response Phrases:** 

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P330: Rinse mouth.

**GHS Storage and Disposal Phrases:** 

Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.2.2 Labeling according to Directive 1999/45/EC:





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2.3 Adverse Human Health Fatal if swallowed.

Effects and Symptoms: Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation or skin absorption. May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly

investigated.

## Section 3. Composition/Information on Ingredients

CAS#/ RTECS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	1	Risk Phrases/ GHS Classification
51481-10-8 YD0167000	Deoxynivalenol	100.0 %	610-668-0 NA	T+; R28 Acute Tox.(O) 2: H300

## Section 4. First Aid Measures

**Description of First Aid** 4.1

Measures:

In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained

personnel. Get immediate medical attention.

In Case of Skin

Contact:

Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before

reuse.

In Case of Eye

Contact:

Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes

examined and tested by medical personnel.

In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth

to an unconscious person. Get medical attention. Do NOT induce vomiting unless

Exposure may cause: gastrointestinal disturbance, vomiting, diarrhoea, nausea,

directed to do so by medical personnel.

4.2 Important Symptoms

and Effects, Both **Acute and Delayed:** 

dizziness, headache, anorexia.

## Section 5. Fire Fighting Measures

Suitable Extinguishing Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. 5.1

Media: Use water spray to cool fire-exposed containers.

Unsuitable A solid water stream may be inefficient.

**Extinguishing Media:** 

5.2 No data available. Flammable Properties

and Hazards:

Flash Pt: No data.

LEL: No data. **Explosive Limits:** UEL: No data.

**Autoignition Pt:** No data.

5.3 Fire Fighting As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH

Instructions: approved or equivalent), and full protective gear to prevent contact with skin and eyes.



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#### Section 6. Accidental Release Measures

**6.1 Protective Precautions,** Avoid raising and breathing dust, and provide adequate ventilation.

Protective Equipment As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or

and Emergency re

respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy

**Procedures:** rubber gloves).

**6.2 Environmental** Take steps to avoid release into the environment, if safe to do so.

Precautions:

**6.3** Methods and Material Contain spill and collect, as appropriate.

For Containment and

Transfer to a chemical waste container for disposal in accordance with local regulations.

Cleaning Up:

## Section 7. Handling and Storage

**7.1 Precautions To Be** Avoid breathing dust/fume/gas/mist/vapours/spray.

**Taken in Handling:** Avoid prolonged or repeated exposure.

**7.2** Precautions To Be Keep container tightly closed.

**Taken in Storing:** Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

#### 8.1 Exposure Parameters:

CAS#	Partial Chemical Name	Britain EH40	France VL	Europe
51481-10-8	Deoxynivalenol	No data.	No data.	No data.
CAS#	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
51481-10-8	Deoxynivalenol	No data.	No data.	No data.

#### 8.2 Exposure Controls:

8.2.1 Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to

(Ventilation etc.): control airborne levels below recommended exposure limits.

8.2.2 Personal protection equipment:

**Eye Protection:** Safety glasses

**Protective Gloves:** Compatible chemical-resistant gloves

Other Protective Lab coat

Clothing:

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Mainten Do not take internally.

ance Practices: Facilities storing or utilizing this material should be equipped with an eyewash and a

safety shower.

Wash thoroughly after handling.



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Section 9. Physical and Chemical Properties	Section 9.	Physical	and	Chemical	<b>Properties</b>
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9.1 Information on Basic Physical and Chemical Properties

[ ] Gas [ ] Liquid [X] Solid **Physical States:** 

A crystalline solid **Appearance and Odor:** 

No data. **Melting Point:** No data. **Boiling Point:** Flash Pt: No data. No data. **Evaporation Rate:** 

LEL: No data. UEL: No data. **Explosive Limits:** 

Vapor Pressure (vs. Air or

mm Hg):

No data.

No data. Vapor Density (vs. Air = 1): Specific Gravity (Water = 1): No data. No data. Solubility in Water:

~10 mg/ml in PBS (pH 7.2); ~30 mg/ml in EtOH & DMF; ~25 mg/ml in DMSO; **Solubility Notes:** 

No data. **Autoignition Pt:** 

Other Information 9.2

> No data. **Percent Volatile:**

Molecular Formula & Weight: C15H20O6 296.3

## Section 10. Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Stability: Unstable [ ] Stable [X]

10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Polymerization: Will occur [ ] Will not occur [X]

10.4 Conditions To Avoid: No data available. 10.5 Incompatibility -No data available.

**Materials To Avoid:** 

10.6 Hazardous No data available.

**Decomposition Or** 

**Byproducts:** 

## Section 11. Toxicological Information

The toxicological effects of this product have not been thoroughly studied. 11.1 Information on

Deoxynivalenol - Toxicity Data: Oral LD50 (mouse): 46 mg/kg; Oral TDLO (mouse): 2 Toxicological Effects:

mg/kg; Subcutaneous TDLO (rat): 1 mg/kg; Oral TDLO (rat): 16 mg/kg/2D (intermittent);

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented

Chronic Toxicological

Effects:

Deoxynivalenol - Investigated as a mutagen, reproductive effector, and tumorigen.

here. See actual entry in RTECS for complete information.

Deoxynivalenol RTECS Number: YD0167000

NTP? No IARC Monographs? No OSHA Regulated? No Carcinogenicity:



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## Section 12. Ecological Information

**12.1 Toxicity:** Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

### Section 13. Disposal Considerations

13.1 Waste Disposal

Dispose in accordance with local, state, and federal regulations.

Method:

## Section 14. Transport Information

#### 14.1 LAND TRANSPORT (US DOT):

**DOT Proper Shipping Name:** Toxic solids, organic, n.o.s. (Deoxynivalenol)

**DOT Hazard Class:** 6.1 POISON

UN/NA Number: 2811 Packing Group: ||



#### 14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Toxic solids, organic, n.o.s. (Deoxynivalenol)

UN Number: 2811 Packing Group:

Hazard Class: 6.1 - POISON

#### 14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Toxic solids, organic, n.o.s. (Deoxynivalenol)

UN Number: 2811 Packing Group: || Hazard Class: 6.1 - POISON IATA Classification: 6.1

**Additional Transport** 

Transport in accordance with local, state, and federal regulations.

Information:

# Section 15. Regulatory Information

#### EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
51481-10-8	Deoxynivalenol	No	No	No

CAS#	Hazardous Components (Chemical Name)	Other US EPA or State Lists
51481-10-8	Deoxynivalenol	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

### **European Community Hazard Symbol codes:**



 $T_{+}$ 

#### **European Community Risk and Safety Phrases:**

R28 Very toxic if swallowed. S22 Do not breathe dust.

S24/25 Avoid contact with skin and eyes.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label

whenever possible.)



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Regulatory Information

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and

European Directive 67/548/EEC as amended.

Section 16. Other Information

**Revision Date:** 11/21/2013

Additional Information About No data available.

This Product:

Statement:

Company Policy or

Disclaimer:

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

 $N.A. = Not \ available, \ N.P. = Not \ applicable, \ N.D. = Not \ determined, \ N.E. = Not \ established,$ 

N.R.=Not required