

MATERIAL SAFETY DATA SHEET

Date Printed: 05/08/2007

Date Updated: 01/31/2006

Version 1.3

Section 1 - Product and Company Information

Product Name DIGITOXIN CRYSTALLINE
Product Number D5878
Brand SIGMA

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
DIGITOXIN	71-63-6	Yes

Formula C41H64O13
Synonyms Acedoxin * Asthenthilo * Cardidigin * Cardigin *
Carditalin * Carditoxin * Cristapurat *
Crystalline digitalin * Crystodigin * Digimerck *
Digisidin * Digitophyllin *
Digitoxigenin-tridigitoxosid (German) *
Digitoxigenin tridigitoxoside * Digitoxinum *
Digitoxoside * Digitrin * Ditaven * Glucodigin *
Lanatoxin * Mono-digitoxid (German) *
Monodigitoxoside * Mono-glycocard * Myodigin *
Purpurid * Tardigal * Tri-digitoxoside (German) *
Unidigin
RTECS Number: IH2275000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Highly Toxic (USA) Very Toxic (EU).
Very toxic by inhalation, in contact with skin and if swallowed.
Target organ(s): Heart. G.I. System.

HMIS RATING

HEALTH: 3*
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING

HEALTH: 3
FLAMMABILITY: 0
REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

INHALATION EXPOSURE

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

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

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

Section 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.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

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

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance

Color: White

Form: Powder

Property	Value	At Temperature or Pressure
Molecular Weight	764.95 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	240 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	Degree of Rotation: 20 g/l Solvent: CHCl ₃ +20 - +17 (+/-1)	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Materials to Avoid: Strong oxidizing agents, Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Multiple Routes: May be fatal if inhaled, swallowed, or absorbed through skin. May cause irritation.

TARGET ORGAN(S) OR SYSTEM(S)

Nerves. G.I. System. Heart.

SIGNS AND SYMPTOMS OF EXPOSURE

Stomach pains, vomiting, diarrhea. Exposure can cause:

TOXICITY DATA

Oral

Man

0.286 mg/kg

LDLO

Remarks: Blood:Thrombocytopenia. Peripheral Nerve and

Sensation:Paresthesis. Cardiac:Pulse rate increased without fall
it BP.

Oral
Rat
23.75 mg/kg
LD50

Subcutaneous
Rat
16430 UG/KG
LD50

Intravenous
Rat
3900 UG/KG
LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Oral
Mouse
4.95 mg/kg
LD50

Intraperitoneal
Mouse
3900 UG/KG
LD50

Subcutaneous
Mouse
22180 UG/KG
LD50

Remarks: Cardiac:Other changes. Brain and Coverings:Recordings
from specific areas of CNS. Behavioral:Convulsions or effect on
seizure threshold.

Intravenous
Mouse
4100 UG/KG
LD50

Intracerebral
Mouse
49 UG/KG
LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Oral
Cat
0.18 mg/kg
LD50

Intraperitoneal
Cat
170 UG/KG
LD50

Oral
Guinea pig
3.7 mg/kg
LD50

Intraperitoneal
Guinea pig
1800 UG/KG
LD50

Intraduodenal
Guinea pig
3 MG/KG
LD50
Remarks: Cardiac:Arrythmias (including changes it conduction).
Cardiac:Cardiomyopathy including infarction.

Intraperitoneal
Pigeon
320 UG/KG
LD50

Oral
Frog
3.05 mg/kg
LD50

Subcutaneous
Frog
1050 UG/KG
LD50

Intravenous
Frog
730 UG/KG
LD50

IRRITATION DATA

Eyes
Dog
1 %
1D

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman
Dose: 200 UG/KG
Route of Application: Oral
Exposure Time: (27-30W PREG)
Result: Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Other neonatal measures or effects.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Toxic solids, organic, n.o.s.
UN#: 2811
Class: 6.1
Packing Group: Packing Group I
Hazard Label: Toxic substances.

IATA

Proper Shipping Name: Toxic solid, organic, n.o.s.
IATA UN Number: 2811
Hazard Class: 6.1
Packing Group: I

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: T
Indication of Danger: Toxic.
R: 23/25-33
Risk Statements: Toxic by inhalation and if swallowed. Danger of cumulative effects.
S: 45
Safety Statements: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Highly Toxic (USA) Very Toxic (EU).
Risk Statements: Very toxic by inhalation, in contact with skin and if swallowed.
Safety Statements: Do not breathe dust. 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).
US Statements: Target organ(s): Heart. G.I. System.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes
NOTES: This product is subject to SARA section 313 reporting requirements.
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: Yes

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

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.

