



## Safety Data Sheet

In accordance with CFR 1910.1200 (OSHA HCS)

SDS No. 342

Review Date: August 8, 2018

### 1 Identification of substance and company

**Product name:** **Cadmium Oxide**  
**Product code:** 14742, 15995  
**Relevant use and restrictions on use:** Research and product development  
**Manufacturer/Supplier:** Noah Technologies Corporation  
1 Noah Park  
San Antonio, Texas 78249-3419  
Phone: 210-691-2000  
Fax: 210-691-2600  
Web site: www.noahtech.com  
**Emergency information:** CHEMTREC  
800-424-9300

### 2 Hazards identification

#### Emergency Overview:

#### Pictogram(s):



#### Signal word(s):

Danger

#### Hazard statements:

H330 - Fatal if inhaled.  
H341 - Suspected of causing genetic defects.  
H350 - May cause cancer.  
H361 - Suspected of damaging fertility or the unborn child.  
H372 - Causes damage to organs through prolonged or repeated exposure.  
H410 - Very toxic to aquatic life with long lasting effects

#### Precautionary statements:

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe dust / fume / gas / mist / vapors / spray.  
P264 - Wash skin thoroughly after handling.  
P270 - Do not eat, drink or smoke with using this product.  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
P284 - Wear respiratory protection.  
P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor / physician.  
P308 + P313 - IF exposed or concerned: Get medical advice / attention.  
P391 - Collect spillage  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant

#### GHS Classification:

Acute toxicity, Inhalation - 2  
Germ cell mutagenicity - 2  
Carcinogenicity - 1B  
Reproductive toxicity - 2  
Specific target organ toxicity, repeated exposure - 1  
Acute aquatic toxicity - 1  
Chronic aquatic toxicity - 1

#### Hazards not otherwise classified:

None

#### HMIS ratings (scale 0-4):

Health hazard: 4\*  
Flammability: 0  
Physical hazard: 0

### 3 Composition/Information on ingredients

Chemical name:	Cadmium Oxide
CAS number:	1306-19-0
EC number:	215-146-2
Formula:	CdO
Synonyms:	None known

### 4 First aid measures

After inhalation:	Move victim into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact:	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
After eye contact:	Flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so.
After ingestion:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Information for doctor:	Show this safety data sheet to the doctor in attendance
Symptoms/effects; acute and delayed:	Fumes may cause coughing, difficulty breathing and cyanosis.
Immediate medical attention and special treatment needed:	Medical observation is recommended for 24 to 48 hours after inhalation overexposure as pulmonary edema may be delayed.

### 5 Fire-fighting measures

Suitable and unsuitable extinguishing agents:	Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards caused by the material, its products of combustion or resulting gases:	Oxides of cadmium
Special fire fighting procedures:	Wear self-contained breathing apparatus. Always wear full fire fighting equipment / clothing in fire situations. Cadmium oxide is recognized as a very toxic material. Prevent runoff from entering drains or municipal sewers as contaminated water will contain a RCRA hazardous waste.
Unusual fire and explosion hazard:	No data available

### 6 Accidental release measures

Person-related safety precautions:	Wear respiratory protection. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area.
Measures for environmental protection:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Measures for cleaning/collecting:	Moisten spilled material and place in sealed plastic bags. DO NOT over wet or allow to enter drains or water sources. Place in suitable container for proper disposal. Always wear protective equipment.
Additional information:	See Section 7 for information on safe handling See Section 8 for information on personal protective equipment See Section 13 for information on disposal See Section 15 for regulatory information

### 7 Handling and storage

Information for safe handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Ensure adequate ventilation.
Information about protection against explosions and fires:	No data available
Storage requirements to be met by storerooms and containers:	Store in tightly closed containers. Highly toxic, store away from food stuff. Store in a cool, dry place.
Incompatibility (avoid contact with):	Strong acids. Strong oxidizers. Mixtures with magnesium may explode.
Further information about storage conditions:	Avoid exposure and heat.

### 8 Exposure controls/personal protection

Ventilation requirements:	Local exhaust. Chemical fume hood.
Components with exposure limits that require monitoring:	OSHA PEL: TWA 5 ug (Cd) / m3; CL 2.5 ug (Cd) / m3 (dust) ACGIH TLV: TWA 0.01 mg (Cd) / m3 (dust); Kidney damage, suspected human carcinogen NIOSH REL: lowest feasible level
General protective and hygienic measures:	The usual precautionary measures for handling chemicals should be adhered to Keep away from foodstuffs, beverages and food Instantly remove any soiled and impregnated garments Wash hands during breaks and at the end of the work Avoid contact with the eyes and skin
Personal protective equipment:	
Respiratory protection: (Use only NIOSH or CEN approved Equipment)	Filter-dust, fume, mist
Hand protection:	Handle with gloves. Neoprene / Natural rubber / Polyvinyl chloride / Impervious. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with product.
Eye protection:	Face shield and safety glasses
Skin protection:	Protective work clothing sufficient to prevent contact.

<b>Additional protective equipment:</b>	Emergency eyewash and safety shower.
<b>Precautionary labeling:</b>	Do not breathe dust, vapor, mist, gas Keep container closed. Do not get in eyes, on skin or on clothing. Keep away from heat, sparks and open flames. Empty container may contain hazardous residues. Highly toxic - always wear protective equipment.

## 9 Physical and chemical properties

<b>Physical state:</b>	Powder or cubic crystals
<b>Color:</b>	Dark brown
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available
<b>Molecular Weight (Calculated):</b>	128.4
<b>pH</b>	No data available
<b>Melting point/freezing point/range:</b>	870 - 950 C
<b>Boiling point/range:</b>	1559 C
<b>Sublimation temperature/start:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Flammability (solid, gas):</b>	Non-flammable
<b>Flash point:</b>	No data available
<b>Autoignition temperature:</b>	No data available
<b>Danger of explosion:</b>	No data available
<b>Flammable limits:</b>	
<b>Lower:</b>	No data available
<b>Upper:</b>	No data available
<b>Evaporation Rate:</b>	No data available
<b>Vapor pressure (mm Hg):</b>	1 mmHg @ 1000 C
<b>Vapor density:</b>	No data available
<b>Specific gravity:</b>	8.15
<b>Bulk density:</b>	No data available
<b>Solubility in/Miscibility with water:</b>	Practically insoluble (0.0021 g/L @ 20 C)
<b>Partition coefficient n-octanol/water:</b>	No data available
<b>Viscosity:</b>	No data available
<b>Other information:</b>	No data available

## 10 Stability and reactivity

<b>Reactivity:</b>	No data available
<b>Chemical stability:</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions:</b>	No data available
<b>Conditions to be avoided:</b>	Heat. Exposure. See section 7 for information on proper handling and storage
<b>Materials to be avoided:</b>	Strong acids. Strong oxidizers.
<b>Dangerous reactions:</b>	Mixtures with magnesium may explode.
<b>Hazardous decomposition products: (thermal and other)</b>	Oxides of cadmium

## 11 Toxicological information

<b>LD/LC50 values that are relevant for classification:</b>	inhalation-rat LC <sub>50</sub> : 0.056 mg/L:4H oral-rat LD <sub>50</sub> : 72 mg/kg
<b>Irritation or corrosion of skin:</b>	No data available
<b>Irritation or corrosion of eyes:</b>	No data available
<b>Primary irritant or corrosive effect: on the skin: on the eye:</b>	Mild Mild
<b>Sensitization:</b>	No data available
<b>Potential health effects:</b>	
<b>Inhalation:</b>	Fumes may cause coughing, difficulty breathing and cyanosis. Strong irritant via inhalation.
<b>Ingestion:</b>	Poison by ingestion.
<b>Skin:</b>	No data available
<b>Eyes:</b>	No data available
<b>Signs and symptoms of exposure:</b>	Poison by ingestion, inhalation, and intraperitoneal routes. An experimental neoplastigen. Experimental reproductive effects. Human systemic effects by inhalation include change in the sense of smell, change in heart rate, blood pressure, an excess of protein in the urine and other kidney or bladder changes. Primary routes of exposure are inhalation, ingestion, eyes and skin. Highly toxic by inhalation and ingestion. High exposure can cause rapid and severe lung damage, with shortness of breath, chest pain, cough and possible fluid up of fluid in the lungs. Illness can be delayed for 4 to 8 hours. Can cause permanent kidney damage which can lead to kidney stones and other serious health problems.

**Carcinogenicity:** IARC: Group 1 - Carcinogenic to humans  
 ACGIH: Group A2 - Carcinogen List  
 NTP: Known to be human carcinogen  
 OSHA: OSHA specifically regulated carcinogen

**Additional information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known

**12 Ecotoxicological information**

**Toxicity:**

**Toxicity to fish:** Fathead minnow LC<sub>50</sub>: 7.029 mg/L:96H

**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna LC<sub>50</sub>: 0.75 mg/L:48H

**Toxicity to algae:** Growth inhibition EC<sub>50</sub>: 0.018 mg/L:72H

**Persistence and degradability:**

**Biodegradability:** No data available

**Bioaccumulative potential:**

**Bioaccumulation:** No data available

**Mobility in soil:** No data available

**Other adverse effects:** Very toxic to aquatic life with long lasting effects.

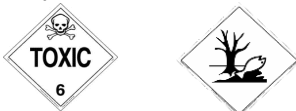
**13 Disposal considerations**

**Recommendation:** Consult state, local or national regulation for proper disposal  
 Allow professional disposal company to handle waste  
 Must be specially treated under adherence to official regulations

**Unclean packagings recommendation:** Disposal must be made according to official regulations

**14 Transport information**

**Land transport DOT**



**Proper shipping name:** Cadmium compounds

**Technical name:** Cadmium oxide

**DOT Hazard Class:** 6.1

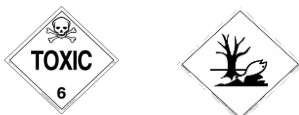
**UN Identification number:** UN2570

**Label(s):** Toxic and Marine Pollutant

**Packing group:** I

**North American Emergency Response Guidebook No.:** 154

**Air transport ICAO-TI and IATA-DGR:**



**Proper shipping name:** Cadmium compounds

**Technical name:** Cadmium oxide

**DOT Hazard Class:** 6.1

**UN Identification number:** UN2570

**Label(s):** Toxic and Marine Pollutant

**Packing group:** I

**North American Emergency Response Guidebook No.:** 154

**UPS Ground / FedEx Ground**



**Proper shipping name:** Cadmium compounds

**Technical name:** Cadmium oxide

**DOT Hazard Class:** 6.1

**UN Identification number:** UN2570

**Label(s):** DOT-SP-8249 and Marine Pollutant

**Packing group:** I

**North American Emergency Response Guidebook No.:** 154

UPS Air



<b>Proper shipping name:</b>	Cadmium compounds
<b>Technical name:</b>	Cadmium oxide
<b>DOT Hazard Class:</b>	6.1
<b>UN Identification number:</b>	UN2570
<b>Label(s):</b>	DOT-SP-8249 and Marine Pollutant
<b>Packing group:</b>	I
<b>North American Emergency Response Guidebook No.:</b>	154

#### 15 Regulatory information

<b>SARA Section 302 Extremely Hazardous components and corresponding TPQs:</b>	This product is subject to reporting levels established by SARA Title III, Section 302: TPQ: 45.36 kg
<b>SARA Section 311 / 312 hazards:</b>	Acute Health Hazard; Chronic Health Hazard
<b>SARA Section 313 components:</b>	The following components are subject to reporting levels established by SARA Title III, Section 313: Cadmium oxide: CAS No. 1306-19-0 (Revision Date: 1993-04-24)
<b>California Proposition 65 components:</b>	WARNING! This product contains a chemical known to the State of California to cause cancer WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm
<b>TSCA:</b>	Product is listed on the TSCA Inventory

#### 16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.