



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name

**Octocure ZDB-100**

**ZDB-powder**

Substance name                      zinc bis(dibutylidithiocarbamate)  
REACH registration no.            01-2119535161-51

**Identification numbers**

CAS no.                                136-23-2  
EC no.                                 205-232-8  
Index no.                            006-081-00-9

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

**Relevant identified uses of the substance or mixture**

Industrial raw material

**Uses advised against**

No data available.

### 1.3 Details of the supplier of the safety data sheet

**Address**

Tiarco Chemical Europe GmbH  
Am Gut Baarking 12  
46395                      Bocholt

Telephone no.                    +49 2871 23476-0  
Fax no.                            +49 2871 23476-44  
e-mail                            europeansales@trcc.com

**Advice on Safety Data Sheet**

sdb\_info@umco.de

### 1.4 Emergency telephone number

For medical advice (in German and English):  
+49 (0)551 192 40 (Giftinformationszentrum Nord)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Aquatic Acute 1; H400  
Aquatic Chronic 1; H410  
Eye Irrit. 2; H319  
Skin Irrit. 2; H315  
Skin Sens. 1; H317  
STOT SE 3; H335

**Classification information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:  
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP  
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3 and 4 of Annex I to CLP.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)**

**Product identifier**

136-23-2 (zinc bis(dibutylidithiocarbamate))

**Hazard pictograms**



GHS07



GHS09

**Signal word**

Warning

**Hazard statement(s)**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 Call a POISON CENTER/doctor if you feel unwell.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362 Take off contaminated clothing.  
P391 Collect spillage.  
P405 Store locked up.  
P501 Dispose of contents/container to hazardous or special waste collection point.

**2.3 Other hazards**

No data available.

**SECTION 3: Composition/information on ingredients****3.1 Substances****Chemical characterization**

Substance name zinc bis(dibutyldithiocarbamate)  
Formula C<sub>18</sub> H<sub>36</sub> N<sub>2</sub> S<sub>4</sub> Zn  
Molecular weight 474

**Identification numbers**

CAS no. 136-23-2  
EC no. 205-232-8  
Index no. 006-081-00-9

**3.2 Mixtures**

Not applicable. The product is not a mixture.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information**

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. After exposition don't drink alcohol.

**After inhalation**

Remove affected person from the immediate area. Ensure supply of fresh air.

**After skin contact**

Wash off with soap and water.

**After eye contact**

Separate eyelids, wash the eyes thoroughly with water (15 min.).

**After ingestion**

Rinse the mouth thoroughly with water. If swallowed give water to drink. Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed**



## **Octocure ZDB-100**

### **Symptoms**

Dust may irritate the respiratory tract and cause symptoms of Bronchitis. May lead to alcohol incompatibility.

### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Dry chemical extinguisher; Foam; Water spray jet; Water mist

#### **Unsuitable extinguishing media**

High power water jet

### **5.2 Special hazards arising from the substance or mixture**

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide and smoke. In the event of fire, the following can be released: Sulphur oxides (SxOy); Nitrogen oxides (NOx); Hydrogen cyanide (HCN)

### **5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear protective clothing.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

#### **For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation. Keep away from ignition sources.

#### **For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

### **6.2 Environmental precautions**

Do not discharge into the drains/surface waters/groundwater.

### **6.3 Methods and material for containment and cleaning up**

Take up mechanically. Send in suitable containers for recovery or disposal.

### **6.4 Reference to other sections**

No data available.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

Provide good ventilation at the work area (local exhaust ventilation, if necessary). Avoid the formation and deposition of dust.

#### **General protective and hygiene measures**

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Avoid contact with eyes and skin.

#### **Advice on protection against fire and explosion**

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition.

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

#### **Technical measures and storage conditions**

Keep container dry in a cool, well-ventilated place.

#### **Requirements for storage rooms and vessels**

Always keep in containers of same material as the original.

#### **Incompatible products**

None known

### **7.3 Specific end use(s)**

No data available.

## **SECTION 8: Exposure controls/personal protection**



## 8.1 Control parameters

### Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	Dust		
	List of approved workplace exposure limits (WELs) / EH40		
	Dust respirable		
	WEL long-term (8-hr TWA reference period)	4	mg/m³
	Comments	see Definition 44 "Dust"	
	List of approved workplace exposure limits (WELs) / EH40		
	Dust inhalable		
	WEL long-term (8-hr TWA reference period)	10	mg/m³
	Comments	see Definition 44 "Dust"	

## 8.2 Exposure controls

### Appropriate engineering controls

No data available.

### Personal protective equipment

#### Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event that workplace threshold values are not specified. In case of insufficient ventilation or long-term effect use breathing apparatus.

#### Eye / face protection

Safety glasses (EN 166)

#### Hand protection

Protective gloves (EN 374)

Appropriate Material PVC

#### Other

Normal chemical work clothing.

### Environmental exposure controls

No data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>State of aggregation</b>			
solid			
<b>Form/Colour</b>			
Powder / granulates			
white to pink			
<b>Odour</b>			
odourless			
<b>pH value</b>			
Comments		neutral	
<b>Boiling point / boiling range</b>			
No data available			
<b>Melting point/freezing point</b>			
Value		min.	100 °C
<b>Decomposition temperature</b>			
No data available			
<b>Flash point</b>			
No data available			
<b>Ignition temperature</b>			
Value		400	°C
<b>Flammability</b>			
No data available			

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Lower explosion limit			
Value	20      mg/m³		
Upper explosion limit			
No data available			
Vapour pressure			
No data available			
Relative vapour density			
No data available			
Relative density			
No data available			
Density			
Value	1270	kg/m³	
Reference temperature	20	°C	
Bulk density			
Value	310	- 350	kg/m³
Solubility in water			
Comments	essentially insoluble		
Solubility			
No data available			
Soluble in			
Acetone; Carbon disulphide			
Partition coefficient n-octanol/water (log value)			
No data available			
Viscosity			
No data available			
Particle characteristics			
No data available			

**9.2 Other information**

<b>Other information</b>
No data available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No data available.

**10.2 Chemical stability**

No data available.

**10.3 Possibility of hazardous reactions**

No data available.

**10.4 Conditions to avoid**

None known

**10.5 Incompatible materials**

Oxidizing agents; strong acids

**10.6 Hazardous decomposition products**

Under nitrosating conditions this product can form the following carcinogenic n-nitrosamine(s) listed in the TRGS  
552: N-nitroso-di-n-butylamine

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

<b>Acute oral toxicity</b>			
LD50	>	5000	mg/kg
Species	rat		
<b>Acute dermal toxicity</b>			



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LD50	>	2000	mg/kg
Species	rabbit		
Acute inhalational toxicity			
No data available			
Skin corrosion/irritation			
No data available			
Serious eye damage/irritation			
No data available			
Respiratory or skin sensitisation			
No data available			
Germ cell mutagenicity			
Method Evaluation	Ames-Test negative		
Reproduction toxicity			
No data available			
Carcinogenicity			
Duration of exposure	2	year(s)	
Species	rat		
Evaluation	No indications of carcinogenic effects are available from long-term trials.		
STOT - single exposure			
No data available			
STOT - repeated exposure			
No data available			
Aspiration hazard			
No data available			
Delayed and immediate effects as well as chronic effects from short and long-term exposure			
Contact of the product with skin or eyes may cause irritation. Inhalation of dusts may irritate the respiratory tract.			

### 11.2 Information on other hazards

#### Endocrine disrupting properties

No data available.

#### Other information

This product is approved for items that may come into contact with foods.

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish (acute)		
LC50	520	mg/l
Duration of exposure	96	h
Species	Oncorhynchus mykiss	
LC50	880	mg/l
Duration of exposure	96	h
Species	Lepomis macrochirus	
Toxicity to fish (chronic)		
No data available		
Toxicity to Daphnia (acute)		
EC50	0.74	mg/l
Duration of exposure	48	h
Species	Daphnia magna	
Toxicity to Daphnia (chronic)		
No data available		
Toxicity to algae (acute)		
No data available		
Toxicity to algae (chronic)		

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No data available

**Bacteria 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**

No data available.

**12.6 Endocrine disrupting properties**

No data available.

**12.7 Other adverse effects**

No data available.

**12.8 Other information****Other information**

Do not discharge into drains or waters and do not dispose of in public landfills.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

**Packaging**

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

**SECTION 14: Transport information****14.1 Transport ADR/RID/ADN**

Class	9
Classification code	M7
Packing group	III
Hazard identification no.	90
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Tunnel restriction code	-
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

**14.2 Transport IMDG**

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
EmS	F-A, S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

**14.3 Transport ICAO-TI / IATA**

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

**Octocure ZDB-100****14.4 Other information**

No data available.

**14.5 Environmental hazards**

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

**14.6 Special precautions for user**

No data available.

**14.7 Maritime transport in bulk according to IMO instruments**

Not relevant

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

**REACH candidate list of substances of very high concern (SVHC) for authorisation**

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

**Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES**

The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is subject to Part I of Annex I, risk category:

E1

**15.2 Chemical safety assessment**

No data available.

**SECTION 16: Other information****Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

**Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)**

H400

Very toxic to aquatic life.

**Creation of the safety data sheet**

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

**Alterations/supplements:**

Alterations to the previous edition are marked in the left-hand margin.

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