

**Safety Data Sheet**

according to UK REACH Regulation

**Cryptand 222**

Revision date: 08.02.2023

Product code: 800.XXXX

Page 1 of 5

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Cryptand 222

**Further trade names**

4,7,13,16,21,24-Hexaoxa-1,10-diazabicyclo[8.8.8]hexacosane

**Synonyms:**

2,2,2-Crypt; 2,2,2-Cryptand; 2,2,2-Cryptate; Crypt-2,2,2; Cryptand 2.2.2; Cryptand C 222; Cryptating agent 222; Cryptofix 222; Kryptand 222; Kryptofix 222

CAS No: 23978-09-8

EC No: 245-962-4

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.3. Details of the supplier of the safety data sheet**

Company name:	ABX advanced biochemical compounds Biomedizinische Forschungsreagenzien GmbH	
Street:	Heinrich-Gläser-Straße 10-14	
Place:	01454 Radeberg	
Telephone:	+49 3528 4041 60	Telefax: +49 3528 4041 65
e-mail:	info@abx.de	
Contact person:	Dr. Christoph Meyer	Telephone: +49 3528 4041 8732
e-mail:	meyer@abx.de	
Internet:	http://www.abx.de	

**1.4. Emergency telephone number:**

+49 3528 4041 60

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Acute Tox. 4; H302

Skin Irrit. 2; H315

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Signal word:** Danger**Pictograms:****Hazard statements**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

**Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

**Safety Data Sheet**

according to UK REACH Regulation

**Cryptand 222**

Revision date: 08.02.2023

Product code: 800.XXXX

Page 2 of 5

present and easy to do. Continue rinsing.

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: C18H36N2O2

Molecular weight: 376.49

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
23978-09-8	Cryptand 222			95 - < 100 %
	245-962-4			
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H302 H315 H318			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
23978-09-8	245-962-4	Cryptand 222	95 - < 100 %
	oral: ATE = 500 mg/kg		

**SECTION 4: First aid measures****4.1. Description of first aid measures****After inhalation**

Provide fresh air.

**After contact with skin**

After contact with skin, wash immediately with: Water. Change contaminated clothing.

**After contact with eyes**

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

**After ingestion**

If swallowed, immediately drink: Water. Call a physician in any case!

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Water. Foam. Extinguishing powder. Carbon dioxide (CO2).

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and

# Safety Data Sheet

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## Cryptand 222

Revision date: 08.02.2023

Product code: 800.XXXX

Page 3 of 5

clothes. Wear personal protection equipment.

### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

#### **Other information**

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

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

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

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

#### **Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

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

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

Keep container dry. Keep container tightly closed.

#### **Further information on storage conditions**

storage temperature: < 30 °C

Protect against: Light.

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

### **8.1. Control parameters**

#### **Additional advice on limit values**

To date, no national critical limit values exist.

### **8.2. Exposure controls**

#### **Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

## **SECTION 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

Physical state:

solid

Colour:

white

Melting point/freezing point:

68 - 71 °C

## **SECTION 10: Stability and reactivity**

### **10.3. Possibility of hazardous reactions**

Materials to avoid: Oxidizing agents, strong. acid.

### **10.6. Hazardous decomposition products**

Carbon dioxide. Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>).

## **SECTION 11: Toxicological information**

### **11.1. Information on hazard classes as defined in GB CLP Regulation**

**Safety Data Sheet**

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**Cryptand 222**

Revision date: 08.02.2023

Product code: 800.XXXX

Page 4 of 5

**Acute toxicity**

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
23978-09-8	Cryptand 222				
	oral	ATE 500 mg/kg			

**Irritation and corrosivity**

Irritating to eyes. Following inhalation: Lung irritation. Coughing. shortage of breath. After skin contact: irritant.

**Information on likely routes of exposure**

Irritating to eyes. Following inhalation: Lung irritation. Coughing. shortage of breath. After skin contact: irritant.

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 12: Ecological information****12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**Further information**

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Other applicable information**

Not a hazardous material with respect to these transportation regulations.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water hazard class (D): 3 - highly hazardous to water

**SECTION 16: Other information****Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
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Page 5 of 5