



## **SAFETY DATA SHEET GP-210**

### **HEXAMETHYLENEDIAMINE CARBAMATE**

#### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

##### **1.1 Product identifiers**

Product name: hexamethylenediamine carbamate (GP-210)  
6.aminohexyl carbamic acid  
EC No:205-581-6  
CAS-No. : 143-06-6  
REACH Registration number: 01-2120755360-60-0005

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

Identified uses: Laboratory chemicals, Manufacture of substances

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

Manufacturer's Name: Cymer, LLC  
124 Cymer Lane  
Decatur, TN 37322  
Telephone number: 1-423-334-2778  
Email address: ESH@cymerllc.com

##### **OR Contact details**

Company name: ReFaC  
Address: Southmere Court  
Electra Way  
Crewe  
CW1 6GU  
United Kingdom  
Telephone number: +44 1270258530  
Email address: technical.manager@refac.eu

##### **1.4 Emergency telephone number**

CHEMTEL assistance, call: 1-888.255.3924 24 Hr  
For International CHEMTEL assistance, call:+1.813.248.0573 24 Hr.

#### **SECTION 2. HAZARDS IDENTIFICATION**

##### **2.1 Classification of the substance or mixture**

Flammable Solid 2 - H228 Flammable solid  
Eye irritation 2 - H319 Causes serious eye irritation  
For the full text of the H-Statements mentioned in this Section, see Section 16.

##### **2.2 Label elements**



Pictogram

Signal word **Warning**

**Hazard statement(s)**

H319: Causes serious eye irritation

**Precautionary statement(s)**

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention

**2.3 Other Hazards**

This substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII

**SECTION 3. COMPOSITION/INFORMATION ON  
INGREDIENTS**

**3.1 Substances**

Substance name	EC No.	CAS No.	% w/w	REACH registration number	Classification	Notes
(6-aminohexyl)carbamic acid	205-581-6	143-06-6	98.5-100	01-2120755360-60-0005	Flam Sol 2 Eye Irrit 2	H228 H319

**SECTION 4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Take off all contaminated clothing and wash before reuse. Call a POISON CENTRE or consult a doctor if you feel unwell (show the label where possible). Show this safety data sheet to the doctor in attendance.

**Following inhalation**

Remove person to fresh air and keep comfortable for breathing. Oxygen or artificial respiration. If not breathing, give artificial respiration if needed. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor.

**In case of skin contact**

Take off contaminated clothing and wash before reuse. If on skin: wash with plenty of water. If skin irritation or rash occurs: get medical advice/attention.

**In case of eye contact**

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a POISON CENTRE or doctor if you feel unwell.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **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**

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

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

Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

#### **5.3 Advice for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

#### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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

For personal protection see section 8.

For disposal see section 13.

### **SECTION 7. HANDLING AND STORAGE**

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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

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

Keep container tightly closed in a dry and well-ventilated place.

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

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **8.1 Control parameters**

##### **Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

PEL (OSHA): Particulates (Not Otherwise Regulated)

15 mg/m<sup>3</sup>, 8 Hr. TWA, total dust

5 mg/m<sup>3</sup>, 8 Hr. TWA, respirable dust

#### **8.2 Exposure controls**

##### **8.2.1 Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls. Eye wash facilities and emergency showers must be available when handling this product.

##### **8.2.2. Individual protection measures such as**

### **Personal protective equipment**

#### **Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **8.2.3. environmental exposure controls**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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

- a) Appearance - White powder
- b) Odor - Slight amine.
- c) Odour threshold – n/a
- d) pH- n/a
- e) Melting point/freezing point – 159.19°C
- f) Initial boiling point and boiling range – 159.19°C
- g) Flash point – n/a
- h) Evaporation rate – n/a
- i) Flammability -
- j) upper/lower flammability or explosive limits
- k) Vapour pressure – n/a
- l) Vapour density – n/a
- m) relative density – 1.284 g/ml
- n) Solubility(ies) – Soluble in water, insoluble in alcohols
- o) partition coefficient: n-octanol/water –2.36
- p) Auto ignition temp – n/a
- q) decomposition temp – 159.19°C
- r) viscosity – n/a
- s) explosive properties – n/a
- t) oxidizing properties – n/a
- c) Specific Gravity - 1.28 ±0.02
- d) Decomposition point 154°C
- e) Moisture - 0.4 %
- f) Ash Content - 0.05 %
- g) Solubility - Soluble in water, Insoluble in alcohols

### **9.2 Other safety information**

no data available

## SECTION 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Reacts with water to form hexamethylenediamine

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Reacts with water to form hexamethylenediamine

### 10.6 Hazardous decomposition products

#### Incompatibility with Other Materials

Reacts with water to form hexamethylenediamine

#### Decomposes with heat.

Hazardous gases or vapors can be released, including ammonia, hexamethylenediamine, and carbon dioxide.

In the event of fire: see section 5

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat: 2875 mg/kg

LD50 Dermal – rat: not classified

#### Skin corrosion/irritation

Not irritating

#### Serious eye damage/eye irritation

Irritating

#### Respiratory or skin sensitisation

Not considered to be sensitizing

#### Germ cell mutagenicity

Not considered to be mutagenic

#### Carcinogenicity

No data available

#### Reproductive toxicity

NOAEL Rat: 50 mg/Kg bw/day

#### Specific target organ toxicity - single exposure

no data available

#### Specific target organ toxicity - repeated exposure

no data available

#### Aspiration hazard

no data available

#### Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Ecotoxicological endpoint	Value	Species, Method
Acute (short term toxicity):		
Fish	LC50 (96h) >15.7 mg/L	Danio rerio; OECD 203
Crustacea	EC50 (48h) 16.2 mg/L	Daphnia magna; OECD

Algae/aquatic plants	EC50 (72h) >100 mg/L	Desmodesmus subspicatus; OECD 201
Activated sludge respiration	EC50 (3h) 902 mg/L	Activated sludge; OECD 209
Chronic (long term toxicity):		
Fish	No data available	
Crustacea	No data available	

## 12.2 Persistence and degradability

Material is readily degradable

## 12.3 Bioaccumulative potential

no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

This substance is not considered to be PBT or vPvB.

## 12.6 Other adverse effects

no data available

# SECTION 13. DISPOSAL CONSIDERATIONS

## 13.1 Waste treatment methods

### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

# SECTION 14. TRANSPORT

U.S. DOT	IMDG	IATA	ADN (EU)	ADR/RID (EU)
Not regulated	Not regulated	Not regulated	Regulated	Regulated

## 14.1 Special precautions for user

Read safety instructions, SDS and emergency procedures before handling

## 14.2 Transport in bulk according to Annex II of MARPOL 73/78 and IBC

Code No information available

# SECTION 15. REGULATORY INFORMATION

15.1 SARA 302: No components subject to SARA Title III reporting requirements.

15.2 SARA 313: No components with known CASRNs exceed SARA Title III threshold reporting levels.

15.3 SARA 311/312: Acute Health Hazard.

15.4 State Right To Know Components (NJ, PA, MA): None listed.

15.5 California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## **SECTION 16. OTHER INFORMATION**

### **Full text of H-Statements referred to under sections 2 and 3.**

H315, 335: May cause skin and respiratory irritation if PPE and/or controls are not used.  
H319: Causes serious eye irritation

**SDS Creation Date:** 2/15/2017

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Cymer LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.