

## Section 1. Identification

### 1.1 Product Identifier 0214

Product Name 1,6-DIAMINOHEXANE pure  
CAS Number 124-09-4  
REACH Registration No 01-2119473981-28-XXXX  
Molecular Formula  $\text{NH}_2(\text{CH}_2)_4\text{NH}_2$  =116.21

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

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

### 1.3 Supplier Vickers Laboratories Ltd



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### 1.4 Emergency Telephone (08:00-16:30) +44(0) 113 2362811 (24hr) 112 (Have this document to hand)

## Section 2. Hazards Identification

### 2.1 Classification of the substance or mixture

#### Classification according to regulation 1272/2008/EC

Skin corrosion/irritation, category 1B H314: Causes severe skin burns and eye damage.  
Acute toxicity, category 4 (oral) H302: Harmful if swallowed.  
Acute toxicity, category 4 (dermal) H312: Harmful in contact with skin.  
Spec target organ tox - single, category 3 H335: May cause respiratory irritation.

### 2.2 Label elements

#### Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements	Harmful in contact with skin. Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage.
Precautionary Statements	Wear protective gloves / protective clothing / eye protection. Do not breathe fume/vapours. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

## Section 3. Composition

### 3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
1,6-Diaminohexane	124-09-4	204-679-6	01-2119473981-28-XXXX	98%	Skin Corr. 1B, Acute Tox. 4 (O), Acute Tox. 4 (D), STOT SE 3 (I)

## Section 4. First Aid

### 4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. In severe cases or if exposure has been great, OBTAIN MEDICAL ATTENTION.
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If conscious place in a sitting position. OBTAIN MEDICAL ATTENTION.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

### 4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

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

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

Extinguishing Media	Water spray, alcohol resistant foam, dry powder or carbon dioxide.
Unsuitable Media	Nothing specified.

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

Hazards	May evolve toxic fumes if involved in a fire.
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### 5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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## Section 6. Accidental Release Measures

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

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.
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### 6.2 Environmental precautions

Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
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### 6.3 Methods and material for containment and cleaning up

Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Contain and absorb on inert material. Transfer absorbent to container for removal. Wash area down with copious amounts of water.

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.  
Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

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

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits	
			Long Term (8hr TWA)	Short Term 15min period)
1,6-Diaminohexane	124-09-4	98%	-	-

Exposure data source(s) No occupational exposure data currently available.

### 8.2 Exposure controls

Respiratory Protection	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.
Hand Protection	Use nitrile gloves or PVC gauntlets.
Eye Protection	Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection	If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards	No special precautions required.

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance	Colourless/white crystalline solid mass.
Odour	Characteristic amine odour.
pH	14 @ 20°C
Boiling Point	199°C
Melting Point	41°C
Flash Point	85°C (Closed cup)
Upper Flammable Limit	7.6 vol%
Lower Flammable Limit	0.9 vol%
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	No.
Vapour Pressure	Not applicable
Relative Density	0.84 @ 20°C
Water Solubility	Very soluble in water.

## 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	No specific conditions.
10.5	Incompatible Materials	Strong oxidising agents.
10.6	Hazardous Decomposition Products	Burning will produce toxic fumes of NOx, carbon monoxide and/or carbon dioxide.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

Eyes	The liquid will cause conjunctival irritation and corneal damage. Damage can range from severe irritation and corneal scarring to permanent blindness. The vapour may be irritating to the eyes.
Skin	The liquid will cause burns.
LD50 Skin	1110mg/kg Rabbit
Ingestion	Causes severe corrosion of the mouth, throat and gastro-intestinal tract.
LD50 Oral	750mg/kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.
Other Information	The irritant effect provides warning that control of exposure is needed.

## Section 12. Ecological

12.1	Toxicity	Small amounts present no specific environmental hazard.
	LC50 Algal	15mg/l Green algae (72 hours)
	LC50 Crustacea	23.4mg/l Daphnia magna (48 hours)
	LC50 Fish	62mg/l Fish (96 hours)
12.2	Persistence and degradability	Product is biodegradable.
12.3	Bioaccumulative potential	Not expected to bioaccumulate.
12.4	Mobility in soil	No data available.
12.5	Results of PBT & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator. Never dispose of into water courses or sewerage systems.
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Contaminated Packaging Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion. Clean out with a weak hydrochloric acid solution then wash out thoroughly with water.

## Section 14. Transport Information

14.1 UN Number	2280
14.2 Proper Shipping Name	Hexamethylenediamine, solid
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	None
Transport category	3
ADR Hazard ID	80
Tunnel Restriction Code	E
14.4 Packing Group	III
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

#### Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Skin corrosion/irritation, category 1B; Acute toxicity, category 4 (oral); Acute toxicity, category 4 (dermal); Spec target organ tox - single, category 3

Signal word Danger

Hazard Pictograms



Hazard Statements H312, H302, H335, H314  
Harmful in contact with skin. Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage.

Hazard Statements (Packs of 500ml/g or less) H312, H302, H335, H314  
Harmful in contact with skin. Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage.

Precautionary Statements P280, P260, P303+P361+P353, P304+P340, P305+P351+P338, P301+P330+P331  
Wear protective gloves / protective clothing / eye protection. Do not breathe fume/vapours. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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