

**Section 1. Identification****1.1 Product Identifier** DI2426

Product Name 1,2-DIAMINOETHANE pure 250ml.

CAS Number 107-15-3

REACH Registration No 01-2119480383-37-XXXX

Molecular Formula  $\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2 = 60.10$ **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** WF Education GroupPhoenix House  
Battlefield Enterprise Park  
Stafford Drive  
Shrewsbury  
Shropshire  
SY1 3FE  
UNITED KINGDOM

Phone +44(0)1743 812200

Email sales@wf-education.com

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**1.4 Emergency Telephone** (08:30-17:00) +44(0)1743 812200  
(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**

Flammable liquid, category 3

Acute toxicity, category 3 (dermal)

Skin corrosion/irritation, category 1B

Acute toxicity, category 4 (oral)

Acute toxicity, category 4 (inhalation)

Respiratory sensitization, category 1

Skin sensitization, category 1

Hazard to aquatic environment, category 3

H226: Flammable liquid and vapour.

H311: Toxic in contact with skin.

H314: Causes severe skin burns and eye damage.

H302: Harmful if swallowed.

H332: Harmful if inhaled.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317: May cause an allergic skin reaction.

H412: Harmful to aquatic life with long lasting effects.

**2.2 Label elements****Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



**Hazard Statements** Flammable liquid and vapour. Harmful if swallowed. Toxic in contact with skin. Harmful if inhaled. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

**Precautionary Statements** Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection / face protection. Do not breathe dust / fume / gas / mist / vapours / spray. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

## Section 3. Composition

### 3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
1,2-Diaminoethane	107-15-3	203-468-6	01-2119480383-37-XXXX	99%	Flam. Liq. 3, Acute Tox. 3 (D), Skin Corr. 1B, Acute Tox. 4 (O), Acute Tox. 4 (I), Resp. Sens. 1, Skin Sens. 1, Aquatic Chronic 3

## 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. Vapour-air mixtures are explosive.
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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.

### 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.

### 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. Neutralise with 5M hydrochloric acid. 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)	
1,2-Diaminoethane	107-15-3	99%	10.0 ppm	-	25.0 ppm	-

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 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 liquid or frozen mass.
Odour	Strong ammoniacal odour.
pH	Not applicable
Boiling Point	117 °C
Melting Point	11 °C
Flash Point	38 - 42 °C (Closed cup)

Upper Flammable Limit	14.2%
Lower Flammable Limit	2.6%
Auto Ignition	385-405 °C
Explosive Properties	Moderate/severe in confined spaces.
Oxidising Properties	No.
Vapour Pressure	13 hPa @ 20°C
Relative Density	0.9000
Water Solubility	Completely miscible in water.

## 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

<b>10.1</b> Reactivity	No data available.
<b>10.2</b> Chemical Stability	Stable under normal conditions
<b>10.3</b> Possibility of hazardous reactions	No data available.
<b>10.4</b> Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
<b>10.5</b> Incompatible Materials	Acids. Strong oxidising agents. Halogenated aromatic compounds. Aldehydes, ketones and acrylates.
<b>10.6</b> Hazardous Decomposition Products	Burning will produce toxic fumes of NO <sub>x</sub> , 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. A single prolonged exposure may result in the material being absorbed in harmful amounts. May cause skin sensitisation.
LD50 Skin	560 mg/Kg Rabbit
Ingestion	Causes severe corrosion of the mouth, throat and gastro-intestinal tract.
LD50 Oral	866 mg/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	14.7 mg/Kg Rat
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

<b>12.1</b> Toxicity	Material is practically non-toxic to fish on an acute basis (LC50 > 100mg/l. Material is moderately toxic to aquatic invertebrates on a static acute basis (LC50 1-10mg/l) Material is readily bio-degradable in the environment. Passes BOD >60%.
LC50 Algal	645 mg/L Green algae
LC50 Crustacea	16.7 mg/L Daphnia magna
LC50 Fish	640 mg/L Fish
<b>12.2</b> Persistence and degradability	No data available.
<b>12.3</b> Bioaccumulative potential	No data available.
<b>12.4</b> 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.
- 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      1604
- 14.2 Proper Shipping Name      Ethylenediamine
- 14.3 Transport classes
- UN classification      8
  - Subsidiary hazard(s)      3
  - Transport category      2
  - ADR Hazard ID      83
  - Tunnel Restriction Code      D/E
- 14.4 Packing Group      II
- 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      Flammable liquid, category 3; Acute toxicity, category 3 (dermal); Skin corrosion/irritation, category 1B; Acute toxicity, category 4 (oral); Acute toxicity, category 4 (inhalation); Respiratory sensitization, category 1; Skin sensitization, category 1; Hazard to aquatic environment, category 3

Signal word      Danger

Hazard Pictograms



Hazard Statements      H226, H302, H311, H332, H314, H334, H317, H412  
 Flammable liquid and vapour. Harmful if swallowed. Toxic in contact with skin. Harmful if inhaled. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Hazard Statements (Packs of 500ml/g or less)      H226, H302+H312, H314, H334, H317  
 Flammable liquid and vapour. Harmful if swallowed and in contact with skin. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Precautionary Statements      P210, P280, P260, P270, P301+P330+P331, P305+P351+P338  
 Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection / face protection. Do not breathe dust / fume / gas / mist / vapours / spray. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

Precautionary Statements (Packs of 500ml/g or less) P210, P280, P270, P301+P330+P331, P305+P351+P338

Keep away from heat / sparks/open flames/hot surfaces - No smoking. Wear protective gloves / protective clothing / eye protection / face protection. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

## 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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