

Revision: 2.1

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Section 1. Identification

1.1 Product Identifier 1014

Product Name 1,2-DIAMINOETHANE pure

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 Vickers Laboratories Ltd



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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°C (Closed cup)

Upper Flammable Limit	14.2%
Lower Flammable Limit	2.6%
Auto Ignition	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

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	Hot surfaces, naked flames or other sources of ignition.
10.5 Incompatible Materials	Acids. Strong oxidising agents. Halogenated aromatic compounds. Aldehydes, ketones and acrylates.
10.6 Hazardous Decomposition Products	Burning will produce toxic fumes of NO _x , 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

12.1 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
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 & 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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