



SAFETY DATA SHEET

According to (EC) 1907/2006

ETHYLENEDIAMINE 22% (EDA22%)

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1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY UNDERTAKING

1.1 Product identifier

Trade name	Allamine EDA22
Substance name	Ethylenediamine 22%
Registration number	01-2119480383-37-0000
CAS number	107-15-3
EC number	203-468-6
Index number	612-006-00-6
Product code	5405289
Synonyms	Dimethylenediamine 22% 1,2 Diaminoethane 22%

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

Uses advised against	No information
Applications of the substance	Intermediate in manufacture of sequestering agents, fungicides, textile resins and polyamide resins. Metal treatment

1.3 Details of the supplier of the safety data sheet

Supplier: Alliance Chemicals Limited Old Walls, Chapel Lane, Penselwood, BA9 8LY United Kingdom Telephone: +44 (0) 1747841222 Fax: +44 (0) 1747841333 Email: sj@alliancechemicals.com
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1.4 Emergency telephone number

+44 (0) 1747841222

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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification under CHIP	Corrosive, C, R34 Sensitising, Xn, R42/43
Classification under CLP	Respiratory sensitisation, Category 1, H334 Skin corrosion, Category 1B, H314 Skin sensitisation, category 1B, H317
Information concerning particular hazards for human and environment	May cause sensitisation by inhalation and skin contact Causes burns

2.2 Label elements


Label Elements under CLP	
Hazard Symbols	 <p>GHS05: Corrosion GHS07: Exclamation mark GHS08: Health hazard</p>
Hazard statements	<p>H314: Causes severe skin burns and eye damage H317: May cause an allergic skin reaction H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled</p>
Signal word	Danger
Precautionary statements	<p>P261 Avoid breathing dust/ fumes/ gas/ mist/ vapours/ spray P280 Wear eye protection/ face protection/ protective gloves/ protective clothing P285 In case of inadequate ventilation wear respiratory protection</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing</p>

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Label Elements under CHIP	
Hazard Symbols	 C: Corrosive
Risk phrases	R34: Causes burns R42/43: May cause sensitisation by inhalation and skin contact
Safety phrases	S23: Do not breath fumes S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S36/37/39: Wear suitable eye/face protection, protective gloves, protective clothing S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible) S63: In case of accident by inhalation, remove victim to fresh air and keep at rest

2.3 Other hazards

Results of PBT and vPvB assessment	
PBT:	Not identified as a PBT substance
vPvB:	Not identified as a vPvB substance

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Chemical characterisation: Substances

Substances				
Hazardous Substance:				
Chemical Name	CAS-No. EC-No. REACH No.	CLP Classification	CHIP Classification	Conc . %
Ethylenedia mine	107-15-3 203-468-6 01-2119480383-37-0000	Flam.Liq.3; H226 Acute Tox. 4; H302 Acute Tox. 4; H3132 Acute Tox. 3; H311 Skin Corr. 1B; H314 Resp. Sens. 1; H334 Skin Sens. 1; H317	R10 C; 34 Xn; R21/22 Sens: R42/43	22
Non Hazardous Substance:				
Water	7732-18-5 231-791-2			78

For the full text of H-Statements mentioned in this Section, see Section 16.
For the full text of R-Phrases mentioned in this Section, see Section 16.

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Candidate List of Substances of Very High Concern for Authorisation: Neither banned or restricted.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice	In case of accident or if you feel unwell seek medical advice immediately Move out of dangerous area Show this safety data sheet to the doctor in attendance
If inhaled	Remove to fresh air immediately. If not breathing give artificial respiration. Consult a physician after significant exposure
In case of skin contact	Remove contaminated clothes and shoes. Remove person from source of contamination Immediately flush with water for at least 15 minutes If skin irritation persists call a doctor
In case of eye contact	Immediately rinse with water for at least 15 minutes holding the eyelids apart. Get medical attention immediately
If swallowed	Wash mouth out with water and then drink plenty of water Never give anything by mouth to an unconscious person Get medical attention immediately DO NOT induce vomiting!

4.2 Most important symptoms and effects, both acute and delayed

If inhaled	May cause tightness in chest and shortness of breath. Exposure may cause coughing and wheezing. May cause loss of consciousness
In case of skin contact	May cause irritation or pain at the site of contact. May cause blistering or severe burns. May cause sensitisation
In case of eye contact	Risk of severe damage to the eyes. May be severe pain
If swallowed	Harmful if swallowed. There may be soreness and redness of the mouth and throat. May cause nausea and stomach pain. There may be vomiting

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4.3 Indication of any immediate medical and special treatment needed

Symptomatic treatment. If in doubt get medical attention immediately

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents	Carbon dioxide (CO ₂), water spray, alcohol-resistant foam, dry chemical powder
For safety reasons unsuitable extinguishing agents:	No information

5.2 Special hazards arising from the substance or mixture

Corrosive	
In case of fire the following can be released:	Carbon monoxide (CO) Carbon dioxide (CO ₂) Nitrogen oxides (NO _x)

5.3 Advice for fire fighters

Protective equipment:	Wear self-contained breathing apparatus and protective suit/ eye protection
Additional information:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and fire extinguishing water must be disposed of in accordance with local regulations

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation
Wear protective clothing
Use respiratory protective device against the effects of fumes/dust/aerosol
Remove all incompatible materials

6.2 Environmental precautions

Do not allow the product to penetrate the ground/soil
Do not allow the product to reach any water course/ sewage systems

6.3 Methods for cleaning up/ Methods for containment

Soak up with inert absorbent material (e.g. sand, dry earth, vermiculite)
Keep in suitable closed and labelled containers for disposal

6.4 Reference to other sections

Additional Advice:	<p>For personal protection see Section 8 For additional information on health hazards see Section 11 For additional information on safe handling see Section 7 For information on incompatible materials see Section 10 For information on collection and disposal of spillages see Section 13</p>
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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

<p>Avoid contact with skin and eyes Avoid inhalation of vapours Wear full protective clothing for prolonged exposure Ensure good ventilation at the workplace Dispose of rinse water in accordance with local and national regulations</p>

Information about protection against explosions and fires:

<p>Keep ignition sources away – No smoking Avoid the formation of aerosol</p>
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7.2 Conditions for safe storage including any incompatibilities

Requirements for storage areas and containers	<p>Do not store near heat sources or expose to high temperatures Keep container tightly closed in a dry and well ventilated place</p>
Information about storage in one common storage facility	<p>Store away from feedstuffs or foodstuffs Avoid incompatible materials and conditions</p>

7.3 Specific end use(s)

<p>No special requirement</p>

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8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Hazardous ingredients: 1,2-DIAMINOETHANE

Workplace exposure limits:

Respirable dust:

State	8 hour TWA	15. min STEL	8 hour TWA	15 min. STEL
UK	25 mg/ m3			

DNEL (Derived No Effect Level)/ PNEC (Predicted No Effect Concentration) values

Type	Exposure	Value	Population	Effect
DNEL	Dermal	10 g/l	Workers	Local
DNEL	Dermal	3.6 mg/Kg bw/day	Workers	Systemic
DNEL	Inhalation	25 mg/ m3	Workers	Systemic
PNEC	Fresh water	0.016 mg/ l	-	-
PNEC	Marine water	0.002 mg/ l	-	-
PNEC	Fresh water sediment	7.68 mg/ Kg dry weight	-	-
PNEC	Marine sediment	0.768 mg/ Kg dry weight	-	-
PNEC	Soil	4.36 mg/ Kg dry weight	-	-
PNEC	Sewage treatment plant	0.5 mg/ l	-	-

8.2 Exposure controls

Engineering controls	Effective exhaust ventilation system. Ensure that eyewash stations and safety showers are close to the workstation location.
Personal Protective equipment	
General protective and hygienic measures:	Handle in accordance with good industrial hygiene and safety practice Avoid contact with eyes, skin and clothing When using do not eat, drink or smoke Wash hands before breaks and at the end of the working day
Respiratory protection:	Gas/ vapour filter, type K: ammonia and derivatives (EN141)
Hand protection:	Butyl-rubber gloves. Alkali-resistant gloves
Eye protection:	Safety goggles. Face-shield
Skin and body protection:	Protective suit
Environmental exposure controls	Prevent product from entering drains, waterways

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Appearance:	Form: Colour: Odour: Odour threshold:	Liquid Colourless to slight yellow Ammonical Not determined
Safety data:	pH: Flash point: Ignition temperature: Water solubility: Solubility in other solvents: Viscosity: Relative density: Oxidising properties: Explosive properties:	~12.5 22% solution (20°C) >100° C 385-405°C miscible in all proportions ethanol. benzene non-viscous ~0.95 g/ ml not classified as oxidising not explosive
This safety data only contains information relating to safety and does not replace any product information or product specification		

9.2 Other information

No further relevant information is available

10. STABILITY AND REACTIVITY**10.1 Reactivity**

Stable under normal conditions

10.2 Chemical stability

Stable under recommended storage conditions (see Section 7). Stable under normal temperatures and pressures

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions
Violent reactions are possible with the below mentioned substances

10.4 Conditions to avoid

Heat, flames and sparks. Avoid contact with strong oxidizers

10.5 Incompatible materials

Materials to avoid:	Acids, alkaline, reducing agents, halogenated compounds Reacts strongly with oxidizers . Attacks copper and copper alloys
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10.6 Hazardous decomposition products

Thermal decomposition will produce nitrogen oxides
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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Route	Species	Test	Value	Units
ORAL	Rat	LD50	300-2000	mg/ Kg
VAPOURS	Rat	4H LC50	10-20	mg/ l
DERMAL	Rabbit	LD50	200-1000	Mg/ Kg

Hazardous ingredients:

1,2-DIAMINOETHANE

ORAL	Mouse	LD50	1	gm/Kg
ORAL	Rat	LD50	1200	mg/ Kg
Subcutaneous	Rat	LD50	300	mg/ Kg

Relevant effects for mixture:

Effect	Route	Basis
Corrosivity	OPT INH DRM	Hazardous: calculated
Sensitisation	INH DRM	Hazardous: calculated

Symptoms/ routes of exposure:

Skin contact	Irritation or pain may occur at the site of contact. Blistering may occur. Severe burns may occur. May cause sensitisation by skin contact
Eye contact	Risk of serious damage to the eyes. There may be severe pain. Corneal burns may occur. The eyes may water profusely
Ingestion	Harmful if swallowed. There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Corrosive burns may appear around the lips. Nausea and stomach pain may occur. There may be vomiting
Inhalation	There may be a feeling of tightness in the chest with a shortness of breath. Exposure may cause coughing or wheezing. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness. May cause irritation of the mucous membranes and respiratory system. May cause sensitisation
Delayed/ immediate effects	Immediate effects can be expected after short-term exposure
Other information	No further information is available

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Ecotoxicity values:

Species	Test	Value	Units
Poecilia reticulata (Guppy)	96H LC50	>100	mg/l
Daphnia magna	48H EC50	10-100	mg/l
Pseudokirchneriella subcapita (Green A)	72H EC50	>100	mg/l

12.2 Persistence and biodegradability**Readily biodegradable (according to OECD criteria)****12.3 Bioaccumulation potential****Not expected considering the low log Pow value****12.4 Mobility in soil****This product is soluble in water****12.5 Results of PBT and vPvB assessment****This substance is not considered to be PBT (Persistent, Bioaccumulating, Toxic)
This substance is not considered to be vPVB (very Persistent nor very Bioaccumulating)****12.6 Other adverse effects****Harmful to fauna. Do not allow to enter watercourses or soils. Large doses causes high/ low pH which may affect effluent and sewage treatment processes. Discharge of large quantities may kill fish and other aquatic life due to increase/ decrease in pH. Harmful to aquatic organisms. Spillage in sewers or waterways must be avoided**

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	This product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container Hazardous waste
Contaminated packaging:	Contaminated packaging must not be treated as household waste. Dispose of in accordance with regional or national regulations.

14. TRANSPORT INFORMATION

14.1 UN number: 2735

14.2 UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S (1-2 DIAMINOETHANE)

14.3 Transport hazard class(es): 8

14.4 Packing group: II

14.5 Environmental hazards

Environmentally hazardous	No
Marine pollutant	No

14.6 Special precautions for user

Special precautions	No special precautions
Tunnel code	E
Transport category	2

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture

Specific regulations	No specific applicable legislation
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15.2 Chemical Safety Assessment

A chemical safety assessment has been carried out for 1-2 DIAMINOETHANE by the producer
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16. OTHER INFORMATION

Full Text Of H-Statements Referred To Under Sections 2 And 3	
H226:	Flammable liquid and vapour
H302:	Harmful if swallowed
H312:	Harmful in contact with skin
H314:	Causes severe burns and eye damage
H317:	May cause an allergic skin reaction
H334:	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Full Text Of R-Phrases Referred To Under Sections 2 And 3	
R10:	Flammable
R21/22:	Harmful in contact with skin, or if swallowed
R34:	Causes burns
R42/43:	May cause sensitisation by inhalation and skin contact
Explanation For Possible Abbreviations Mentioned In Section 2	
PBT:	Persistent, bioaccumulative and toxic
vPvB:	Very persistent and very bioaccumulative
OEL:	Occupational exposure limit

For the full exposure scenario see Appendix attached to the Akzo Nobel Safety Data Sheet For Ethylenediamine (EDA).

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Author: Steven Johnston

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