

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING****Product information**

Trade name : Redflow EAG (Hardener)

**Red Rock (2004) Ltd.**

P.O.Box 12091

Birmingham B13 9WS

Fax 0121 246 4441

Tel: (0044) 0870 910 7799

Email: info@redrock-uk.co.uk

**2. COMPOSITION/INFORMATION ON INGREDIENTS****Chemical nature**

Aliphatic polyamine preparation

**Hazardous components**

Chemical Name	CAS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
trimethylhexamethylenediamine EC-No.: 247-134-8	25620-58-0	C	R22 R34 R43 R52/53	80-100

**3. HAZARDS IDENTIFICATION**

Causes burns.

Harmful in contact with skin and if swallowed.

May cause sensitization by skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**4. FIRST AID MEASURES**

- Inhalation : Move to fresh air.  
Oxygen or artificial respiration if needed.  
Call a physician immediately.
- Eye contact : Rinse immediately with plenty of water for at least 15 minutes.  
Call a physician immediately.
- Skin contact : Clean with detergents. Avoid solvents.
- Ingestion : Call a physician immediately.  
Immediately give plenty of water (if possible charcoal slurry).  
If a person vomits when lying on his back, place him in the recovery position.  
Do not induce vomiting.

**5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Water spray.  
Carbon dioxide (CO<sub>2</sub>).  
Foam.  
Dry powder.
- Extinguishing media which must not be used for safety : High volume water jet.

reasons  
 Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.  
 Further information : Burning produces obnoxious and toxic fumes.  
 Carbon oxides.  
 Nitrogen oxides.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions : Keep away from sources of ignition - No smoking.  
 Avoid contact with skin, eyes and clothing.  
 Do not breathe vapours/dust.  
 Environmental precautions : Prevent product from entering drains.  
 Do not contaminate surface water.  
 Avoid subsoil penetration.  
 Methods for cleaning up : Soak up with inert absorbent material and dispose of as hazardous waste.

**7. HANDLING AND STORAGE**

**Handling**

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.  
 Avoid formation of aerosol.  
 Ensure adequate ventilation.  
 Keep away from sources of ignition - No smoking.  
 Handle and open container with care.

**Storage**

Further information on storage conditions : Keep away from food, drink and animal feeding stuffs.  
 Keep container tightly closed.  
 Store at room temperature in the original container.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Control parameters	Update	Basis
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**Engineering measures**

No special precautions required.

**Personal protective equipment**

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.

Eye protection	:	Tightly fitting safety goggles. Face-shield.
Hand protection	:	rubber or plastic gloves
Skin and body protection	:	Protective suit. Safety shoes.
Protective measures	:	Keep away from sources of ignition - No smoking. Avoid contact with skin, eyes and clothing.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Colour	:	Colourless to light yellow clear
Odour	:	amine-like
pH	:	approx.11 at (20 °C) 1:1 in water
Boiling point	:	> 200 °C
Thermal decomposition	:	> 200 °C
Flash point	:	108 °C Method: DIN 51758 (Pensky-Martens Closed Cup)
Vapour pressure	:	< 2 Pa at 20 °C
Density	:	0.89 - 0.9 g/cm <sup>3</sup> at 25 °C
Water solubility	:	at 20 °C Note: partly soluble
Miscibility with water	:	miscible
Viscosity, dynamic	:	5 - 20 mPa.s at 25 °C

### 10. STABILITY AND REACTIVITY

Conditions to avoid	:	Note: Take necessary action to avoid static electricity discharge.
Materials to avoid	:	Strong acids and strong bases. Strong oxidizing agents.
Hazardous decomposition	:	Carbon oxides.

products

Nitrogen oxides. Burning produces obnoxious and toxic fumes.

#### 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 rat Dose: 1,000 mg/kg
Eye irritation	:	Corrosive rabbit
Skin irritation	:	Corrosive rabbit dermal
Sensitization	:	Causes sensitization. guinea pig dermal

#### 12. ECOLOGICAL INFORMATION

##### Ecotoxicity effects

##### Further information on ecology

Additional ecological information	:	Avoid subsoil penetration. Prevent product from entering drains. Do not contaminate surface water.
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#### 13. DISPOSAL CONSIDERATIONS

Container	:	Empty containers can be landfilled after cleaning, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.
Product	:	Waste Key Number: 55352 Must be incinerated, when in compliance with local regulations.

#### 14. TRANSPORT INFORMATION

##### Land transport

ADR:

UN-No:	2327
Class:	8
Classification code:	C7
Packaging group:	III
Risk No.:	80

ADR/RID-Labels: 8  
Proper shipping name: TRIMETHYLHEXAMETHYLENEDIAMINE SOLUTION

*RID:*

UN-No: 2327  
Class: 8  
Packaging group: III  
Risk No.: 80  
ADR/RID-Labels: 8  
Proper shipping name: TRIMETHYLHEXAMETHYLENEDIAMINE SOLUTION

**Sea transport**

*IMDG:*

UN-No: 2327  
Class: 8  
Packaging group: III  
ADR/RID-Labels: 8  
MFAG:  
EmS: F-A S-B  
Proper shipping name: TRIMETHYLHEXAMETHYLENEDIAMINES SOLUTION

**Air transport**

*IATA-DGR:*

UN/ID No.: UN 2327  
Class: 8  
Packaging group: III  
Packing instruction (cargo aircraft): 820  
Max. Qty/Pack.: 60.00 L  
( 999.00 = No limit )  
Packing instruction (passenger aircraft): 818  
Max. Qty/Pack.: 5.00 L  
( 999.00 = No limit )  
ADR/RID-Labels: 8  
Proper shipping name: TRIMETHYLHEXAMETHYLENEDIAMINES SOLUTION

**15. REGULATORY INFORMATION**

**Labelling according to EEC Directive**

Labelling required

Symbol(s):	: C	Corrosive
R-phrase(s):	: R34 R21/22 R43 R52/53	Causes burns. Harmful in contact with skin and if swallowed. May cause sensitization by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

S-phrase(s) : S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

Hazardous components : trimethylhexamethylenediamine  
which must be listed on the label EC-No.: 247-134-8

**National legislation**

**Notification status**

: EINECS yes

**16. OTHER INFORMATION**

**List of R-phrases (Section 2)**

R21/22 Harmful in contact with skin and if swallowed.  
R22 Harmful if swallowed.  
R34 Causes burns.  
R43 May cause sensitization by skin contact.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The provision of Safety Data Sheets comes under Regulation 6 of CHIP (CHIP is the recognised abbreviation for the Chemicals Hazard Information and Packaging Regulations). This is an addition to the Health and Safety at Work Act 1974. Users of this product should take appropriate measures to ensure working practices are in accordance with the Control of Substances Hazardous to Health Regulations (COSHH).

All information is based on results gained from experience and tests and is believed to be accurate but is given without acceptance of liability for loss or damage attributable to reliance thereon as conditions of use lie outside our control. Users should always carry out sufficient tests to establish the suitability of any products for their intended applications. No statements shall be incorporated in any contract unless expressly agreed in writing nor construed as recommending the use of any product in conflict of any patent.

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