

## Section 1. Identification

### 1.1 Product Identifier 2619

Product Name	TYTRONICS MANGANESE ALKALINE REAGENT (R1)
CAS Number	Mixture
REACH Registration No	A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.

### 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.
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### 1.3 Supplier Vickers Laboratories Ltd



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UNITED KINGDOM

Phone	44 0113 2362811
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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.
Spec target organ tox - single, category 3	H335: May cause respiratory irritation.
Hazard to aquatic environment, category 3	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	Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
Precautionary Statements	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves / protective clothing / eye protection / face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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

### 3.2 Mixtures

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Ethanolamine	141-43-5	205-483-3	01-2119486455-28-XXXX	45%	Skin Corr. 1B, Acute Tox. 4 (O), Acute Tox. 4 (D), Acute Tox. 4 (I), STOT SE 3 (I), Aquatic Chronic 3
Hydrochloric acid	7647-01-0	231-595-7	01-2119484862-27-XXXX	3.4%	Skin Corr. 1A, 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.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. If irritation persists or there is any sign of skin damage, seek IMMEDIATE MEDICAL ASSISTANCE
Inhalation	Remove from exposure. Keep warm and at rest. Remove from exposure. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. 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	Consider what other flammable materials are present and act accordingly.
Unsuitable Media	Nothing specified.

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

Hazards	Presents no specific fire danger.
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### 5.3 Advice for firefighters

Advice for firefighters	Consider all other materials in the vicinity.
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## Section 6. Accidental Release Measures

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

Personal Protection	Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow other people to enter area. Do not allow general use of area until it is safe to do so.
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### 6.2 Environmental precautions

Environmental	Keep non-neutralised 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 container for removal. Wash area down with copious amounts of water.
Minor Spillage	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

Store in a dry place protected against moisture and water. Keep well separated from acids.

### 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	
Ethanolamine	141-43-5	45%	1.0 ppm	2.5 mg/m-3	3.0 ppm	7.6 mg/m-3
Hydrochloric acid	7647-01-0	3.4%	1.0 ppm	2.0 mg/m-3	5.0 ppm	8.0 mg/m-3

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 organic vapour respirator, or use self contained breathing apparatus.
Hand Protection	Use nitrile gloves or PVC gauntlets.
Eye Protection	Use chemical full face shield.
Skin Protection	Avoid contact with skin. 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	Pale straw coloured liquid.
Odour	Faint 'amine-like: odour.
pH	14 @ 20°C
Boiling Point	Not available
Melting Point	Not applicable
Flash Point	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	No.
Vapour Pressure	Not applicable
Relative Density	1.0300
Water Solubility	Completely 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	Acids. Strong oxidising agents.
10.6	Hazardous Decomposition Products	May produce hazardous fumes if involved in a fire.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

Eyes	The liquid will cause severe burns.
Skin	The liquid will cause severe burns.
LD50 Skin	Not available
Ingestion	Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus.
LD50 Oral	>2000mg/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.

## Section 12. Ecological

12.1	Toxicity	Small amounts present no specific environmental hazard. Neutralised material presents no specific environmental hazard.
	LC50 Algal	Not available
	LC50 Crustacea	Not available
	LC50 Fish	Not available
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.
Contaminated Packaging	Wash out containers with water. Use a licensed waste disposer.

## Section 14. Transport Information

14.1 UN Number	2491
14.2 Proper Shipping Name	Ethanolamine
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); Spec target organ tox - single, category 3; Hazard to aquatic environment, category 3

Signal word Danger

Hazard Pictograms



Hazard Statements H302, H314, H335, H412  
Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.

Precautionary Statements P264, P270, P280, P301+P330+P331, P303+P361+P353, P305+P351+P338  
Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves / protective clothing / eye protection / face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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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