SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Issue 3 - Revision Date 17.01.2011
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1. IDENTIFICATION OF PREPARATION AND OF COMPANY

Brand name : RED SEA

Product name : **MAGNESIUM PRO TEST KIT**

Product category : AQUARIUM WATER QUALITY TEST KIT

Product code : R21415

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Emergency No. : As appropriate above

2. HAZARD INDENTIFICATION

Classification for supply :

Reagent A – Classified as being **Corrosive** C, R34

Reagent B – Not classified as being hazardous

Reagent C – Not classified as being hazardous

Health / physical hazard :

Reagent A – Causes burns

Environmental hazard : **None**

Physico-chemical hazard :

Reagent A – May corrode metals and produce flammable vapours

3. COMPOSITION / INFORMATION ON INGREDIENTS

	Hazardous component	Classification	CAS No.	Conc.
Reagent A	Potassium hydroxide	C – R22, R35	1310-58-3	1 - 5%
	Sodium tetraborate $10H_20$	T, Repr. Cat 2 – R60, R61	1303-96-4	1 - 5%
	Oxalic acid	Xn – R21/22	144-62-7	1 - 5%

Classification symbol / letter and R phrases – Refer to section 16 where the full text of each relevant symbol / R phrase is listed

4. FIRST AID MEASURES

General advice : Seek medical advice and show this safety data sheet to attending medical personnel.

Eye contact : In case of contact with eyes, rinse immediately with plenty of flowing water for at least 15 minutes, occasionally lifting eyelids and seek medical advice.

Skin contact : After contact with skin, remove any contaminated clothing and wash immediately with plenty of soap and water. If any irritation occurs after this, seek medical advice. Wash contaminated clothing before re-use.

Ingestion : Never give anything by mouth to an unconscious person.
Wash out mouth with water and obtain medical attention immediately. Do not induce vomiting, unless instructed by medical personnel.

Inhalation : If adverse effects (*e.g. irritation of airways, drowsiness or dizziness*) occur, remove from exposure, rest and keep warm. Seek medical advice immediately.

5. FIRE FIGHTING MEASURES

Fire and explosive properties : The reagents tend to be water based and are not combustible or explosive.

Suitable extinguishing media : Use extinguishing media suitable to the surroundings such as, Dry Chemical Powder, Chemical Foam, Water Spray and Carbon dioxide.

Special exposure hazards : When heated sufficiently, product may decompose to form smoke and toxic fumes, gases or vapours that may cause dizziness. Wear approved self-contained breathing apparatus, protective clothing and prevent contact with skin and eyes. Avoid run-off water from entering drains though the use of barriers or sorbent materials.

6. ACCIDENTIAL RELEASE MEASURES

Appropriate to size of spillage.

Personal precautions : Refer to section 8 of the safety data sheet for personal protection details. Avoid contact with skin and eyes. Do not breathe any vapours and keep unauthorised personnel from the spillage area.

Environmental precautions : Do not allow any liquid to be washed down drains or natural water courses if safe to do so. Contact authorities, water company, and waste water treatment plant as appropriate if significant contamination occurs.

Clean-up procedure : In the event of spillage, clean up as soon as possible. Small spills can be mopped up with a dry cloth or paper tissue. Collect larger spills with sorbent material or mixed with sand then place in a suitable container for disposal as solid waste in accordance with local or national regulations. Wash contaminated surfaces with water. In the case of a large spill follow prescribed advice in section 6 – "Environmental Precautions" and collect washings for disposal.

7. HANDLING AND STORAGE

Handling requirements : Handle liquids carefully taking care to avoid contact with skin and eyes, and inhalation of any mists or vapours. When handling large quantities, wear personal protective equipment as described in section 8 and good general ventilation is recommended.

Storage requirements : Keep only in original container. Avoid large temperature changes and store in a cool, dry, well ventilated environment way from direct sunlight. Keep containers closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

During normal non-professional use of the chemical kit no personal protective equipment is required. However, in case of manufacture or spillage, use as appropriate to the size of the spill.

Exposure limit values : Generally not applicable to the packed liquids due to small volumes of liquid being handled coupled with very short exposure times and packaging type.

Potassium hydroxide :	STEL 15min 2mg/m^3 (UK EH40 OES)
Sodium tetraborate $10H_20$:	8hr TWA 1mg/m^3 (UK EH40 OEL)
Oxalic acid :	8hr TWA 1mg/m^3 (UK EH40 OEL), STEL 2mg/m^3 (UK EH40 OEL)

Exposure controls : None when handling packed liquids in kit form.
For large volumes, good general ventilation is recommended. Where conditions may lead to high airborne concentrations, local exhaust ventilation may be necessary to ensure that workplace exposure limits are not exceeded.

Take measure to prevent : Spillage, skin and eye contact, and ingestion.

Personal protective equipment : For professional use, the need for personal protective equipment should be based on a workplace risk assessment. Avoid skin contact by wearing chemical resistant gloves (e.g. rubber, neoprene, nitrile) and safety goggles. Where more extensive contact may occur, wear suitable protective clothing (e.g. apron, sleeves and boots). Personal protective equipment should be chosen in consultation with the manufacturer or distributor of the equipment.

Respiratory protection : Respiratory protection is not necessary if kit is used in accordance with manufacturer's instructions.
If required, use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate, use with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges.

Hand protection : Protective gloves.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection : Face shield and safety goggles.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 166 derived from it.

Skin and body protection : Protective clothing; laboratory coat, apron, arm protection etc.
Choose body protection according to the amount and concentration of the dangerous substance being used.

Hygiene measures : Handle in accordance with good hygiene and safety practices, and wash hands after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

REAGENT A

Appearance :	Colourless liquid	**Flash point (°C) :**	Not applicable
Odour :	None	**Flammability :**	Liquid is non-combustible
pH :	11	**Oxidising properties :**	Not applicable
Density :	Not determined	**Solubility (water) :**	Completely soluble to give an alkaline solution
Boiling point :	Not determined	**Other :**	

REAGENT B

Appearance :	Dark red liquid	**Flash point (°C) :**	Unknown
Odour :	None	**Flammability :**	Liquid is non-combustible
pH :	Not determined	**Oxidising properties :**	Not applicable
Density :	Not determined	**Solubility (water) :**	Completely soluble to give a neutral solution.
Boiling point :	Not determined	**Other :**	

REAGENT C

Appearance :	Colourless liquid	**Flash point (°C) :**	Unknown
Odour :	None	**Flammability :**	Liquid is not combustible
pH :	Not determined	**Oxidising properties :**	Not applicable
Density :	Not determined	**Solubility (water) :**	Completely soluble to give an alkaline solution.
Boiling point :	Not determined	**Other :**	

10. STABILITY AND REACTIVITY

Stability : Reagents stable under recommended storage and handling conditions.

Conditions to avoid: Long term exposure to heat and direct sunlight.

Materials to avoid : Acids, alkalis, oxidising compounds and metals. May produce heat.

Decomposition products : Toxic fumes may be evolved on thermal decomposition.

11. TOXICOLOGICAL INFORMATION

The preparations / reagents have not been tested for toxicological effects. Based on the known effects of the ingredients, the product is classified for human health effects as indicated;

Acute toxicity : No compounds present in the reagents have been identified as having acute toxic properties.

Corrosivity / Irritation : **Reagent A** is classified as being corrosive due to the level of Potassium hydroxide present and will cause local damage in contact with tissue of the eyes and skin. Inhalation of spray or mist will irritate the respiratory system and ingestion will damage the linings of the mouth, throat and gastro-intestinal tract.

Sensitisation : No compounds present in the reagents have been identified as having sensitising properties.

Repeated-dose toxicity : No compounds present in the reagents have been identified as having repeated-dose toxicity properties.

Carcinogenicity / Mutagenicity / Reproductive toxicity : **Reagent A** contains Sodium tetraborate decahydrate, but at levels below the threshold for classification. This compound has been found to have effects on reproduction and fertility

12. ECOLOGICAL INFORMATION

Ecotoxicological data has not been determined specifically for the preparations / reagents, but are not classified as toxic on the basis of the known hazards of components present;

Mobility : Though there is no specific information on the mobility of compounds in the reagents, they are soluble under normal environmental conditions in water so would also be expected to be highly mobile in soil.

Persistence and degradability : Compounds present in the reagents would be readily bio-degradable in the environment.

Bioaccumulation : No information available.

Ecotoxicity : No components in the reagents have been shown to be hazardous to aquatic organisms. However, **Reagent A** is alkaline so may be inadvertently hazardous to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

User's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Waste residues : Hazardous residues.

Safe handling of waste product : Landfill or burn in accordance with local regulations.

Disposal of product : According to Special Waste Regulations

EWC (European waste code) recommendation : 16 03 05
16 Wastes not otherwise specified in the lists
03 Off specification batches and unused products
05 Organic wastes containing dangerous substances
Depending on the origin and state of the waste, other EWC numbers may be applicable.

Disposal of packaging : According to Special Waste Regulations

EWC (European waste code) recommendation : 15 01 10
15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
01 Packaging (including separately collected municipal waste).
10 Packaging containing residues of or contaminated by dangerous substances.
Depending on the origin and state of the waste, other EWC numbers may be applicable.

14. TRANSPORTATION INFORMATION

Land transport

RID/ADR hazard classification : 9
Packing group : II
UN No. : UN 3316
Shipping name : CHEMICAL KIT

Maritime transport

IMO – IMDG hazard class : 9
Packing group : II
UN No. : UN 3316
Shipping name : CHEMICAL KIT

Air transport

ICAO/IATA classification : 9
Packing group : II
UN No. : UN 3316
Shipping name : CHEMICAL KIT

15. REGULATORY INFORMATION

EEC labelling information Classified according to CHIP (Chemical Hazard information and packaging) regulations.

MAGNESIUM REAGENT A

Hazard symbols : **Corrosive** : C 

Contains : Potassium hydroxide
Sodium tetraborate

R phrase(s) : R34 Causes burns

S phrase(s) :
S1/2 Keep locked up and out of reach of children
S37/39 Wear suitable gloves and eye/face protection
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash off immediately with plenty of water
S46 If swallowed seek medical advice immediately and show this container or label.

Other regulatory information:

MAGNESIUM REAGENT B

Hazard symbols : **Not classified**

Contains :

R phrase(s) : None

S phrase(s) :
S2 Keep out of reach of children
S46 If swallowed seek medical advice immediately and show this container or label.

Other regulatory information:

MAGNESIUM REAGENT C

Hazard symbols : **Not classified**

Contains :

R phrase(s) : None

S phrase(s) :
S2 Keep out of reach children
S46 If swallowed seek medical advice immediately and show this container or label.

Other regulatory information:

16. OTHER INFORMATION

Nature of revision : Web site address updated and contact details changed in Section 1.

Based on EC directive : The classification of this product has been assessed according to the calculations given in 99/45/EC and its amendments, and regulation (EC) No.1272/2008 on classification, labelling and packaging of substances and mixtures on the basis of available information for the ingredients from supplier safety data sheets and the Existing Chemical Substances Information System found on the European Chemical Bureau website; http://ecb.jrc.ec.europa.eu/esis/.

Relevant R phrases used in section 3 :
T Toxic
C Corrosive
Xn Harmful
Repr. Cat 2 Repro-toxic category 2
R21/22 Harmful in contact with skin and if swallowed
R22 Harmful if swallowed
R35 Causes severe burns
R60 May impair fertility
R61 May cause harm to the unborn child

Usage advice : This safety data sheet is provided to enable the employer / user to fulfil his duties to assess and provide information on risks in the work place as required under regional health and safety legislation.
Read accompanying information, use only in accordance to manufacturer's instructions.

Recommended uses / restrictions : To measure semi-quantitatively the Magnesium levels in aquarium water.

Other information : The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage from handling or from contact with the above product.