

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product name	Rapid Clean
Product number	RCL-0400
Brand	ReefX®
Substance name	1,2,3-Propanetricarboxylic acid, 2-hydroxy-
EC no.	201-069-1
CAS no.	77-92-9

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

For cleaning of empty aquariums, aquarium tools and equipment, where an acidic solution is produced by dissolving in water.

**1.3 Details of the supplier of the safety data sheet**

Name	Live Reef Ltd
Address	8-9 Mountbatten Road EX16 6SW Tiverton Devon UK
Telephone	+44 (0)800 8620270
email	info@livereef.uk

**1.4 Emergency telephone number**

Live Reef Distribution Ltd  
+44 (0)800 8620270

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 (CLP)

**2.2 Label elements**

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal word

Warning

Hazard statement(s)

H319

Causes serious eye irritation

**Precautionary statement(s)**

P264

P280

P337+P313

P305+P351+P338

Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If eye irritation persists: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**2.3 Other hazards**

Not Classified as PBT/vPvB by current EU criteria.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Substance name	1,2,3-Propanetricarboxylic acid, 2-hydroxy-
EC no.	201-069-1
CAS no.	77-92-9
Formula	C6H8O5
Molecular weight	192.14
Other names / synonyms	1,2,3-Propanetricarboxylic acid, 2-hydroxy-; Acidum citricum; Citric acid; 2-Hydroxy-1,2,3-propanetricarboxylic acid

**SECTION 4: First aid measures****4.1 Description of first aid measures**

Following inhalation	Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.
Following skin contact	Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists.
Following eye contact	Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.
Following ingestion	Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

**4.2 Most important symptoms and effects, both acute and delayed**

Irritation, Nausea, Headache, Shortness of breath.

**4.3 Indication of any immediate medical attention and special treatment needed**

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop as described the casualty should be transferred to hospital as soon as possible. For further information, please refer to section 11.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Water spray. Carbon dioxide. Dry chemical powder. Foam.

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

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

### 5.3 Advice for firefighters

Use NIOSH-approved respiratory protection/breathing apparatus.

Wear protective clothing to prevent contact with skin and eyes.

Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

#### Further information

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

Use spark-proof tools and explosion-proof equipment.

## SECTION 6: Accidental release measures

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

Wear protective equipment.

Transfer to a disposal or recovery container.

Use spark-proof tools and explosionproof equipment.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Keep unprotected persons away.

Ensure adequate ventilation.

Keep away from ignition sources.

Protect from heat.

Stop the spill if possible.

Contain spilled material by diking or using inert absorbent.

### 6.2 Environmental precautions

Do not discharge into drains or rivers.

Inform the relevant authorities if the product has caused environmental pollution. (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

Sweep up or vacuum up spillage.

Transfer to a closable, labelled salvage container for disposal by an appropriate method.

Wash the spillage site with large amounts of water.

Refer to section 13 of SDS for suitable method of disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Minimize dust generation and accumulation.

Wash hands after handling.  
 Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).  
 Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.  
 Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.  
 Follow good hygiene procedures when handling chemical materials.  
 Do not eat, drink, smoke, or use personal products when handling chemical substances.  
 Use only in well ventilated areas.  
 Avoid generation of dust or fine particulate.  
 Avoid contact with eyes, skin, and clothing.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well ventilated area.  
 Avoid storage near extreme heat, ignition sources or open flame.  
 Store away from foodstuffs.  
 Store away from oxidizing agents.  
 Store in cool, dry conditions in well sealed containers.  
 Keep container tightly sealed.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 1. Citric acid (CAS: 77-92-9 EC: 201-069-1)

Parameter	TWA
Route of exposure	Inhalation
Value	10 mg/m <sup>3</sup> total dust
Parameter	TWA
Route of exposure	Inhalation
Value	4 mg/m <sup>3</sup> respirable dust

### 8.2 Exposure controls

#### Appropriate engineering controls

Ensure there is sufficient ventilation of the area.

#### Personal protection equipment

#### Pictograms



#### Eye and face protection

Safety glasses with side-shields (European standard - EN 166).

#### Skin protection

Protective gloves (European standard - EN 374).

Suitable materials include nitrile rubber, neoprene, natural rubber and PVC.

#### Body protection

Wear appropriate clothing to prevent any possibility of skin contact.

**Respiratory protection**

Not required under normal conditions of use.

Use suitable respiratory protective device when high concentrations are present.

Wear suitable respiratory protection when aerosols or mist are present meeting particle filter class P1 (EN143).

**Environmental exposure controls**

Ensure all engineering measures mentioned in section 7 of SDS are in place.

Prevent from entering in public sewers or the immediate environment.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance	Solid white crystals
Odour	Odorless
Odour threshold	No data available
pH	1.8 at ca.50 g/l at 25 °C
Melting point / freezing point	153 - 159 °C
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	Not applicable
Flammability (solid, gas)	No data available
Upper/lower flammability limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.665 @ 20 °C
Solubilit(ies)	Water : >=100 mg/mL @ 22 °C (RAD) DMSO : >=100 mg/mL @ 22 °C (RAD) 95% Ethanol : >=100 mg/mL @ 22 °C (RAD) Methanol : Not available Acetone : >=100 mg/mL @ 22 °C (RAD) Toluene : Not available Amyl alcohol: 15.43 g/100 g Amyl acetate: 5.98 g/100 g Ethyl acetate: 5.28 g/100 g Methanol: 197 g/100 g Propanol: 62.8 g/100 g Ether : Moderately soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	1010 °C
Decomposition temperature	No data available
Viscosity	Not applicable
Explosive properties	No data available
Oxidising properties	No data available

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Violent reaction with: Strong alkalis. Strong oxidising agents.

**10.2 Chemical stability**

Stable under normal temperature conditions and recommended use.

**10.3 Possibility of hazardous reactions**

Not known.

**10.4 Conditions to avoid**

Store away from oxidizing agents, strong acids or bases.

**10.5 Incompatible materials**

Strong alkalis. Strong oxidising agents.

**10.6 Hazardous decomposition products**

Fire or high temperatures create: Irritating gases/vapours/fumes of Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>).

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Toxic Dose 1: LD 50, 5040 mg/kg (oral-mouse)

Toxic Dose 2: LD 50, 3000 mg/kg (oral rat)

Acute Toxicity (Oral LD50) > 7000 mg/kg Rabbit

ATE (Oral) 3000 mg/kg

**Skin corrosion/irritation**

Skin irritation is not anticipated when used normally.

**Serious eye damage/irritation**

Causes serious eye irritation.

Particles in the eyes may cause irritation and smarting.

**Respiratory or skin sensitization**

Dust may irritate respiratory system or lungs.

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

No specific target organs noted.

**STOT-repeated exposure**

No specific target organs noted.

**Aspiration hazard**

Not anticipated to present an aspiration hazard based on chemical structure.

## SECTION 12: Ecological information

### 12.1 Toxicity

Not considered toxic to fish.  
LC 50, 96 Hrs, Fish mg/l 440 - 760.

### 12.2 Persistence and degradability

Readily degradable in the environment.

### 12.3 Bioaccumulative potential

No data available on bioaccumulation.

### 12.4 Mobility in soil

The product is soluble in water.

### 12.5 Results of PBT and vPvB assessment

This product is not identified as a PBT or vPvB substance.

### 12.6 Other adverse effects

None known.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Waste treatment

Recover and reclaim or recycle, if practical.  
Dispose of waste and residues in accordance with local authority requirements.

## SECTION 14: Transport information

14.1 UN Number	None
14.2 UN Proper Shipping Name	None
14.3 Transport hazard class(es)	None
14.4 Packing group	None
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	None

## SECTION 15: Regulatory information

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

#### EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and

Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

#### International chemical inventories

Complies with the following national/regional chemical inventory requirements:  
 Australia (AICS), Canada (DSL / NDSL), China (IECSC), Europe (EINECS / ELINCS), Japan (METI / ENCS), Korea (TCCL / ECL), New Zealand (NZIoC), Phillipines (PICCS), United States (TSCA).

#### National Regulations

In accordance with Dutch Mining Regulation 9.2 and ARBO regulation Chapter 4.

#### UK Regulatory References

Chemicals (Hazard Information & Packaging) Regulations. Control of Substances Hazardous to Health Regulations 2002 (as amended) Workplace Exposure Limits EH40.

#### Water hazard classification

WGK 1.

## 15.2 Chemical Safety Assessment

Yes

#### HMIS Rating

1,2,3-Propanetricarboxylic acid, 2-hydroxy-	
<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<b>X</b>

#### NFPA Rating



## SECTION 16: Other information

#### Further information/disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.