

## SMART CELL Cleaning Kit MSDS

according to Regulation (EC) No. 1907/2006 (REACH)

### Section 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Product Name: Smart Cell Cleaning Kit

Part Number: 110707, 111023

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

Relevant identified uses:

General chemical reagent

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

Company name: Rivertrace Limited

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## Section 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### 2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements
Eye irritation, category 2	H319

### 2.2 Label elements

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



#### 2.2.2 Hazard pictograms

Signal word: Warning

Hazard statements	
H319	Causes serious eye irritation.

Precautionary statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards

none

## Section 3: Composition / information on ingredients

### 3.1 Substances

Substance name	Citric acid
Molecular formula	C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>
Molecular weight	192.13 g/mol
CAS No.	77-92-9
REACH registration No.	01-2119457026-42-XXXX
INDEX No.	000-000-00-0

## Section 4: First aid measures

### 4.1 General information

IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

### 4.2 After inhalation

Call a POISON CENTRE/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

### 4.3 In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

### 4.4 After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

### 4.5 In case of ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

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## 4.6 Most important symptoms and effects, both acute and delayed

no data available

## 4.7 Indication of any immediate medical attention and special treatment needed

no data available

## 4.8 Self-protection of the first aider

First aider: Pay attention to self-protection!

## 4.9 Information to physician

no data available

# Section 5: Firefighting measures

## 5.1 Extinguishing media

### 5.1.1 Suitable extinguishing media

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

### 5.1.2 Extinguishing media which must not be used for safety reasons

no restriction

## 5.2 Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide

Carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.

Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

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## 5.4 Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases.

Use water spray jet to protect personnel and to cool endangered containers. In case of fire: Evacuate area.

## Section 6: Accidental release measures

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

Avoid generation of dust.

### 6.2 Environmental precautions

Do not allow to enter into surface water or drains.

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

Spilled product must never be returned to the original container for recycling. Clean contaminated objects and areas thoroughly observing environmental regulations. Collect in closed and suitable containers for disposal.

### 6.4 Additional information

Clear spills immediately.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

All work processes must always be designed so that the following is as low as possible: Inhalation skin contact Eye contact If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Usual measures for fire prevention. Handle under (Gas): Protective gas, dry

### 7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: 15-25°C Storage class: 10-13

Keep container tightly closed and in a well-ventilated place.

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## 7.3 Specific end use(s)

no data available

## Section 8: Exposure controls/personal protection

### 8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### 8.2.2 Personal protection equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

##### Eye/face protection

Eye glasses with side protection DIN-/EN-Norms: DIN EN 166 Recommendation: VWR 111-0432

##### Skin protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms: DIN EN 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

##### By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time (maximum wearing time):	> 480 min
Recommended glove articles:	VWR 112-0998

##### By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm

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Breakthrough time (maximum wearing time): > 480 min

Recommended glove articles: VWR 112-3717 / 112-1381

## Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Suitable respiratory protection apparatus: Filtering Half-face mask (DIN EN 149)

Recommendation: VWR 111-0451

Suitable material: P3

Recommendation: VWR 111-0244

## Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

### **8.2.3 Environmental exposure controls**

no data available

## **Section 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- (a) Appearance
  - Physical state:solid
  - Colour:white
- (b) Odour: odourless
- (c) Odour threshold: no data available

### **9.2 Safety relevant basic data**

- (d) pH: 1.7 (100 g/l; H<sub>2</sub>O; 20 °C)
- (e) Melting point/freezing point: 149-151 °C
- (f) Initial boiling point and boiling range: 310 °C (1013 hPa)
- (g) Flash point: 345 °C (closed cup)
- (h) Evaporation rate: no data available
- (i) Flammability (solid, gas): not applicable

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- (j) Flammability or explosive limits
  - Lower explosion limit: no data available
  - Upper explosion limit: no data available
- (k) Vapour pressure: < 0.1 hPa (20 °C)
- (l) Vapour density: no data available
- (m) Relative density: 1.665 g/cm<sup>3</sup> (20 °C)
- (n) Solubility(ies)
  - Water solubility (g/L): 1,330 g/l (20 °C)
  - Soluble (g/L) in Ethanol: no data available
- (o) Partition coefficient: n-octanol/water: -1.72 (20 °C)
- (p) Auto-ignition temperature: 540 °C
- (q) Decomposition temperature: 153 °C (1013 hPa)
- (r) Viscosity
  - Kinematic viscosity: no data available
  - Dynamic viscosity: no data available
- (s) Explosive properties: not applicable
- (t) Oxidising properties: not applicable

## 9.3 Other information

Bulk density: 1.665 g/cm<sup>3</sup> (20 °C)

Refraction index: 1.44 (589 nm; 25 °C)

Dissociation constant: no data available

Surface tension: no data available

Henry constant: no data available

## Section 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

### 10.3 Possibility of hazardous reactions

no data available

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## 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

no data available

## 10.6 Hazardous decomposition products

no data available

## 10.7 Additional information

no data available

# Section 11: Toxicological information

## 11.1 Information on toxicological effects

### 11.1.1 Acute effects

Acute oral toxicity:

LD50: > 3000 mg/kg - Rat - (RTECS)

Acute dermal toxicity: no data available

Acute inhalation toxicity: no data available

**Irritant and corrosive effects** Primary irritation to the skin: not applicable

Irritation to eyes:

Causes serious eye irritation.

Irritation to respiratory tract:

not applicable

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## **11.1.2 Respiratory or skin sensitisation**

In case of skin contact: not sensitising

After inhalation: not sensitising

## **11.1.3 STOT-single exposure**

not applicable

## **11.1.4 STOT-repeated exposure**

not applicable

## **11.1.5 CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) Carcinogenicity**

No indication of human carcinogenicity.

## **11.1.6 Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

## **11.1.7 Reproductive toxicity**

No indications of human reproductive toxicity exist.

## **11.1.8 Aspiration hazard**

not applicable

## **11.1.9 Other adverse effects**

no data available

## **11.1.10 Additional information**

no data available

## **Section 12: Ecological information**

### **12.1 Ecotoxicity**

#### **12.1.1 Fish toxicity:**

no data available

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## **12.1.2 Daphnia toxicity:**

no data available

## **12.1.3 Algae toxicity:**

no data available

## **12.1.4 Bacteria toxicity:**

no data available

## **12.2 Persistence and degradability**

no data available

## **12.3 Bioaccumulative potential**

Partition coefficient: n-octanol/water: -1.72 (20 °C)

## **12.4 Mobility in soil:**

no data available

## **12.5 Results of PBT/vPvB assessment**

no data available

## **12.6 Other adverse effects**

no data available

## **Section 13: Disposal considerations**

### **13.1 Waste treatment methods**

#### **13.1.1 Appropriate disposal / Product**

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: 060106

#### **13.1.2 Appropriate disposal / Package**

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

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## 13.1.3 Additional information

no data available

## Section 14: Transport information

### 14.1 Land transport (ADR/RID)

No dangerous good in sense of this transport regulation.

### 14.2 Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant

### 14.3 Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

## Section 15: Regulatory information

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

#### 15.1.1 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 (Text with EEA relevance)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance)
- Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance)
- Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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## 15.1.2 National regulations

no data available

Water hazard class (WGK): slightly hazardous to water (WGK 1)

## 15.2 Chemical Safety Assessment

not relevant

## Section 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)

CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)

Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)

IATA-DGR - International Air Transport Association-Dangerous Goods Regulations ICAO-TI - International Civil Aviation Organization-Technical Instructions

IMDG - International Maritime Code for Dangerous Goods LTV - Long Term Value

NIOSH - National Institute for Occupational Safety and Health OSHA - Occupational Safety & Health Administration

PBT - Persistent, Bioaccumulative and Toxic

RID - Regulation concerning the International Carriage of Dangerous Goods by Rail STV - Short Term Value

SVHC - Substances of Very High Concern vPvB - very Persistent, very Bioaccumulative

### Additional information

Indication of changes: general update

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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