

## 1. Product and Company Identification

**Product Code:** FGAU410-414  
**Product Name:** CLEARSTART 22KZ  
**Company Name:** Stoller Australia Pty Ltd  
 1 Creswell Rd  
 Largs Bay  
 South Australia, 5016  
**Web site address:** www.stoller.com.au  
**Email address:** stoller@stoller.com.au  
**Emergency Contact:** STOLLER PRODUCTION CHEMIST  
 Contact number: 08 8169-0988  
**Information:** 1800 337-345  
**Synonyms:** Phosphoric acid. Phosphated fertilizer solution. NPK fertilizer solution.

## 2. Hazards Identification

**Serious Eye Damage/Eye Irritation, Category 2B**

**Skin Corrosion/Irritation, Category 1B**

**Acute Toxicity: Inhalation, Category 4**

**Corrosive To Metals, Category 1**

**Acute Toxicity: Oral, Category 4**



**GHS Signal Word:** **Danger**

**GHS Hazard Phrases:** H290 - May be corrosive to metals.  
 H302 - Harmful if swallowed.  
 H314 - Causes severe skin burns and eye damage.  
 H320 - Causes eye irritation.  
 H332 - Harmful if inhaled.

**GHS Precaution Phrases:** P234 - Keep only in original container.  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 - Wash hands thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**GHS Response Phrases:** P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.  
 P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 - Immediately call a POISON CENTER or doctor/physician.  
 P321 - Specific treatment see ... on this label.  
 P330 - Give 2-3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention immediately if ingested. Do not leave victim unattended. Wear impervious gloves while decontaminating skin and hair.  
 P337+313 - If eye irritation persists, get medical advice/attention.

<b>GHS Storage and Disposal Phrases:</b>	P363 - Wash contaminated clothing before reuse. P390 - Absorb spillage to prevent material damage. P405 - Store locked up. P501 - Dispose of contents/container to treatment at a permitted facility or as advised by your local regulatory authority.
<b>Potential Health Effects (Acute and Chronic):</b>	Chronic: Severe exposure can cause permanent skin and eye burns and liver damage, even death.
<b>Inhalation:</b>	Causes chemical burns to the respiratory tract. May cause respiratory tract irritation. May be harmful if inhaled.  Prolonged exposure to vapors may cause sore throat and severe irritation of respiratory tract.
<b>Skin Contact:</b>	May cause discomfort, skin irritation or rash, even burns unless treated promptly.
<b>Eye Contact:</b>	Contact with product may cause severe irritation, blurred vision, eye tissue damage.
<b>Ingestion:</b>	May cause mouth and esophagus burns, gastrointestinal damage, malaise, nausea. Large doses may cause permanent damage or even death.

### 3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	RTECS #
7664-38-2	Phosphoric acid	<55.0 %	TB6300000
1314-13-2	Zinc oxide	< 2.0 %	ZH4810000
7722-76-1	Monoammonium phosphate	<12.0 %	NA
7631-95-90	Sodium Molybdate (VI)	< 0.25 %	GL8900000
10124-43-3	Cobalt Sulfate	< 0.25 %	GG3100000

### 4. First Aid Measures

<b>Emergency and First Aid Procedures:</b>	Victims of severe exposure to chemicals must be taken to health providing centers for medical attention. If necessary, also rescuers must be attended. Always bring with victim a copy of label and SDS of product to health professional.
<b>In Case of Inhalation:</b>	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.  Move patient to fresh air. Supplemental oxygen may be needed. Assure mucous does not obstruct airway. Seek medical attention if victim's breathing is difficult.
<b>In Case of Skin Contact:</b>	Wipe off excess product and immediately wash affected area thoroughly with abundant soap and water. Remove contaminated clothing taking care not to impregnate eyes. Seek medical attention if irritation occurs.
<b>In Case of Eye Contact:</b>	Holding eyelids apart, immediately flush eyes with running water for at least 15 minutes. Seek medical attention if severe irritation occurs.
<b>In Case of Ingestion:</b>	Immediately contact a physician or poison control center for treatment advice. Victim should drink milk, egg whites or large quantities of water. <b>DO NOT INDUCE VOMITING.</b> Never give anything by mouth to someone who is unconscious, having convulsions, or unable to swallow.
<b>Note to Physician:</b>	Symptomatic treatment.

### 5. Fire Fighting Measures

<b>Flash Pt:</b>	N.A.
<b>Explosive Limits:</b>	LEL: N.A.      UEL: N.A.
<b>Autoignition Pt:</b>	N.A.
<b>Suitable Extinguishing Media:</b>	Use all means adequate to fight surrounding fire: water, foam, CO2, dry chemicals, etc.
<b>Fire Fighting Instructions:</b>	It is recommended that firefighters wear self-contained breathing apparatus and full protective equipment, like chemical resistant clothing.
<b>Flammable Properties and Hazards:</b>	Toxic gasses by reaction with metals; aldehydes, cyanides, sulfides. Phosphoric acid may produce flammable hydrogen gas by reaction with chlorides and stainless steel. Not enough data for this particular solution. Toxic fumes may be generated under fire conditions.
<b>Hazardous Combustion Products:</b>	Produces a violent exothermic reaction with sodium tetrahydroborate.

### 6. Accidental Release Measures

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	In case of a large spill, clear and isolate the affected area and protect people. Such releases should be responded to by trained personnel using pre-planned procedures. In the event of an incidental release, minimum Personal Protective Equipment must be worn: latex or rubber gloves and boots, goggles or full face-shield and coveralls or long sleeved shirt and pants.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	It is necessary to contain the spill into the smallest area possible by diking, scooping, etc., and recover liquid into an appropriate container for salvage or later use. Neutralize residues with lime, then absorb onto dry carrier such as dirt, vermiculite or other absorbent material, put in covered, labeled containers and dispose of as a dry waste in accordance with Federal, State and Local hazardous waste disposal regulations.

### 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	All personnel who handle this material should be trained to work with it safely. Avoid breathing vapors or mist; use in well-ventilated location. Empty containers may contain residual liquid or vapors and therefore should be handled the same as full containers. Do not rinse containers and reuse for other purposes. When diluting, add small amounts of acid to water, do not add water to acid since it may cause sputtering and splashing.
<b>Precautions To Be Taken in Storing:</b>	Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Store in a cool, dry place, away from direct sunlight, sources of intense heat or where freezing is possible. Store away from food, feed and clothing materials. Whenever possible, place chemicals on secondary containers or diked area. Keep containers tightly closed when not in use. Keep away from children and domestic animals.

### 8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7664-38-2	Phosphoric acid	PEL: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TLV: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	No data.
1314-13-2	Zinc oxide	PEL: 5 (fume); 15 (dust) mg/m <sup>3</sup>	TLV: 2 mg/m <sup>3</sup> (R) STEL: 10 mg/m <sup>3</sup> (R)	No data.
7722-76-1	Monoammonium phosphate	No data.	TLV: 10 mg/m <sup>3</sup>	No data.
7631-95-90	Sodium Molybdate (VI)	No data.	No data	No data.
10124-43-3	Cobalt Sulfate	No data.	No data.	No data.

<b>Respiratory Equipment (Specify Type):</b>	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143)) dust masks.
<b>Eye Protection:</b>	Wear a NIOSH/OSHA approved respirator if working conditions require doing so. Safety glasses should be worn in any type of operation with chemicals.
<b>Protective Gloves:</b>	Acid resistant gloves.
<b>Other Protective Clothing:</b>	Long-sleeved shirt, long pants and protective shoes should be worn as a good safety practice.
<b>Engineering Controls (Ventilation etc.):</b>	General ventilation is usually adequate. Local exhaust should be used if needed for safe, comfortable working conditions. An eye bath and washing facilities should be readily available.
<b>Work/Hygienic/Maintenance Practices:</b>	As a general rule, do not eat, drink, smoke, and/or chew gum or tobacco when handling chemicals. Wash thoroughly after handling this product. Remove all dirty or contaminated clothing and wash it before reusing.
<b>Environmental Exposure Controls:</b>	If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways.

**9. Physical and Chemical Properties**

<b>Physical States:</b>	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
<b>Appearance and Odor:</b>	Clear, pink color Neutral or no odor.
<b>pH:</b>	0 - 2
<b>Melting Point:</b>	N.A.
<b>Boiling Point:</b>	NE
<b>Flash Pt:</b>	N.A.
<b>Evaporation Rate:</b>	N.E.
<b>Flammability (solid, gas):</b>	Product is non-flammable.
<b>Explosive Limits:</b>	LEL: N.A.    UEL: N.A.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	N.E.    at 20.0 C (68.0 F)
<b>Vapor Density (vs. Air = 1):</b>	N.E.
<b>Specific Gravity (Water = 1):</b>	1.39 - 1.43
<b>Density:</b>	N.E.
<b>Solubility in Water:</b>	100%
<b>Saturated Vapor Concentration:</b>	N.E.
<b>Octanol/Water Partition Coefficient:</b>	N.E.
<b>Autoignition Pt:</b>	N.A.
<b>Decomposition Temperature:</b>	NE
<b>Viscosity:</b>	N.E.
<b>Molecular Formula &amp; Weight:</b>	Proprietary    0.0

## 10. Stability and Reactivity

<b>Stability:</b>	Unstable [ <input type="checkbox"/> ]    Stable [ <input checked="" type="checkbox"/> ]
<b>Conditions To Avoid - Instability:</b>	High heat. Mixture with incompatible materials.
<b>Incompatibility - Materials To Avoid:</b>	Alkalies, oxidizing agents, metals like steel, copper or aluminum. Phosphoric acid produces a violent reaction with sodium tetrahydroborate. Exothermic reactions with alcohols, glycols, aldehydes, amines, amides, esters, organic peroxides.
<b>Hazardous Decomposition or Byproducts:</b>	Flammable gasses by reaction with metals; aldehydes, cyanides, sulfides. Explosive, flammable hydrogen gas by reaction with chlorides and stainless steel.
<b>Possibility of Hazardous Reactions:</b>	Will occur [ <input type="checkbox"/> ]    Will not occur [ <input checked="" type="checkbox"/> ]
<b>Conditions To Avoid - Hazardous Reactions:</b>	No data available.

## 11. Toxicological Information

<b>Toxicological Information:</b>	Mutagenicity: The components of this product are not reported to produce mutagenic effects in humans.
	Embryotoxicity: The components of this product are not reported to produce embryotoxic effects in humans.
	Teratogenicity: The components of this product are not reported to produce teratogenic effects in humans.
	Reproductive Toxicity: The components of this product are not reported to produce toxic reproductive effects in humans. However, urea is being investigated as a reproductive effector.
<b>Carcinogenicity/Other Information:</b>	The components of this product are not listed as a carcinogenic by CPDB, IARC, NTP, OSHA, CAL/OSHA and ACGIH.
<b>Carcinogenicity:</b>	NTP? No    IARC Monographs? No    OSHA Regulated? No

## 12. Ecological Information

<b>General Ecological Information:</b>	<p>The available data on this material does not indicate any undue hazard to the environment under anticipated use and storage. All work practices must be aimed at preventing environmental contamination.</p> <p>Any waste due to spillage or leakage should be contained and disposed of accordingly, see above under Section 6 "Accidental Release Measures." Due to its nutritional nature, may cause eutrophication if discharged in bodies of water.</p> <p>To aid our customers in complying with regulatory requirements, SARA Title III hazard categories for this product are indicated in Section 15. If the word "YES" is marked next to any category, this product may be reportable by you under the requirements of 40 CFR Part 370. Please consult those regulations for details.</p>
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### 13. Disposal Considerations

**Waste Disposal Method:** Waste disposal must be done following all Federal, State and Local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority.

### 14. Transport Information

**LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** PHOSPHORIC ACID SOLUTION. 8, III, RQ.  
**DOT Hazard Class:** 8 CORROSIVE  
**UN/NA Number:** UN1805 **Packing Group:** III



**MARINE TRANSPORT (IMDG/IMO):**

**IMDG/IMO Shipping Name:** PHOSPHORIC ACID SOLUTION. CLASS 8, PG III.  
 EmS: F-A, S-B (8-08) Stowage: A  
**UN Number:** 1805 **Packing Group:** III  
**Hazard Class:** 8 - CORROSIVE **IMDG Classification:** 8  
**IMDG EMS Number:** F-A, S-B **IMDG MFAG Number:**  
**IMDG EMS Page:**

**AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** PHOSPHORIC ACID SOLUTION. 8, III.

**Additional Transport Information:** Placards / Markings: CORROSIVE

Reportable Quantity (RQ): 5000 lb (2270 kg) for Phosphoric acid; for this solution, 12,500 lb (5670 kg).

Emergency Response Guide Number: 154

### 15. Regulatory Information

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

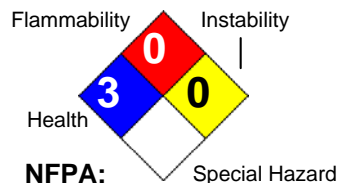
CAS #	Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
7664-38-2	Phosphoric acid	No	Yes 5000 LB	No
1314-13-2	Zinc oxide	No	No	Yes-Cat. N982
7722-76-1	Monoammonium phosphate	No	No	No
7758-99-8	Copper(II) sulfate	No	No	Yes-Cat. N100
10124-43-3	Cobalt Sulfate	No	No	Yes-Cat. N096

**Regulatory Information Statement:**

## 16. Other Information

**Revision Date:** 06/01/2015

**Hazard Rating System:**



**Additional Information About** No data available.

**This Product:**

**Company Policy or**

**Disclaimer:**

Stoller believes the information contained in this Safety Data Sheet is accurate based on the information provided by reputable suppliers of our raw materials. However, Stoller does not guarantee their accuracy or completeness. The information contained herein is furnished without warranty of any kind, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for any particular purpose. Users should consider these data only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Stoller assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of goods and data.