Safety Data Sheet

1. SUBSTANCE IDENTIFICATION/ PREPARATION AND COMPANY DETAILS

Product Name: CLG012 - Cleangiene Dish Clean Machine Powder 5 kg
Recommended use: Automatic Dishwashing Powder

Supplier: Modern Teaching Aids Pty Ltd

ABN **98 000 628 786**
Street Address: Level 1, 122-126 Old Pittwater Road, Brookvale, NSW, Australia 2100

Telephone: 1800 251 497
E-MAIL: sales@teaching.com.au

Emergency Telephone Number: Australia – 13 11 26 (Poisons Information Centre) (24 hours)
New Zealand – 0800 764 766 (Poisons Information Centre)

2. HAZARDS INDENTIFICATION

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

GHS classification:

Skin corrosion/irritation – Category 2, H315
Serious eye damage/Eye irritation – Category 1, H318
Specific target organ toxicity, single exposure – Cat. 3, H335

Signal word: **Danger**

Pictograms:
GHS05: Corrosion

GHS07: Exclamation mark

Hazard statements:
H315: Causes skin irritation.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.

Precautionary statements:
P261: Avoid breathing dust.
P264: Wash with water thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P302 + P352: IF ON SKIN: Wash with plenty of water.
P321: Specific treatment (see reference to supplemental first aid instruction on this label).
P332 + P313: If skin irritation occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.
P304 + P340 + P312: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

Storage:
P405: Store locked up.

Disposal:
P501: Dispose of contents/ container in accordance with local/ regional/ national/ international Regulations.

Not Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Poisons Schedule (Aust.): S5
This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Sodium carbonate	497-19-8	30 – 50 %
Sodium metasilicate pentahydrate	6834-92-0	20 – 30 %
Sodium phosphate anhydrous	7601-54-9	< 5%
Non-hazardous components		balance

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre. (Phone Australia 131 126).

Ingestion: Rinse mouth with water. Give water to drink. Do NOT induce vomiting. Seek immediate medical assistance.

Eye contact: Immediately irrigate with copious quantities of water until medical help is available. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance.

Specific Hazards: Non-combustible material.

Skin contact: Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and wash before reuse. If irritation occurs seek medical advice.

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Notes to physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Firefighting further advice: Not combustible. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

Suitable extinguishing media: Not combustible, however, if material is involved in a fire use: Water jets, water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear protective equipment to prevent skin and eye contamination and inhalation of dust.

Environmental precautions: Do not allow to enter drainage system, surface or ground water.

Methods and material for containment and cleaning up: Sweep up, but avoid generating dust. Collect and seal in properly labelled containers for disposal. Wash area down with excess water.

7. HANDLING AND STORAGE

Handling: Avoid skin and eye contact and breathing in dusts.

Storage: Keep dry. Keep containers closed at all times – check regularly for spills. Store away from incompatible materials (section 10)

This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard for nuisance dusts:

	TWA	
	ppm	mg/m3
Nuisance dusts	-	10

As published by the National Occupational Health and Safety.
TWA – the Time-Weighted Average airborne concentrations over an eight-hour working day, for a five-day working week over an entire working life.
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These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering measures: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Avoid generating and inhaling dusts. Keep containers closed when not in use.

Personal protection equipment: DUST MASK. Avoid skin and eye contact and inhalation of dust. Avoid generating and inhaling dust. If inhalation risk exists, wear dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour : White granulated powder with a faint chlorine odour
Bulk Density : 1.0
pH (1% soln.) : > 12
Solubility in water (g/L) : Complete
Other data : < 1% available chlorine

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and handling.

Materials to avoid: Incompatible with acids, oxidising agents

Hazardous Decomposition Products: Hydrogen may be produced on contact with aluminium, tin, lead and zinc.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium carbonate	LD50: 2800 mg/kg (rat)	LD50: >2000 mg/kg (rat)	LC50: 0.8 mg/L/2hr (guinea pig) LC50: 1.2 mg/L/2hr (mouse) LC50: 2.3 mg/L/2hr (rat)
Sodium metasilicate:	LD50: 500 mg/kg (rat)	LD50: >5000 mg/kg(rat)	
Sodium phosphate:	LD50: >2000 mg/kg (rat)	LD50: >2 mg/kg(rabbit)	LC50: 2.3 mg/L/2hr(rat)

Skin corrosion/irritation:
sodium carbonate: In the case of both rabbits and humans on which the substance was applied onto damaged skin, the primary irritation index was >= 2, indicating that the substance was slightly irritating (SIDS (accessed in July 2008).
sodium metasilicate: In several 4-hour skin irritation tests using rabbits (OECD guidelines 404; SIDS (accessed in December 2008)), necrosis was observed in the skin and the substance was concluded to be corrosive.
sodium phosphate: aqueous solution of the substance is highly alkaline and may produce caustic burn.

Serious eye damage/irritation:
sodium carbonate: the substance caused serious and irreversible eye damage.
sodium metasilicate: the substance is documented to be corrosive in rabbit eye tests (IUCLID (2000)).
sodium phosphate: aqueous solution of the substance is highly alkaline and may produce caustic burn.

Respiratory or skin sensitisation: No data available.

Germ cell mutagenicity:
sodium carbonate: Insufficient data available.
sodium metasilicate: negative results obtained in chromosomal aberration tests using mouse bone marrow cells (in vivo mutagenicity tests using somatic cells) (SIDS (accessed in December 2008)). In

vitro mutagenicity tests (Ames tests) also yielded negative results (SIDS (accessed in December 2008)).

Cancerogenicity:

sodium metasilicate: In both 14-month and 2-year oral administration tests using rats (SIDS (accessed in December 2008), IUCLID (2000)), no signs of carcinogenicity were detected.

Reproductive toxicity:

sodium carbonate: In oral administration tests using rats, mice and rabbits during the organogenetic period, no toxic effects were found on maternal animals and the development of offspring including teratogenicity (SIDS (accessed in July 2008)).

sodium metasilicate: Oral exposure of mice during the gestational period showed no effects on development of their offspring (SIDS (accessed in December 2008)).

Specific Target Organ Toxicity (STOT): single exposure:

sodium carbonate: In the tests using rats, mice, and guinea pigs, symptoms of respiratory disorder such as dyspnoea and wheezing were observed immediately after the inhalation exposure and they disappeared after 3-4 hours (SIDS (accessed in July 2008)). Based on these results, the substance was classified into Category 3 (respiratory tract irritation). In oral administrations to rats, symptoms such as motor ataxia, prostration, and lethargy were observed, and they disappeared 5 days after the administration among surviving rats (SIDS (accessed in July 2008)). In dermal administrations, although lethargy was observed 24 hours after the administration, no mortality occurred (SIDS (accessed in July 2008)).

sodium metasilicate: In oral administration tests using rats (doses: 538-2000 mg/kg bw for males, and 910-2600 mg/kg bw for females), lethargy, increased breathing frequency, platycoria, and cramps were observed (SIDS (accessed in December 2008)). In other oral administration tests using rats (dose: 1750 mg/kg bw), apathy, staggering gait, and dyspnoea were observed (SIDS (accessed in December 2008)). In addition, in oral administration tests using mice (doses: 500-1920.8 mg/kg for males, and 500-1372 mg/kg for females) (SIDS (accessed in December 2008) lethargy was observed.

sodium phosphate: although the toxicity of the substance was not investigated, it might theoretically be related only to its alkalinity (PATTY, 5th (2001)), and that acute exposure to the substance might cause irritation of the respiratory system with subsequent coughing and pain. It was also reported that in severe exposures, pulmonary edema might develop (PATTY (5th, 2001)).

Specific Target Organ Toxicity (STOT): repeated exposure:

sodium carbonate: In the tests in which rats underwent inhalation exposure at 70mg/m3/4h (0.0467mg/L/6h) for 3.5-months, localized effects such as hyperplasia and desquamation of bronchial epithelium, and perivascular oedema were observed (SIDS (accessed in July 2008)). However, these symptoms are not considered to be severe toxic effects.

sodium metasilicate: In 3-month tests using rats that underwent oral administration in drinking water (tests similar to those of OECD TG408) (doses: 200, 600 or 1800 ppm (26.4, 76.2 or 227.1 mg/kg/day for males, and 32.1, 97.6 or 237.2 mg/kg/day for females)), NOAEL was > 227-237 mg/kg bw, which was higher than Category 2 guidance values; no effects of administration were observed. Similarly, in other 3-month tests using rats that underwent oral administration in drinking water (doses: 750, 1500 or 3000 ppm (23, 47 or 110 mg/day for males, and 21, 37 or 84 mg/day for females)), no effects of administration were observed. In addition, in 3-month tests using mice that underwent oral administration through drinking water (doses: 300, 900 or 2700 ppm for males, and 333, 1000 or 3000 ppm for females), NOAEL was 260-284 mg/kg bw, which was higher than Category 2 guidance values; no notable effects were observed at the highest dose tested other than an increase in liver weight and a decreased leukocytes in females.

sodium phosphate: although the toxicity of the substance was not investigated, it might theoretically be related only to its alkalinity (PATTY, 5th (2001)), and that chronic exposures might cause inflammatory or ulcerative changes in the mouth and possible gastrointestinal disorders (HSDB (2009)).

Aspiration hazard: No data available.

Likely routes of exposure: Skin contact. Eye contact.

Symptoms caused by exposure: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting and abdominal pain.
Skin contact: Repeated or prolonged skin contact may lead to irritant contact dermatitis. Contact with solutions may result in irritation.
Eye contact: A severe eye irritant. Contamination of eyes can result in permanent injury. Corrosive to eyes; contact can cause cornea burns.
Inhalation: Inhalation of dust will result in respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity:
sodium carbonate: 96h LC50 = 210 mg/L for fish (zebra fish)
sodium metasilicate: 48 h-EC50 = 250mg/L for crustaceans (Daphnia magna)
sodium phosphate: 96h-LC50 = 28.5 mg/L for fish. Harmful to aquatic life with long lasting effects.
Persistence and degradability: No Data Available
Bioaccumulative potential: No Data Available
Mobility in soil: No Data Available
Other adverse effects: No Data Available

13. DISPOSAL CONSIDERATIONS

Refer to State Land Waste Management Authority.
Normally suitable for disposal at approved land waste site.

14. TRANSPORT INFORMATION

Not Classified as Dangerous Goods for the purpose of transport by road or rail. Refer to relevant regulations for storage and transport requirements.

15. REGULATORY INFORMATION

This material is hazardous according to health criteria of Safe Work Australia.

Poisons Schedule (Aust.): S5.

All of the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

This Material Safety Data sheet has been prepared by Stelco Chemicals International Pty Ltd
This MSDS summarises at the date of issue our best knowledge of the health and safety information of the product, and in particular how to safely handle and use the product in the workplace. As each workplace is different each user must, prior to use, review thus MSDS in the context of how the user intends to handle and use the product in the workplace.
If clarification of further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.