



MATERIAL SAFETY DATA SHEET

Product : *KRYSTAL KLEAN Solution*

1. IDENTIFICATION

Product Name: KRYSTAL KLEAN SOLUTION

Product Codes: DL7100 - 250g Powder in white HDPE Jar

Uses For cleaning of water distillation units and stainless steel. Removes mineral deposits from surfaces.

Contact Information	Organisation	Location	Telephone
	Dentalife Pty Ltd	Factory 9 / 505 Maroondah Highway Ringwood VIC 3134 Australia	+61 3 9879 1226

Poisons Information Centre (24 hour, 7 days a week) in an emergency : 13 11 26

2. HAZARD IDENTIFICATION



Hazard pictograms:

GHS05 Signal word: Danger

Hazard statements:

H314 - Causes severe skin burns and eye damage

H401 - Toxic to aquatic life

Precautionary statements:

P260 - Do not breathe dust

P264 - Wash exposed skin thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective gloves, eye protection, protective clothing

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - 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/doctor

P363 - Wash contaminated clothing before reuse

P405 - Store locked up

P501 - Dispose of contents/container to comply with local, state and federal regulations



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients :

Chemical Entity	CAS Number	Proportion
Sulfamic Acid	5329-14-6	99%
Citric Acid Anhydrous	5949-29-1	1%

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

General: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

Inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Doctor: administration of corticoid spray.

Skin contact: Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

Eye contact: Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.

Ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting.

Call Poison Information Centre. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote

5. FIRE FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media : Adapt extinguishing media to the environment.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

Hazards from Combustion Products

Non combustible.

Special Protective Precautions and Equipment for Fire Fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind, consider evacuation, have neighbourhood close doors and windows.



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Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

Special Protective Precautions and Equipment for Fire Fighters (contd)

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus

Additional Information

Hazchem Code N/A

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. See "Material-Handling" to select protective clothing.

Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.

In case of hazardous reactions: keep upwind.

In case of reactivity hazard: consider evacuation. Measures in case of dust release :

In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders Protective equipment : Equip cleanup crew with proper protection. Do not breathe dust. Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Knock down/dilute dust cloud with water spray. Methods for cleaning up : Prevent dust cloud formation. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes.

When using do not eat, drink or smoke.

Wash hands and exposed skin after use.

Contaminated clothing should be thoroughly cleaned.



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Storage	Store in a cool, dry, well-ventilated, fire-proof area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. This product should be stored at a temperature not greater than: 25 deg C. Do NOT freeze.
Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards

No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC).

Biological Limit Values

No information available on biological limit values for this product.

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection

RESPIRATOR: Wear an approved respirator with suitable vapour respirator or a self-contained breathing apparatus should be used to avoid inhalation of the product (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Wear impervious protective gloves (AS2161). CLOTHING: Long-sleeved lab coat, full-suit, and safety footwear (AS3765/2210) NOTE: Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colourless to amber solution
Odour / Fragrance: Odourless
Boiling Point (°C): Not available
Vapour Pressure: Not available
Specific Gravity: 1.0 to 1.1 g/mL
Flashpoint (°C): Not available
Flammability Limits (%): Non flammable
Solubility in Water (g/L): Complete
pH: 7.0 to 7.4

Other Properties : Disinfectant and surfactant properties.



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10. STABILITY AND REACTIVITY

Chemical Stability

Product is stable under normal conditions of use, storage and temperature.

Conditions to Avoid

Avoid excessive heat (>40°C), sunlight, moisture, static discharges, naked flames, and other sources of ignition.

Incompatible Materials

Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). When involved in a fire, this product may generate carbon oxides, nitrogen oxides and halogenated compounds. Reacts violently with (strong) oxidizers. Reacts exothermically with (some) bases.

Hazardous Decomposition Products

Decomposes slowly on exposure to water (moisture): release of corrosive products. This reaction is accelerated on exposure to temperature rise. On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides).

Hazardous Reactions

Hazardous Polymerisation has not been reported.

11. TOXICOLOGICAL INFORMATION

Toxicity Data

Acute Oral Toxicity : 6300mg/Kg (Mouse - Calculated value for the mixture) Oral Median LD Rat : 2000mg/Kg Acute Oral LD50 Rat : 2000mg/Kg (Chlorhexidine Gluconate) Acute Oral LD50 Mus : 1260mg/Kg Chronic Effects : The substance is toxic to lungs, mucous membrane (human) Routes of Entry : Eye contact, inhalation, ingestion.

Health Effects - Acute

Swallowed

Very hazardous in case of ingestion. May be harmful if swallowed. Accidental ingestion may cause human health damage. It is likely to result in irritation of the gastrointestinal tract.

Eye

Severe irritant to the eye. This material is considered to represent risk of serious damage to eyes.

Skin



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Hazardous in case of skin contact (irritant). It is not expected to cause significant or prolonged irritation by skin contact. Repeated exposure may cause dermal disturbances. It is not expected to cause systemic harmful effects after skin contact. Product is a photosensitiser. This material showed low primary skin irritation potential to rabbit skin. Eczema and leg ulcer patients patch tested with 1% Chlorhexidine Digluconate solutions developed contact dermatitis. Topical applications of solutions in patients have caused urticaria, dyspnea and anaphylactic shock.

Inhaled

Hazardous in case of inhalation. The substance is toxic to lungs, mucous membrane (human).

12. ECOLOGICAL INFORMATION

Ecotoxicity

Acutely toxic towards fish, acutely very toxic to daphnia magna and algae. LC50 (fish, fresh water, 48h) = 13,4 mg/L EC50 (Daphnia magna, 48h) = 0,087 mg/L EC50 (algae, 72h) = 0,081 mg/L

Persistence and Degradability

Bio-elimination : <10% Oxygen consumption Summary : Chlorhexidine Gluconate is not biodegraded in screening level tests due to its antimicrobial properties and high concentration of test substance in these tests. Environmental : Test with activated sludge (Batch and continuous tests) at environmentally relevant, Chlorhexidine Digluconate concentrations demonstrate nearly waste water, largely as a result of bio-degradation.

Mobility

No information available on mobility for this product. Easily Soluble in water.

Environmental Fate (Exposure)

Do NOT let product reach waterways, drains and sewers.

Bioaccumulative Potential

No information available on bioaccumulation for this product

13. DISPOSAL CONSIDERATIONS

Disposal

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

Special Precautions for Land Fill or Incineration

Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'. Bury on an authorized landfill site or incinerate under approved controlled conditions.



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14. TRANSPORT INFORMATION

Land Transport (Australia)

Regulation Name ADG
UN Number Not applicable.
Shipping Name CHLORHEXIDINE DIGLUCONATE SOLUTION
Dangerous Goods Class Not applicable.
Subsidiary Risk Not applicable.
Pack Group Not applicable.
Precaution for User DANGEROUS FOR THE ENVIRONMENT IRRITANT
Hazchem Code N/A
EPG LOW TO MODERATE HAZARD SUBSTANCES
Special Provision SPAU01

Sea Transport (Australia)

Regulation Name IMDG
UN Number 3082
Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorhexidine 10% Solution)
Dangerous Goods Class 9 Miscellaneous Dangerous Substance
Subsidiary Risk Not applicable.
Pack Group III
Precaution for User DANGEROUS FOR THE ENVIRONMENT IRRITANT
Hazchem Code 3Z
EPG 47 LOW TO MODERATE HAZARD SUBSTANCES
Special Provision Not applicable.

Air Transport (Australia)

Regulation Name IATA
UN Number 3082
Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Chlorhexidine Digluconate 10% Solution)
Dangerous Goods Class 9 Miscellaneous Dangerous Substance
Subsidiary Risk Not applicable.



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Pack Group	III
Precaution for User	DANGEROUS FOR THE ENVIRONMENT IRRITANT
Hazchem Code	3Z
EPG	LOW TO MODERATE HAZARD SUBSTANCES
Special Provision	Not applicable.

15. REGULATORY INFORMATION

Not applicable.

Poisons Schedule Not Applicable

EPG 47

AICS Name D-GLUCONIC ACID, COMPOUND WITH N"N"-BIS(4-CHLOROPHENYL)-3,12-DIIMINO-2,4,11,13- TETRAAZATETRADECANEDIIMIDAMIDE (2:1)

HSNO Hazard Classification 6.1E 6.3A 6.4A 9.1B

16. OTHER INFORMATION

Literature References No data available.

Sources for Data No data available.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. No warranty, either expressed or implied, is made with respect to the information or the product to which the information refers. Each user must review this MSDS in the context of how the product will be handled and used in the workplace.