

Issue Date: February 2023

Issued by REEF PURE RO SYSTEMS



Product Name: Colour Changing Co2 Media

Classified as hazardous

## 1. Identification

<b>Product Identifier</b>	Colour Changing CO2 Media
<b>Company Name</b>	Reef Pure RO Systems (ABN 63 928 183 158)
<b>Address</b>	Thornlands, QLD 4164 AUSTRALIA
<b>Telephone</b>	1300110805
<b>Telephone for Poisons Information Line (24 Hour)</b>	131126
<b>Email</b>	contact@reefpurero.com.au
<b>Web</b>	reefpurero.com.au
<b>Recommended Use</b>	For medical, veterinary or laboratory use to remove carbon dioxide from gas streams.
<b>Other Name</b>	Colour Changing CO2 Media – 10” Canister Refill Colour Changing CO2 Media – 5KG Bulk

## 2. Hazard Identification

<b>GHS Classification of the Substance/Mixture</b>	Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335	
<b>Signal Word(S)</b>	WARNING	
<b>Hazard Statement(S)</b>	H315 Causes skin irritation. H318 Causes serious eye irritation. H355 May cause respiratory irritation	
<b>Pictogram(S)</b>	GHS07 Harmful 	GHS05 Corrosive 
<b>Precautionary Statement – Prevention</b>	P261 Avoid breathing dust P280 Wear protective gloves/protective clothing/eye protection/face protection.	
<b>Precautionary Statement – Response</b>	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P332+P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P337+P313 If eye irritation persists: Get medical advice/attention.	
<b>Precautionary Statement – Disposal</b>	P501 Dispose of contents/container to an approved waste disposal plant.	

### 3. Composition/Information on Ingredients

<b>Chemical Characterisation</b>	Solid		
<b>Information on Composition</b>	<b>Ingredient</b>	<b>CAS No</b>	<b>Content ( % weight )</b>
<b>Ingredients</b>	Calcium Hydroxide	1305-65-0	86.99%
	Water	7732-18-5	12%
	Sodium Hydroxide	1310-73-2	1%
	Ethyl Violet	2390-59-2	0.01%

### 4. First-Aid Measures

<b>Inhalation</b>	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
<b>Ingestion</b>	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice.
<b>Skin</b>	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek immediate medical advice /attention depending on the severity.
<b>Eye Contact</b>	Immediately rinse thoroughly with plenty of water for at least 15 minutes and seek medical advice.
<b>First Aid Facilities</b>	Maintain eyewash fountain and safety shower in work area.
<b>Advice to Doctor</b>	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
<b>Other Information</b>	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

### 5. Fire-Fighting Measures

<b>Hazards From Combustion</b>	Material is not combustible.
<b>Products Specific Methods</b>	Use measures suitable for extinguishing surrounding fire. Use water, foam, carbon dioxide or powder. Collect contaminated fire extinguishing water separately. This must not be discharged into drain

### 6. Accidental Release Measures

<b>Personal Precautions</b>	Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
<b>Personal Protection</b>	Wear protective clothing specified for normal operations (see Section 8)
<b>Clean-up Methods - Small Spillages</b>	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

## 7. Handling and Storage

<b>Precautions for Safe Handling</b>	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
<b>Conditions for Safe Storage, Including any Incompatibilities</b>	Store in cool place and out of direct sunlight. Store away from acids. Keep containers closed at all times. Sensitive to air and moisture.
<b>Corrosiveness</b>	In the presence of moisture, corrosive to aluminium, zinc and tin.
<b>Storage Temperatures</b>	Stored between 0 and 35 °C.

## 8. Exposure Controls/Personal Protection

Occupational Exposure Limit Values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Calcium Hydroxide			5		
	Sodium Hydroxide			2		Peak limitation

**Other Exposure Information** These Workplace 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. These workplace 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. PEAK LIMITATION: PEAK LIMITATION. For some rapidly acting substances and irritants, the averaging of the airborne concentration over an eight-hour period is inappropriate. These substances may induce acute effects after relatively brief exposure to high concentrations and so the exposure standard for these substances represents a maximum or peak concentration to which workers may be exposed. Although it is recognised that there are analytical limitations to the measurement of some substances, compliance with these 'peak limitation' exposure standards should be determined over the shortest analytically practicable period of time, but under no circumstances should a single determination exceed 15 minutes. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.

**Appropriate Engineering Controls** Maintain concentration below recommended exposure limit. Local exhaust ventilation system may be required.

**Respiratory Protection** Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

<b>Eye Protection</b>	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
<b>Hand Protection</b>	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.
<b>Personal Protective Equipment</b>	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/ New Zealand or other approved standards.
<b>Footwear</b>	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
<b>Body Protection</b>	Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
<b>Hygiene Measures</b>	Ensure a high level of personal hygiene is maintained when using this product. Always wash hands before eating, drinking, smoking or using the toilet.

## 9. Physical and Chemical Properties

<b>Form</b>	Solid
<b>Appearance</b>	White or off-white granules.
<b>Odour</b>	Odourless.
<b>Solubility in Water</b>	Slightly soluble.
<b>Specific Gravity</b>	2.0 g/cm <sup>3</sup>
<b>pH</b>	12 - 14 strongly alkaline.
<b>Flammability</b>	Non combustible material.
<b>Melting Point</b>	Not available.
<b>Boiling Point</b>	Not available.
<b>Density</b>	Not available.
<b>Vapour Pressure</b>	Not available.
<b>Partition Coefficient (N -Octanol/Water)</b>	Not available.
<b>Flash Point</b>	Not available.
<b>Auto-Ignition Temperature:</b>	Not available.

## 10. Stability and Reactivity

<b>Chemical Stability</b>	Stable. Converts to calcium and sodium carbonates when exposed to air.
<b>Conditions To Avoid</b>	Exposure to air. Exposure to moisture. Heat and incompatibles.
<b>Incompatible Materials</b>	Acids, chloroform, trichloroethylene and ammonium salts.
<b>Possibility of Hazardous Reactions</b>	Heat is generated when exposed to acids. Reacts with ammonium salts evolving ammonia gas.

## 11. Toxicological Information

<b>Ingestion</b>	Harmful by ingestion. Irritation and burning of the mucous membranes in the mouth, throat, pharynx, oesophagus and gastrointestinal tract. Symptoms include of abdominal pain, vomiting, diarrhoea, nausea and collapse.
<b>Inhalation</b>	Harmful by inhalation. May cause irritation of the nose, throat and lungs. Symptoms include of sneezing, coughing, laboured breathing, spasm, burning sensation, laryngitis, headache, nausea and vomiting. Causes burns.
<b>Skin</b>	Causes burns.
<b>Eye</b>	Causes burns. May cause irritation, redness, tearing, blurred vision and pain. May damage eye tissue and, in severe cases, cause permanent blindness. Risk of corneal clouding.
<b>Carcinogenicity</b>	No evidence of carcinogenic properties.
<b>Chronic Effects</b>	Repeated or prolonged skin contact may cause chronic dermatitis.
<b>Mutagenicity</b>	No evidence of mutagenic properties.
<b>Other Information</b>	Sodium Hydroxide: Rabbit: LD(lo): 500mg/kg Calcium Hydroxide: Rat: LD50: 7.3g/kg

## 12. Ecological Information

<b>Information on Ecological Effects</b>	No risk of prolonged damage to animal or plant life. Converts to naturally occurring minerals.
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## 13. Disposal Considerations

<b>Disposal Considerations</b>	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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## 14. Transport Information

<b>Transport Information</b>	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG); by the IATA Air Transport Dangerous Goods Regulations; or by the IMDG (International Maritime Dangerous Goods) Code.
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## 15. Regulatory Information

<b>Regulatory Information</b>	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
<b>Poisons Schedule</b>	S5

## 16. Other Information

### Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.  
 Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.  
 National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.  
 Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.  
 Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.  
 Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances (NOHSC:1008 (2004))'. Safe Work Australia, 'Hazardous Substances Information System, 2005'.  
 Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.  
 Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment (NOHSC:1003(1995) 3rd Edition)'.

### Declarations

The information in this Safety Data Sheet (SDS) was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.