

SAFETY DATA SHEET

1. Identification

Product identifier RegenOx® Part A

Other means of identification None.

Recommended use of the chemical and restrictions on use

Recommended use Soil and Groundwater Remediation.

Restrictions on use None known.

Details of manufacturer or importer

Company name REGENESIS
Address 1011 Calle Sombra
San Clemente, CA 92673
USA

General information 949-366-8000
E-mail CustomerService@regenesis.com

Emergency phone number For Dangerous Goods Incidents ONLY (spill, leak, fire, exposure or accident), call CHEMTREC 24/7 at:
Australia 0011-1-703-527-3887
International +1 703-741-5970

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards	Oxidising solids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2

Label elements, including precautionary statements

Hazard symbol(s)



Flame over circle Corrosion Exclamation mark

Signal word Danger

Hazard statement(s) May intensify fire; oxidiser. Harmful if swallowed. Causes serious eye damage. Toxic to aquatic life.

Precautionary statement(s)

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Wear protective gloves/eye protection/face protection.

Response IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. 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.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental information None.

Other hazards which do not result in classification None known.

3. Composition/information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
Sodium carbonate peroxyhydrate	15630-89-4	≥95
Silicic acid, sodium salt, sodium silicate	1344-09-8	<1

Composition comments All concentrations are in percent by weight unless otherwise indicated.

4. First-aid measures

Description of necessary first aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

Personal protection for first-aid responders Take off all contaminated clothing immediately. Contact with combustible material may cause fire. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

Symptoms caused by exposure Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes.

Medical attention and special treatment Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Water spray, fog (flooding amounts).

Unsuitable extinguishing media Dry Chemical, CO₂, Halon Foam.

Specific hazards arising from the chemical Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides, metal oxides.

Special protective equipment and precautions for fire fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

Hazchem code 1Y

General fire hazards May intensify fire; oxidiser. Contact with combustible material may cause fire.

Specific methods Cool containers exposed to flames with water until well after the fire is out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear appropriate personal protective equipment.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Collect dust using a vacuum cleaner equipped with HEPA filter. Keep combustibles (wood, paper, oil etc) away from spilled material. Ventilate the contaminated area. This product is miscible in water. Stop the flow of material, if this is without risk. Absorb in vermiculite, dry sand or earth and place into containers.

Large Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Shovel the material into waste container. Minimise dust generation and accumulation. Avoid the generation of dusts during clean-up. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Minimise dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from heat. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not get this material in contact with eyes. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat. Store in a cool, dry place out of direct sunlight. Store at temperatures not exceeding 40°C/104°F. Store in original tightly closed container. Store in a well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters

Follow standard monitoring procedures.

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

No exposure standards allocated.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Provide eyewash station.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection

Unvented, tight fitting goggles should be worn in dusty areas.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Frequent change is advisable. Rubber, neoprene or PVC gloves are recommended.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Recommended use: Wear respirator with dust filter.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Solid.

Form

Powder.

Colour

White.

Odour

Odourless.

Odour threshold	Not available.
pH	10.5 (3% solution/water)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	May intensify fire; oxidiser.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	14.5 g/100g water @ 20 °C (minimum)
Partition coefficient (n-octanol/water)	No data available.
Auto-ignition temperature	Not available.
Decomposition temperature	50 °C (122 °F)
Viscosity	Not available.
Other physical and chemical parameters	
Bulk density	0.9 - 1.2 g/ml
Explosive properties	Not explosive.
Oxidising properties	May intensify fire; oxidiser.

10. Stability and reactivity

Reactivity	Greatly increases the burning rate of combustible materials.
Chemical stability	Decomposes on heating. Product may be unstable at temperatures above: 50°C/122°F.
Possibility of hazardous reactions	Reacts slowly with water.
Conditions to avoid	Moisture. Heat. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Acids. Bases. Salts of heavy metals. Reducing Agents. Combustible material. Water.
Hazardous decomposition products	Oxygen. Steam. Heat.

11. Toxicological information

Information on possible routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed.

Symptoms related to exposure Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes.

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)		
Acute		
Oral		
LD50	Mouse	1100 mg/kg
	Rat	1.1 g/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/irritation	Causes serious eye damage.	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not a respiratory sensitiser.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	

12. Ecological information

Ecotoxicity	Toxic to aquatic life.		
Components			
Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	>= 0.28 - <= 0.57 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	1800 mg/l, 96 hours
Persistence and degradability	Decomposes in the presence of water. The product contains inorganic compounds which are not biodegradable.		
Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.		
Partition coefficient n-octanol / water (log Kow)	No data available.		
Mobility in soil	This product is water soluble and may disperse in soil.		
Other adverse effects	None known.		

13. Disposal considerations

Disposal methods	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Residual waste	Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

ADG	
UN number	3378
UN proper shipping name	SODIUM CARBONATE PEROXYHYDRATE
Transport hazard class(es)	
Class	5.1
Subsidiary risk	-

Packing group III
Environmental hazards No.
Hazchem code 1Y
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

UN number 3378
UN proper shipping name SODIUM CARBONATE PEROXYHYDRATE
Transport hazard class(es)
Class 5.1
Subsidiary risk -
Label(s) 5.1
Packing group III
Environmental hazards No.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number 3378
UN proper shipping name Sodium carbonate peroxyhydrate
Transport hazard class(es)
Class 5.1
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 5L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number 3378
UN proper shipping name SODIUM CARBONATE PEROXYHYDRATE
Transport hazard class(es)
Class 5.1
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant No.
EmS F-A, S-Q
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Safety, health and environmental regulations

National regulations This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals.

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)
Sodium carbonate peroxyhydrate (CAS 15630-89-4)

Australia Medicines & Poisons Appendix F

Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10

Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5

Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)

Sodium carbonate peroxyhydrate (CAS 15630-89-4)

Australia Medicines & Poisons Schedule 6

Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8)

Sodium carbonate peroxyhydrate (CAS 15630-89-4)

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

Silicic acid, sodium salt, sodium silicate (CAS 1344-09-8) 10000 - 99999 TONNES See the regulation for additional information.

Sodium carbonate peroxyhydrate (CAS 15630-89-4) 1000 - 9999 TONNES See the regulation for additional information.

Importation of Ozone Depleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10, as amended)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Sodium carbonate peroxyhydrate (CAS 15630-89-4)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 26-March-2015

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Disclaimer Regenesis cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.