

Material Safety Data Sheet.

Diving grade soda lime's Spherasorb 4 to 8 mesh and 8 to 12 mesh Non-indicating.

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MSDS Ref MH 14052010SphNI

Version 1

1. Product Identification

Brand name: Spherasorb NI

Description: Non- indicating Carbon Dioxide absorbent for diving applications: Solid white granules formed from a combination of Calcium Hydroxide, Sodium Hydroxide and Zeolite, with a trace of Ethyl Violet indicator.

Synonyms: None

CAS No.: Not applicable to mixtures.

Molecular Weight: Not applicable to mixtures.

Chemical Formula: Not applicable to mixtures.

Product Codes: 2181014, 2181018, 2181020

For information call: 0044(0)1189656300

2. Composition/ Information on ingredients.

Ingredient	CAS No	Content (% weight)	Risk Phrase	Hazard Symbol
Calcium Hydroxide	1305-62-0	75 – 80 %	R41	Xi
Sodium Hydroxide	1310-73-2	Under 2 %	R35	C
Zeolite	1318-02-1	4 – 5 %	Avoid dust inhalation	Xi
Water		13.5 – 17.5 %		

Spherasorb NI contains no ozone depleting chemicals and no volatile organic chemical. During manufacture of Spherasorb NI no ozone depleting chemicals and no volatile organic chemical are used.

3. Hazards Identification

Health rating: Slight.

Flammability rating: None.

Reactivity rating: Slight.

Lab Protective Equip: Dust mask recommended, General purpose rubber gloves, Goggles, Wash after skin contact.

Nature of hazard of finished mixture,
'Xi' Irritant

Risk phrases for finished mixture,

R41 Risk of serious damage to eyes. R 36/37/38 Irritating to eye, respiratory system and skin.

Safety Phrases:

S2 Keep out of reach of children.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

S45 In case of accident or if you feel unwell seek medical advice immediately and show label where possible.

Dangerous Component determining label and risk phrases
Sodium Hydroxide (under 2 % weight).

4. First Aid Measures.

Eyes: Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing in a manner which limits further exposure. Remove contaminated clothing and shoes. Thoroughly clean clothes and shoes before re-use.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give copious quantities of water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately.

5. Fire Fighting Measures.

Fire: Product is not considered to be a fire hazard. Packaging may be combustible.

Explosion: Not considered to be an explosion hazard.

Extinguishing Media: Use extinguishing media that is appropriate for the environment. Do not get water inside containers and take care of resulting alkaline water

Flash Point: Not applicable, material is considered to be non-combustible.

NOTE: CO₂ is not suitable as extinguishing media: Exothermic reaction may occur.

6. Accidental release measures.

Health precautions. Do not inhale released dust. Use dust mask type 3M 8710E. Use proper personal protective equipment as indicated in Section 8.

Environmental considerations. Do not discharge into sewer system.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Do not get water inside containers.

7. Handling and Storage.

Handling: Wash thoroughly after handling.
Use with adequate ventilation and dust extractor if necessary. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing.
Do not ingest or inhale. Do not allow contact with water. Keep from contact with moist air and steam.

Storage: Store in a tightly closed container.
Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Store protected from moisture.
Store at temperatures ranging from -20°C to +50°C. Do not allow to desiccate (dry out). Facilities storing or utilizing this material should be equipped with an eyewash facility.

8. Exposure Controls

Follow instructions for use when handling Spherasorb NI

Exposure limits of components where relevant.

CAS No	Material	Occupational Exposure Limit.
1305-62-0	Calcium Hydroxide	5 mg/m ³ 8-hour time weighted average.
1310-73-2	Sodium Hydroxide	2 mg m ³ Short Term Exposure Limit.
1318-02-1	Zeolite	3 mg/m ³ 8-hour time weighted average.

Personal Protective Equipment

Eyes: Wear chemical safety goggles.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Not necessary as Spherasorb NI is provided in pellet form. If dust is generated, use dust mask type 3M 8710E.

9. Physical and Chemical Properties.

Physical State: Solid Spheres of 3 – 4 mm diameter.

Appearance: White

Odor: None.

pH: Basic in solution

Bulk density: 830 – 860 g/l.

Solubility in water: Less than 1 g/l at room temperature.

Decomposition Temperature where relevant:

Hydroxide decomposes to CaO at approximately 500°C.

Na₂O at very high temperatures.

Molecular Formula: Mixture of chemicals - see section 2

Calcium
Sodium Hydroxide decomposes to

10. Stability and reactivity.

Chemical Stability:

Stable at room temperature.

Substance readily absorbs carbon dioxide from air.

Conditions to Avoid:

Avoid contact with acids –

vigorous reactions are possible. Do not use with trichloroethylene and chloroform.

Contact with high concentration of Carbon Dioxide will generate high temperatures.

Materials to avoid:

Hydrogen gas may be formed when

in contact with some metals.

Hazardous Decomposition Products:

Toxic fumes of sodium oxide,

calcium oxide. Low level of Amines may be released from decomposition of Ethyl Violet.

11. Toxicological Information.

No toxicity data is available for finished mixture. However,

Toxicity of major component.

CAS No	Material	Acute toxicity.
1305-62-0	Calcium Hydroxide	LD50 ^{rat} of 7,300 mg/Kg

Toxicity of minor components.

CAS No	Material	Acute toxicity.
1310-73-2	Sodium Hydroxide	LD50 rabbit 500 mg/kg (10 % solution)
1318-02-1	Zeolite	LD50 ^{rat} of 10,000 mg/Kg

12. Ecological information.

Spherasorb NI is not expected to significantly bio accumulate.
Converts to naturally occurring materials.
Do not discharge into lakes, rivers or sewer systems. When handled properly,
Spherasorb NI is not likely to prove detrimental to the environment.

13. Disposal Consideration.

Unused and utilized soda lime can be disposed of as commercial solid waste similar to household waste in accordance with local waste disposal regulations.
European Waste Catalogue Category: Waste packaging, Absorbents, Wiping cloths, filter materials and protective clothing.

EAK No 150203: Absorbents.

14. Transport Information.

Spherasorb NI is not a dangerous product and may be sent by, road, air, sea or post.

Transport Classification	Irritant.
UN Number	None.
Hazard Class	None.
Packaging group	III low danger

15. Regulatory Information

Identification symbol and indication of danger.

'Xi' Irritant

Risk Phrases

R41 Risk of serious damage to eyes.

R 36/37/38 Irritating to eye, respiratory system and skin.

Dangerous Component determining label and risk phrases.

Sodium Hydroxide (under 2 % weight)

Safety Phrases.

S2 Keep out of reach of children.

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S37/39 Wear suitable gloves and eye/face protection.

S45 In case of accident or if you feel unwell seek medical advice immediately and show label where possible.

16. Other information.

The intended use of this product is as an absorbent for Carbon Dioxide. It is suitable for use within anaesthetic equipment.

The above information represents our current state of experience and is provided in good faith. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. It is the responsibility of the customer to test whether the product is suitable for the purpose intended by the customer.

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