

Spherasorb[®]

Medical soda lime Carbon Dioxide absorbent



Spherasorb® medical soda lime Carbon Dioxide absorbent

What is Spherasorb®?

Spherasorb is medical soda lime designed by Intersurgic alspecifically for clinical use.

Unique characteristics

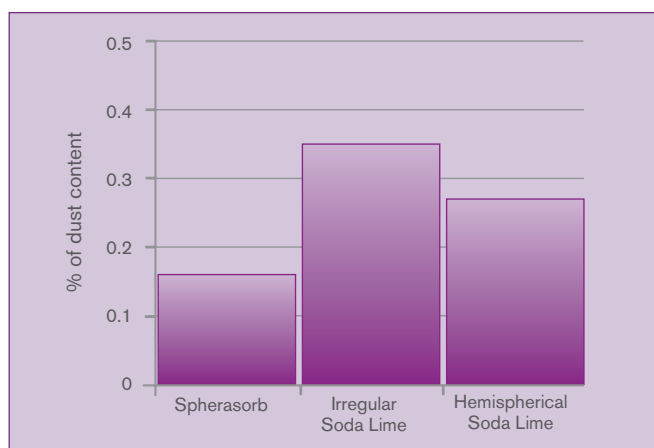
Spherasorb is a unique soda lime developed specifically to address the potential problems of use within the medical environment. Spherasorb is made of 3-4mm spheres processed to minimise potential dusting. Its uniform shape allows consistent bed packing, resulting in a more even flow of anaesthetic gases through the absorber. This results in Spherasorb lasting longer in use than other brands⁽⁹⁾.

Low dust

The unique manufacturing process used to produce Spherasorb ensures that the dust content of the product is significantly lower than other soda limes⁽²⁾

- In clinical use it will minimise resistance to flow of gases
- It reduces the potentially harmful risk of dust contamination to the patient and the equipment.

Dust content of 5 litre jericans after travelling 1000 miles⁽³⁾



Hardness

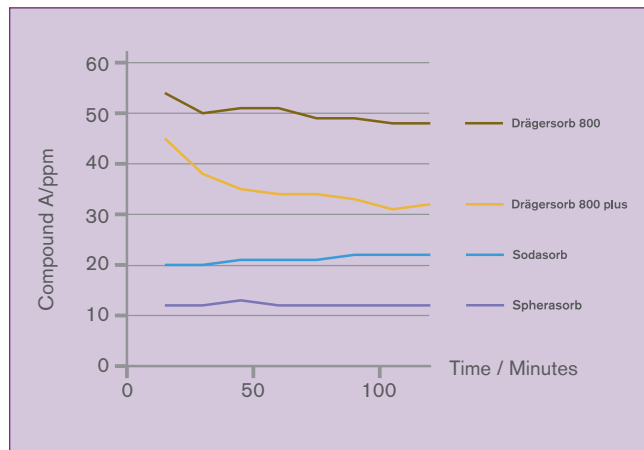
The unique formulation of Spherasorb means that when tested for hardness, in accordance with USP specifications, it is found to be significantly superior to other competitive brands⁽⁴⁾.

This together with the regular shape, minimises the amount of dust produced during transit allowing the product to reach you in perfect condition for use⁽³⁾. Spherasorb will not break down if subjected to high humidity, and has a positive effect on the humidity in the system.⁽³⁾

Anaesthetic degradation

Spherasorb does not contain potassium Hydroxide or Barium Hydroxide and only a very low level of Sodium Hydroxide. Spherasorb also contains a low level of a specific Zeolite.

Compound A generation:⁽⁶⁾ fresh soda lime + oxygen 2L/min, 5% Sevoflurane.

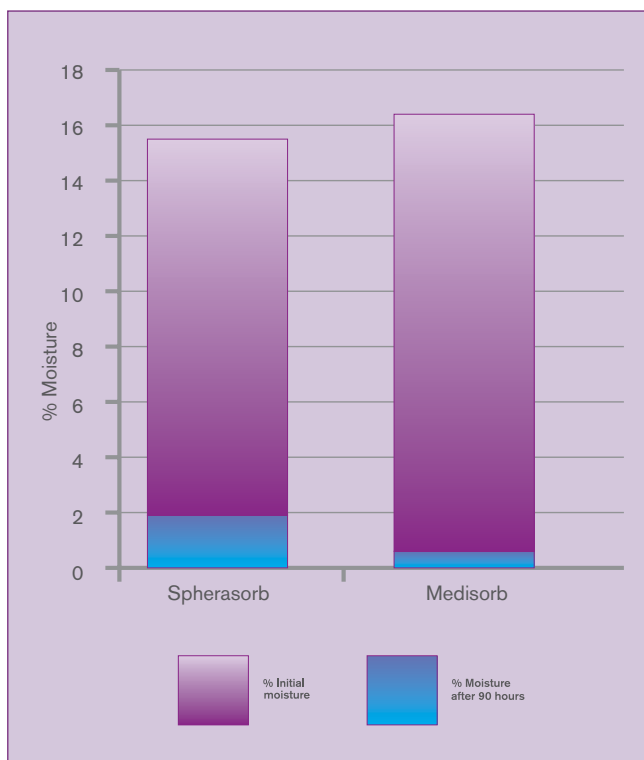


Independent tests have shown that Spherasorb has a unique formulation that presents less of a risk of the anaesthetic degradation products, Carbon Monoxide and Compound A. Tests have also shown that Spherasorb is more difficult to dry out than any other soda lime brands⁽¹⁰⁾. Since significant degradation occurs only when soda lime is dry, Spherasorb is an even safer product to use.⁽⁵⁾⁽⁶⁾⁽⁷⁾⁽⁸⁾

Improved drying resistance of Spherasorb.

Comportamiento en clinica de dos tipos de cal sodada estudio comparativo.

Hospital Clinico Anaesthesia, Valencia, Espana

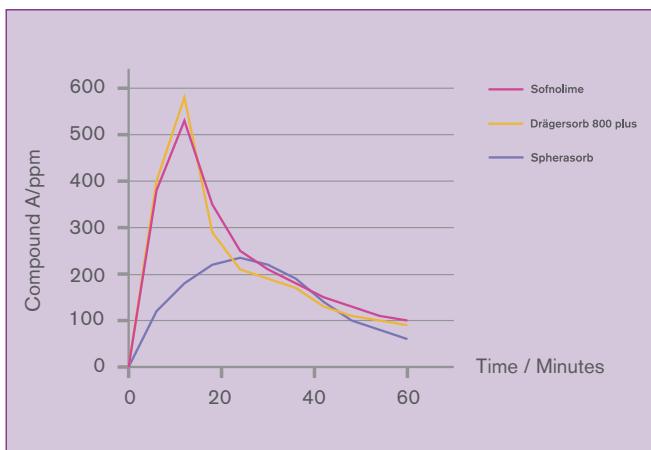


Spherasorb moisture did not fall below 2% after 90 hours flow of dry oxygen

Jumbo absorber, 7L/min dry oxygen for 90hrs (continuous).

Spherasorb® medical soda lime Carbon Dioxide absorbent

Carbon Monoxide formation. 600g dry absorbent, 5L/min oxygen containing 0.5% Isoflurane.



Department of Anaesthesiology and General Intensive Care
University of Vienna, Austria

Spherasorb is a high quality medical soda lime manufactured from mixture of Calcium and Sodium Hydroxides and an inert hardening agent. It is supplied in the form of hard, porous regular rounded pellets which have been specifically processed to maximise Spherasorb absorption capacity. One kilogram of Spherasorb will absorb a minimum of 120 litres of CO₂.⁽¹⁾

Bed packing

The consistently sized spheres allow for optimum bed packing compared with granular soda lime. This help to maximise the performance of the product, by ensuring that good gas flow is guaranteed, preventing gas channelling and the possibility of the gas bypassing regions of the Spherasorb inside the absorber.

Choice

Spherasorb is available in two indicator colour changes, pink to white and white to violet. Both products have a distinct colour change which gives a clear indication of the product status. It is recommended that the colour is used as an indication of exhaustion in conjunction with monitoring of Carbon Dioxide.

Application

Spherasorb is designed specifically for medical use as a Carbon Dioxide absorbent. The absorption of Carbon Dioxide by soda lime results in an exothermic reaction. All Soda Lime brands will generate heat, especially if exposed to higher than normal expiratory levels of Carbon Dioxide.

Storage

Please see back page for details.

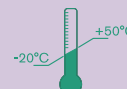
Transport

Spherasorb is supplied in 5 litre jericans or air tight 1kg packages if preferred. Spherasorb contains less than

2% Sodium Hydroxide and is not classified as a caustic material; it can be shipped by road, air or sea as a non-hazardous material.

Safety information

- Risk of serious damage to eyes.
- Irritating to eye, respiratory system and skin.
- Keep out of reach of children.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Wear suitable gloves and eye/face protection.
- In case of accident or if you feel unwell seek medical advice immediately and show label if possible.



Performance

Test	Typical results
Hardness USP	92 % or over
Dust content (<0.42 mm)	0.2% or less
Mesh size 2.0-4.0mm	98% or over
CO ₂ absorption (L/kg)	120% minimum
Resistance to flow 500g@ 60L/min	0,9 cm H ₂ O

Spherasorb



Spherasorb soda lime, 1 kg (pink to white change)

Code: 2172

Box Quantity: 10

Spherasorb soda lime, 1 kg (white to violet change)

Code: 2173

Box Quantity: 10

Spherasorb soda lime, 5 litre (pink to white change)

Code: 2174

Box Quantity: 2

Spherasorb soda lime, 5 litre (white to violet change)

Code: 2175

Box Quantity: 2

Storage information

Store the absorbent in original closed container only.

Use within one month of opening the container.

Keep container away from direct heat and sunlight to prevent drying out or over-heating of the absorbent.

Do not freeze; if frozen, absorbent must be completely thawed before use.

Do not subject to excessive loads.

When stored correctly, unopened containers will maintain their absorption capability for at least five years.

References

- (1) **Technical data of Spherasorb soda lime vs various competitor brands** - Carbon Dioxide Absorption, September 1997
- (2) **Mesh analysis USP XXII** - Intersurgical, September 1997
- (3) **Protocol and test results of a comparative test for Spherasorb to determine the level of dust produced after 1000 miles transit trial** - Intersurgical, September 1997
- (4) **Technical data of Spherasorb soda lime vs various competitor brands** - Physical properties hardness USP XXII.
- (5) **Testing for interaction between anaesthetic agents and soda lime** - University of Wales College of Medicine Department of Anaesthetics and Intensive Care Medicine. Heath Park, Cardiff - Bryan Williams, Prof. Harner - September 1997
- (6) **Carbon Monoxide vs soda lime characteristics** - Intersurgical 1999
- (7) **New Potassium Hydroxide absorbent Spherasorb produces less Carbon Monoxide** - Dept. of Anaesthesiology and General Intensive Care, University of Vienna, Austria.
(Paper to be published, draft abstract available on request.)
- (8) **Reaction of Sevoflurane with soda lime** - Prof. Dr. med H Forester Klinikum der Johann Wolfgang Goethe-Universitaet Frankfurt am Main: February 2000.
- (9) **Spherasorb soda lime, questions and answers** - Intersurgical 1999
- (10) **Comportamiento en clinica de dos tipos de cal sodada: Estudio Comparativo. Hospital Clínico Anaesthesia, Valencia**

