

# Carbon Dioxide Absorption

## Technical Data – 4 litre canister



The 4 litre canister filled with Sofnolime® is designed to be used in a purpose built manifold system for the maintenance of a breathable atmosphere.

### Applications

- Submarine primary system
- Commercial submarines

### Properties

- Highly volumetrically efficient  
(>60 litres of CO<sub>2</sub> absorption per litre storage)
- No maintenance
- Reliable operation
- Easy to use
- Watertight seals

### Canister Dimensions

200mm x 135mm x 240 mm (w x d x h)



### Specifications

Sofnolime® Grade	1550 (1.5-5.0 mm)	1025 (1.0-2.5 mm)
Carbon dioxide removal capacity of unit	> 400 litre/unit @ 266 litre/min @ 1% Carbon Dioxide	>500 litres/unit @ 266 litres/min @ 1% Carbon Dioxide
Average Sofnolime® fill	3.75 kg	3.75 kg
Shelf life	5 years	5 years
Storage volume per unit	6.5 litre	6.5 litres

### Dimensions

Sofnolime® Grade	1550 (1.5-5.0 mm)	1025 (1.0-2.5 mm)
Unit weight	~ 4 kg	~ 4 kg
Pressure drop	45 – 55 mm water gauge	~ 80 mm water gauge
Unit Dimensions / mm (w x d x h)	200 x 135 x 240	200 x 135 x 240

# Carbon Dioxide Absorption

## How it works

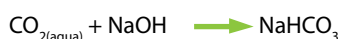
### Sofnolime®

Sofnolime® removes carbon dioxide (and other acidic contaminants) from gas streams via an exothermic, water facilitated, base catalysed chemical reaction. The Sofnolime contains a carefully controlled level of water which aids the reaction. Water is also formed as a by-product of the reaction. The reaction proceeds in 3 stages:-

#### (i) Reaction at aqueous layer



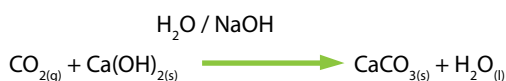
#### (ii) Bicarbonate formation



#### (iii) Decomposition/regeneration of NaOH catalyst



The overall balanced equation being :-



## Additional information

### Packaging

Canisters are individually packed in boxes, 156 per pallet (4 layers of 39 boxes). Total pallet Gross weight is 700kg, dimensions 120 x 100 x 117 cm.

### Sofnolime®

Sofnolime® is a soda lime absorbent for removal of carbon dioxide and other acidic contaminants from gas streams. Sofnolime® is an active compound formed by mixing calcium and sodium hydroxide. It is supplied as hard, porous, irregularly shaped granules which have been processed to maximise carbon dioxide absorption and minimise dust formation.

### Disposal

The units should be disposed of in accordance with local legislation.

### Quality

Molecular Products Ltd's aim is to manufacture chemical products which satisfy completely the needs of our customers. All products are rigorously tested to ensure conformance to the specification. Our activities comply to the requirements of ISO9001:2000 and Good Manufacturing Practice.

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