

TECHNICAL DATA:

Intersorb® 4 to 8 mesh

Indicating and Non-indicating soda lime.

A high performance carbon dioxide absorbent for use in compressed air breathing and industrial acid gas removal applications.

Product names: Intersorb 408 NI (non-indicating)
Intersorb 408 WV (indicating)

Chemical composition: Intersurgical tests.

	Intersorb 408 NI	Intersorb 408 WV
Calcium Hydroxide	97 %	97 %
Sodium Hydroxide	3 %	3 %
Ethyl Violet	NIL	0.03 %

Note, these figures represent the dry constituents. The product will additionally contains 14 % to 18 % water.

Physical properties

	Intersorb 408 NI and WV Typical data	Specification
Particle size		
Over 5.60 mm	0 %	1 % max
4.75 to 5.60 mm	0 %	7 % max
2.00 to 4.75 mm	Balance	Balance
0.600 to 2.00 mm	4 %	15 % max
Under 0.600 mm	0.3 %	1 % max
Moisture content	16 %	14 % to 20 %
Hardness (% Retained on 2.5mm screen)	91 %	75 % minimum
Resistance to flow (40 L/min, absorber 10 cm diameter, 12.5 cm height, volume 1 litre.)	0.9 mbar unused 1.1 mbar used	

Carbon Dioxide absorption

	Intersorb 408 NI and WV Typical data	Specification
Time to 0.5 % CO ₂ breakthrough (minutes)	74 minutes	60 minimum

105 ml absorbent in 30 mm diameter tube.
Challenge gas: 3.0 L/min air containing 5 % CO₂.
Humidity 100 %
Temperature 20°C

Chemical reaction for carbon dioxide removal.

Intersorb 408 removes carbon dioxide (and other acidic contaminants) from gas streams via an exothermic, water facilitated, base catalysed chemical reaction. Intersorb 408 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) $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$
- (ii) $\text{H}_2\text{CO}_3 + 2\text{NaOH} \rightarrow \text{Na}_2\text{CO}_3 + 2\text{H}_2\text{O}$
- (iii) $\text{Na}_2\text{CO}_3 + \text{Ca}(\text{OH})_2 \rightarrow \text{CaCO}_3 + 2\text{NaOH}$

Quality

All products are rigorously tested to ensure conformance to specification. Our production and quality procedures comply to the requirements of ISO9001.

1st October 2010

Mike Holder

Product and Development Manager for Absorbents.

Intersurgical Ltd.

Tel direct 0044 (0)1189 656361

Fax 0044 (0)1189 656356