

Micropore Inc. has developed a family of products based on their patented ExtendAir® process that encapsulates reactive adsorbent powders in a stable polymer sheet. The sheets are comprised primarily of fine CO₂ adsorbent powder (similar in particle size to talcum powder) and are frequently as dense or denser than granules. Micropore offers lithium hydroxide and calcium hydroxide adsorbents for powered and unpowered use in removing carbon dioxide in a wide range of applications. Micropore is providing adsorbents for routine and emergency carbon dioxide control for submarines, diving/first responder rebreathers, mine refuge/CBRN shelters, personal protection escape devices, spacecraft and anesthesia machines in hospitals or field operating rooms. The lithium based adsorbents as



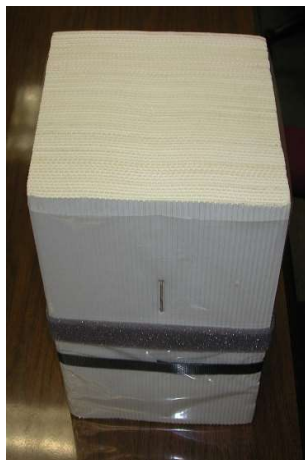
**Rolled ExtendAir® Curtain
NSN 6810-01-560-3015**

tested by multiple NATO and Pac Rim Navies have superior performance at low temperatures or high pressures (optimized for DISSUB conditions). ExtendAir® cylindrical cartridges (NSN 6810-01-560-3015) provide 59% more adsorbent mass per given volume over lithium hydroxide granules. In addition to duration improvements, the encapsulation of the adsorbent eliminates the toxic dust associated with handling granules. Micropore's lithium hydroxide curtains have been



**Folded Curtains in Ammo Box
NSN 4240-01-543-3287**

rigorously tested by the World's Navies. They are proven to outperform any passive solution in a DISSUB environment and are **installed on numerous Navy submarines; for example Canada, Netherlands, Republic of Singapore, United Kingdom, and United States.**



**PowerCube® Adsorbent
NSN 4240-01-626-9829**

For powered operations, Micropore offers both lithium and calcium based adsorbents. Air is forced through the flow channels of the ribbed ExtendAir® sheets. Forced air includes lung powered systems (rescue rebreathers) and fan powered systems. The PowerCube® is a replacement for granules in submarine scrubbers. PowerCube® adsorbent stores in the same volume as the granular cans with 33% more mass thus allowing longer submerged durations or larger crews. PowerCubes® were successfully land-based tested by Naval Engineering



**6 PowerCube® adapters
installed in Dutch submarine**

Test Establishment (test sponsor Canadian MOD, Royal Dutch Navy and Royal Norwegian Navy). **As reported at SAMAP 2017 the Royal Dutch Navy has successfully conducted shipboard testing and has retrofitted their fleet for ExtendAir® calcium hydroxide PowerCube® adsorbent. Other submarine Navies are testing PowerCubes® for submarine applications.**