

# ExtendAir™

Reactive Plastic Cartridges **RPC**

Micropore, Inc. has developed a revolutionary reactive plastic for use in adsorbent applications. **ExtendAir** Reactive Plastic Cartridges (RPCs) are designed for rebreathing and life support equipment, replacing the granular CO<sub>2</sub> scrubbers currently used. This patented technology dramatically improves duration and ease-of-use, while eliminating many of the problems associated with granular adsorbents.

*"A revolutionary reactive plastic for use in adsorbent applications ...RPC"*



## Features • Problems Solved

*Increased adsorbent density over granules*

*Adsorbent powder bound in plastic matrix*

*Cartridge instead of loose granules*

*Individually packaged; simply open and use*

*Optimized adsorbent thickness and rib size*

*Factory-molded in air channels*

• *Improved mean duration or a smaller, lighter scrubber*

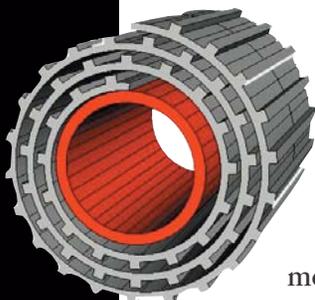
• *Elimination of powdering, reducing incidence of caustic cocktail*

• *Ease of use – installs and removes in seconds*

• *Convenient shipping, handling, and storage*

• *Greater control over duration and breathing resistance*

• *Repeatable, predictable scrubber performance*



Of all the many beneficial features of RPCs, the one that is most exciting is the factory-molded air flow channels. This eliminates both channeling problems and performance variability inherent in granular systems. An RPC's mean duration is repeatable to +/- 5% within two standard deviations, while granular performance is no better than +/- 30%. Because granular adsorbent scrubbers are typically oversized to account for this large performance variation, **ExtendAir** RPC scrubbers will have the lightest weight and smallest size, or the longest duration possible for a given scrubber volume.

**HOW** much better? At a minimum, duration is improved 25% due to a higher density of adsorbent alone. As the use conditions become more extreme (higher work rates, lower temperatures, higher pressures), the performance advantages are even greater. This graph shows the increase in duration (at 32°F and 150 ft. depth) compared to granules at various breathing rates.

**RPCs vs. Granules: Duration Increase**

