

# ProGuard 900 Media

ProGuard 900 is a coal based carbon pellet impregnated to remove acid gases such as hydrogen sulfide, sulfur dioxide, and oxides of nitrogen. It is typically used in HVAC systems in refineries, paper mills, wastewater plants, steel mills, and industrial buildings to protect computers and people and remove odors.

## MEDIA COMPOSITION

**ProGuard 900** carbon contains the equivalent of 100 football fields of available surface area per one pound of media. The caustic impregnate is evenly distributed throughout the pellet so that it is available for reaction with contaminant gases as they pass through. This makes the media effective at removing these gases down to very low parts per billion levels.

## MEDIA ADVANTAGES

- *Low dust*
- *Very effective for a broad range of acid gases*
- *Nontoxic and nonhazardous*
- *Hard, strong pellet*
- *Uniform size*
- *High surface area*

## TARGET CONTAMINANTS AND THE REMOVAL PROCESS

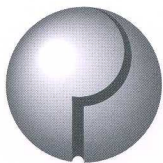
Contaminants are removed by adsorption and chemisorption. Odorous gases are chemically changed as they pass through the pellet utilizing the full capacity. Common contaminants include: hydrogen sulfide, sulfur dioxide, nitric oxides, mercaptans, chlorine.

## ADDITIONAL MEDIA

ProMark provides a range of media that covers all gas phase filtration requirements. **ProGuard 100** is designed for ethylene and general odor control. **ProGuard 200** is designed for toxic and corrosive gases. **ProGuard 400** removes chlorine gas. **ProGuard Blend** combines ProGuard 200 or 300 and carbon for general odor control over the greatest range of gases. **ProGuard 600** is virgin, coconut shell based, granular carbon effective at removing lower molecular weight VOCs and for general odor control. **ProGuard 700** is activated coal based carbon for general odor control. **ProGuard 800** is designed for ammonia and other basic pH gases. **Dry 208** desiccant replaces any alumina based desiccant media for air or liquid drying. The right media will be selected to address the specific need based upon contaminant gases present, concentration levels, airflow requirements, environmental concerns and room design considerations.

## YOUR COMPLETE SOURCE FOR GAS PHASE FILTRATION

- *Media for all types of applications (KMnO<sub>4</sub> on alumina, plain carbon, impregnated carbon)*
- *Equipment design and supply*
- *Laboratory support, media testing, coupon analysis*
- *Monitoring instruments*
- *Technical support for application and design*



**PROMARK  
ASSOCIATES, INC.**  
*Gas Filtration Experts*

2656 Broadway Ave. Evanston, IL 60201-1502 USA  
p 847.866.7446 f 847.866.7795 toll free 800.809.8300

[www.promarkassociates.com](http://www.promarkassociates.com)

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## CHEMICAL CAPACITY

ProGuard 900 shall meet the following removal capacities:

- **Hydrogen Sulfide** 25% minimum by weight (.14 g/cc)
- **Sulfur Dioxide** 6% minimum by weight (.034 g/cc)
- **Chlorine** 10% minimum by weight (.056 g/cc)

## PHYSICAL PROPERTIES

ProGuard 900 shall have the following properties:

- **Particle Sizes** 4 mm diameter (3.5 - 6.5 mm long)
- **Moisture Content** 10% maximum
- **Hardness, Ball Pan**  $\geq 95$
- **Bulk Density** 35 lbs/ft<sup>3</sup> (0.56 g/cc)
- **Carbon Tetrachloride Activity** 65 min.
- **Iodine Number** 1100 mg/g

## QUALITY CONTROL

Quality control is maintained by monitoring the physical properties and chemical capacities and ensuring they fall within specifications.

## APPLICATION GUIDELINES

ProGuard 900 shall perform effectively under the following conditions and guidelines:

- **Temperature** -4°F to 125°F (-20°C to 51°C)
- **Humidity** 10-95%RH
- **Airflow** 60 FPM to 500 FM in commercial and industrial systems
- **Media Performance** ProGuard 900 shall be designed for 99.5% min. removal efficiency when new in properly designed systems.
- **Media Life** In order to determine ProGuard 900 media life, periodic samples shall be taken and returned to the factory for analysis. The results of testing make it possible to project changeout intervals and ensure media performance.

## INSTALLATION AND DISPOSAL REQUIREMENTS

Installers shall use dust masks, safety goggles, and rubber gloves. Spent ProGuard media should be disposed of according to local, state and federal requirements.

## PACKAGING

ProGuard 900 carbon media is packaged in 55 lb bags and is also available in 1,100 lb bulk sacks.

## ADDITIONAL INFORMATION AND RELATED EQUIPMENT

- **PMA Media Selection Chart** - lists specific gases that are controlled by ProGuard 200 media (potassium permanganate on alumina) as well as gases controlled by ProGuard 700 carbon and other media, either alone or in a blend.
- **PMA 12 & 18 Media Modules** - refillable steel, standardized modules that hold the ProGuard media for use in housings.
- **PMD 12 & 18 Media Modules** - disposable modules that are filled at the factory with any of the ProGuard media.
- **PMA Trays** - refillable steel trays that hold media for installation in various housings.
- **Honeycomb Disposables** - directly replace refillables and can be filled with any of the ProGuard media.
- **Carbon Bonded Disposables** - activated carbon in a bonded block disposable filter, suitable for high purity applications; more carbon per panel than a comparable loose fill. Eliminates metal and labor to empty and fill metal trays.