



## ProGuard™ 300 Media

Proprietary chemistry makes PG300 the high capacity standard for potassium permanganate on alumina pellets. It removes twice as much toxic, corrosive, and odorous gases from air streams as a standard 4% pellet.

### MEDIA COMPOSITION

**PG300** chemisorbent media is a round porous pellet manufactured from activated alumina and water. It is impregnated with potassium permanganate and proprietary chemistry. This chemistry is uniformly distributed throughout for maximum reaction with target contaminants.

### MEDIA ADVANTAGES

- *High H<sub>2</sub>S removal capacity*
- *Destroys a wide range of chemicals, especially acids*
- *Very effective for ethylene, formaldehyde and a broad range of chemicals (contaminants)*
- *Nontoxic and nonhazardous*
- *Bacteriacide*
- *Easy disposal*

### TARGET CONTAMINANTS AND THE REMOVAL PROCESS

Contaminants are removed by adsorption, absorption and chemical reaction. Odorous gases penetrate into the core where they react with the  $\text{KMnO}_4$  and other chemicals and are converted into safe, non-odorous byproducts. Many become solids and are captured on the pellet. Common contaminants include: hydrogen sulfide, sulfur dioxide, nitric oxide, and formaldehyde.

### 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 two ProGuard media 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; **ProGuard™ 900** controls acid gases. **Dry 208** 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.

### COMPLETE SOURCE FOR GAS PHASE FILTRATION

- *Media for all types of applications ( $\text{KMnO}_4$  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  
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# ProGuard™ 300 Media

## CHEMICAL CAPACITY

ProGuard™ 300 shall meet the following removal capacities:

- **Hydrogen Sulfide** 14% min. by weight
- **Sulfur Dioxide** 8% min. by weight
- **Nitric Oxide** 5.6% min. by weight
- **Formaldehyde** 2.8% min. by weight

## PHYSICAL PROPERTIES

ProGuard™ 300 shall have the following properties:

- **Potassium Permanganate Content** 8% on dry basis
- **Bulk Density** 50 lbs/ft<sup>3</sup>
- **Crush Strength** Strength 7 lbs minimum by weight
- **Abrasion Loss** 1% maximum
- **Moisture Content** 25% maximum
- **Nominal Pellet Diameter** 3/16" (4.76 mm in 3x6 mesh range) or 1/8" (3.18 mm in 5x8 mesh range)

## QUALITY CONTROL

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

## APPLICATION GUIDELINES

ProGuard™ 300 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** ProGuard media shall be effective in commercial and industrial systems with airflows ranging from less than 25 CFM (42.5 m<sup>3</sup>/hr) to over 100,000 CFM (169,920 m<sup>3</sup>/hr) and with velocities from 60 FPM to 500 FPM (1,080 to 9,000m/hr).
- **Media Performance** ProGuard 300 shall be designed for 99.5% min. removal efficiency when new in properly designed systems.
- **Media Life** in order to determine ProGuard 300 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 guidelines.

## PACKAGING

ProGuard media is packaged in three mil poly bags inside a double wall corrugated box that holds 50 lbs (one cubic foot). Media is also available in 50 lb plastic pails and bulk sacks up to 2,000 lbs.

## ADDITIONAL INFORMATION AND RELATED EQUIPMENT

- **PMA Media Selection Chart** - lists specific gases that are controlled by ProGuard 300 media (potassium permanganate on alumina) as well as gases controlled by other ProGuard 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 and 25 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.