

# PRODUCT SPECIFICATION FOR

## PURAFIL® SELECT MEDIA




**PURAFIL SELECT MEDIA** removes sulfur oxides and other odorous pollutants from makeup air. Automobiles and other sources of fossil fuel combustion produce these pollutants. In return air applications, Purafil Select removes emissions from office furnishings and human bioeffluents. Purafil Select is also recommended for the preservation of fruits, vegetables, and flowers because of its effectiveness at removing ethylene, a ripening agent.



### MEDIA SPECIFICATION

Purafil Select Media shall consist of manufactured, generally spherical, porous pellets. Pellets shall be formed from a combination of activated alumina and other binders, suitably impregnated with potassium permanganate to provide optimum adsorption, absorption and oxidation of a wide variety of gaseous contaminants. The potassium permanganate shall be applied during pellet formation, such that the impregnant is uniformly distributed throughout the pellet volume and is totally available for reaction.

### THE CHEMISORPTIVE PROCESS

The Purafil chemisorptive process shall remove contaminant gases by means of adsorption, absorption, and chemical reaction. Gases shall be trapped within the pellet where oxidation changes the gases into harmless solids, eliminating the possibility of desorption.

### REMOVAL CAPACITY

Purafil Select Media shall meet the following removal capacities:

- **HYDROGEN SULFIDE:** 14% minimum by weight
- **SULFUR DIOXIDE:** 7.0% minimum by weight
- **NITROGEN DIOXIDE:** 10% minimum by weight
- **NITRIC OXIDE:** 4.9% minimum by weight
- **FORMALDEHYDE:** 2.5% minimum by weight

*For example, 100 pounds (45.36 kg) of Purafil® Select Media will remove a minimum of 14pounds (6.35 kg) of hydrogen sulfide.*

### PHYSICAL PROPERTIES

Purafil Select Media shall have the following physical properties:

- **MOISTURE CONTENT:** 35% Maximum
- **CRUSH STRENGTH:** 35% - 70%
- **ABRASION:** 4.5% Maximum
- **BULK DENSITY:** 50 lbs/ft<sup>3</sup> (0.8 g/cc) ±5%
- **NOMINAL PELLET DIAMETER:** 1/8" (3.175 mm)
- **POTASSIUM PERMANGANATE CONTENT:** 8% Min.

### QUALITY CONTROL

Purafil Select Media shall be submitted to the following quality control tests before shipment:

- Moisture Content
- Crush Strength
- Abrasion
- Bulk Density
- Potassium Permanganate Content

### APPLICATION GUIDELINES

Purafil Select Media 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:** Purafil Select Media shall be effective in commercial and industrial systems with airflows ranging from less than 25CFM (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 (0.30 to 2.54 m/s).
- **MEDIA PERFORMANCE:** Purafil Select Media shall be designed for 99.5% min. removal efficiency in Purafil systems.
- **MEDIA LIFE:** Regular media samples of Purafil Select Media shall be taken for projecting remaining media life, providing scheduled maintenance, and ensuring performance.

# PURAFIL® SELECT



## ADVANTAGES

- Will not desorb
- UL Classified
- Will not support bacterial or fungal growth
- Can be tested for remaining service life
- Non-toxic and non-hazardous

## TARGET CONTAMINANTS

- Oxides of sulfur
- Nitric oxide
- Lower molecular weight aldehydes and organic acids
- Formaldehyde
- Hydrogen sulfide

## INSTALLATION & DISPOSAL REQUIREMENTS

- **INSTALLATION:** Installers shall use dust masks, safety goggles, and rubber gloves.
- **DISPOSAL:** Spent Purafil® Select Media should be disposed of according to local, state and federal guidelines.