

# Product Bulletin for Purafil Odormix SP Media

**Odormix SP Media** is made from an equal mix (by volume) of Purafil's Odoroxidant SP media and Odorkol media. Odoroxidant SP media is generally spherical, porous pellets formed from a combination of activated alumina and other binders, suitably impregnated with sodium permanganate (NaMnO<sub>4</sub>). The sodium permanganate is applied during pellet formation such that it is uniformly distributed throughout the pellet volume and is completely available for reaction with target gases. Odorkol media consists of extruded cylindrical, porous pellets formed from a premium virgin activated carbon. No binders are used allowing the carbon completely available for adsorption of target gases.



**Odormix SP Media** has been specially engineered to provide the highest overall performance against multiple contaminants. Odoroxidant SP removes contaminant gases by chemisorption using adsorption, absorption, and chemical reaction (oxidation). Harmful gases are trapped within the pellet and converted into harmless solids which remain in the pellet, eliminating the possibility of desorption and release back into the environment. Odorkol media removes contaminant gases with high efficiencies and capacities by means of physical adsorption (physisorption). It is very effective against medium-to-high molecular weight compounds, and chemical contaminants with low volatility.

**Odormix SP Media** demonstrates a higher working capacity for broad-spectrum control of odorous and corrosive gases including mercaptans, hydrocarbons, hydrogen sulfide and sulfur and nitrogen oxides. Odormix SP media can be used when space within a Purafil scrubber is limited but these two individual media are indicated; combining two stages of filtration into one. Odormix SP is also recommended as a polishing media in odor control and corrosion control applications. Odormix SP media provides the following minimum removal capacities:

## Removal Capacities

| Contaminant Gas  | g/cc   | Weight % * |
|--|--------|------------|
| Sulfur dioxide (SO <sub>2</sub> )                        | 0.0520 | 8.13       |
| Nitrogen dioxide (NO <sub>2</sub> )                      | 0.1434 | 22.41      |
| Toluene (C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub> ) | 0.0792 | 12.38      |

\* 100 pounds (45.36 kg) of Odormix SP Media will remove a minimum of 8.13 pounds (3.69 kg) of sulfur dioxide.

## Application Guidelines

|             |   |
|-------------|---|
| Temperature | -4°F to 125°F (-20°C to 51°C)                             |
| Humidity    | 10 - 95% RH   |
| Air Speed   | 60 - 500 fpm (0.30 - 2.54 m/s)                            |
| Performance | 99.5% (min) initial removal efficiency in Purafil systems |

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## Specifications

|                         |  |
|-------------------------|--|
| <b>Odormix SP</b>       |  |
| Bulk density            | 40 lbs/ft <sup>3</sup> (0.64 g/cc) ±5% |
| <b>Odoroxidant SP</b>   |  |
| Sodium permanganate     | 12% (min) as NaMnO <sub>4</sub>        |
| Moisture                | 35% (max)                              |
| Crush strength          | 35-70%                                 |
| Abrasion                | 4.5% (max)                             |
| Bulk density            | 50 lb/ft <sup>3</sup> (0.8 g/cc) ±5%   |
| Nominal pellet diameter | 1/16" - 1/8" (1.6 - 3.2 mm)            |
| <b>Odorkol</b>          |  |
| CTC activity            | 60% (min)                              |
| Hardness number         | 95 (min)                               |
| Moisture                | 2.0% (max)                             |
| Ash content             | 12% (max)                              |
| Bulk density            | 30 lb/ft <sup>3</sup> (0.48 g/cc) ±5%  |
| Nominal pellet diameter | 0.16" (4 mm)                           |

## Quality Control

Each lot of Odoroxidant SP and Odorkol media used in Odormix SP media is thoroughly tested prior to shipment according to the procedures described in Purafil's ISO 9001 Quality Systems Manual.

## Media Life Analysis

Samples of Odormix SP media should be sent on a regular basis to the Purafil laboratories for testing to determine remaining media life. This provides for scheduled maintenance, avoids downtime, and assures ongoing protection for processes, products, and personnel.

## Disposal

Odormix SP media should be disposed of according to local, state, and federal guidelines.

Purafil's Odormix SP media is UL classified for flammability.