

PRODUCT SPECIFICATION 4

ODOROXIDANT™ SP MEDIA PURAFIL



ODOROXIDANT SP MEDIA demonstrate a higher working capacity for broad-spectrum oxidation of contaminants in actual field conditions, where multiple gas challenges are present. The Purafil SP Series has been specially engineered to contain more permanganate (the active ingredient) for increased removal capacity, allowing the media to remain more available for removal of target gases. Odoroxidant™ SP (patent-pending) Media demonstrates a high removal capacity for sewerage gases, including hydrogen sulfide, aldehydes, sulfur dioxide and many organic compounds.



ODOROXIDANT SP MEDIA

MEDIA SPECIFICATION

Purafil ESD's Odoroxidant™ SP 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 sodium permanganate to provide optimum adsorption, absorption and oxidation of a wide variety of gaseous contaminants. The sodium 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 ESD's Odoroxidant™ SP Media shall meet the following removal capacities:

- **HYDROGEN SULFIDE:** 14.0% min. by weight
- **SULFUR DIOXIDE:** 7.0% min. by weight
- **NITROGEN DIOXIDE:** 15.0% min. by weight
- **NITRIC OXIDE:** 6.0% min. by weight
- **FORMALDEHYDE:** 4.0% min. by weight

For example, 100 pounds (45.36 kg) of Odoroxidant™ SP Media will remove a minimum of 14 pounds (6.35 kg) of hydrogen sulfide.

PHYSICAL PROPERTIES

Purafil ESD's Odoroxidant™ SP Media shall have the following physical properties:

- **MOISTURE CONTENT:** 35% Maximum
- **CRUSH STRENGTH:** 35% - 70%
- **ABRASION:** 4.5% Maximum
- **BULK DENSITY:** 50 lbs/ft³ (0.8 g/cc) ±5%
- **PELLET DIAMETER:** 1/16" - 1/8" (1.5 mm - 3.2 mm)
- **SODIUM PERMANGANATE CONTENT:** 12% Minimum

APPLICATIONS

Odoroxidant™ SP Media is designed for the removal of odorous gases pervasive in wastewater operations. The media is used in conjunction with other Purafil ESD media and serves to polish remaining odorous gases before discharge to the atmosphere.

ADVANTAGES

- Landfill disposable
- UL Classified Class 1
- New and spent media is non-toxic
- Will not support bacterial or fungal growth

APPLICATION GUIDELINES

Odoroxidant™ SP 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:** Odoroxidant™ SP Media shall be effective in Purafil ESD systems, including the Drum Scrubber with airflows from 100 to 1,000 CFM (170 to 1699 m³/hr), Tub Scrubber with airflows from 500 to 6,000 CFM (850 to 10,194 m³/hr) and Deep Bed Scrubber with airflows from 600 to 8,000 CFM (1,020 to 13,592 m³/hr). Odoroxidant™ SP Media shall also be effective in Vessel Scrubbers with airflows from 8,000 to 20,000 cfm (13,592 to 33,980 m³/hr) and in passive Mole Manhole Scrubbers.

DISPOSAL REQUIREMENTS

Spent Odoroxidant™ SP Media should be disposed of according to local, state and federal guidelines.