

Product Bulletin for Purafil SP Blend Media

Purafil SP Blend media is made from an equal mix (by volume) of Purafil SP and Purakol media. Purafil SP media is generally spherical, porous pellets formed from a combination of activated alumina and other binders, suitably impregnated with sodium permanganate (NaMnO_4). 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. Purakol 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.



Purafil SP Blend Media has been specially engineered to provide the highest overall performance against multiple contaminants. Purafil 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. Purakol 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.

Purafil SP Blend 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. Purafil SP Blend 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. Purafil SP Blend is also recommended as a polishing media in odor control and corrosion control applications. Purafil SP Blend media provides the following minimum removal capacities:

Removal Capacities

Contaminant Gas	g/cc	Weight % *
Sulfur dioxide (SO_2)	0.0520	8.13
Nitrogen dioxide (NO_2)	0.1434	22.41
Toluene ($\text{C}_6\text{H}_5\text{CH}_3$)	0.0792	12.38

* 100 pounds (45.36 kg) of Purafil SP Blend 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

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

Quality Control

Each lot of Purafil SP and Purakol media used in Purafil SP Blend 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 Purafil SP Blend 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

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

Purafil SP Blend media is UL classified for flammability.