

Product Bulletin for Purafil Chemisorbant Media

Purafil Chemisorbant Media consists of generally spherical, porous pellets formed from a combination of activated alumina and other binders, suitably impregnated with potassium permanganate (KMnO₄). The potassium 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.



Purafil Chemisorbant Media has been specially engineered to provide an enhanced oxidation potential thus assuring the highest overall performance. The chemisorptive process removes contaminant gases by means of 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.

Purafil Chemisorbant Media demonstrates a higher working capacity for broad-spectrum contaminant control in applications where there are undefined sources such as: outdoor air cleaning, general odor control, and off-gassing from building materials and office furnishings. This media is often used with Purakol media to provide broad-spectrum contaminant control. Purafil Chemisorbant media provides the following minimum removal capacities:

Removal Capacities

Contaminant Gas	g/cc	Weight % *
Hydrogen sulfide (H ₂ S)	0.0640	8.00
Sulfur dioxide (SO ₂)	0.0320	4.00
Nitrogen dioxide (NO ₂)	0.0900	11.25
Nitric oxide (NO)	0.0228	2.85
Formaldehyde (HCHO)	0.0112	1.40

* 100 pounds (45.36 kg) of Purafil Chemisorbant media will remove a minimum of 8 pounds (3.62 kg) of hydrogen sulfide.

Specifications

Potassium permanganate	4% (min) as KMnO 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	1/8" (3.175 mm)

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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Quality Control

Each lot of Purafil Chemisorbant media is thoroughly tested prior to shipment according to the procedures described in Purafil's ISO 9001 Quality Systems Manual. This testing includes but is not limited to: bulk density, potassium permanganate content, moisture content, crush strength, and abrasion.

Media Life Analysis

Samples of Purafil Chemisorbant 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 Chemisorbant media should be disposed of according to local, state, and federal guidelines.

Purafil Chemisorbant media is UL 900 classified for flammability.