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PAARS™

Gaseous contaminants oxidation.

High-end filter media from Entec. Specially designed to remove harmful gases such as H_2S, SO_2, SO_3 and thiols from the air.

DESCRIPTION

The goal of our high-end filter media PAARS™ is to permanently remove harmful gases such as H_2S, SO_2, SO_3 and thiols from the air. The granulate has a porous structure which is impregnated with potassium permanganate ($KMnO_4$); visible as the specific purple colour.

Main target: Gaseous contaminants oxidation. **Reducing bad odour**, for example from waste water pits and treatment plants.

The impregnation system (potassium permanganate / KM_nO_4 is a very powerful oxidizer.

Harmful gases penetrate the pellet via the microporous surface, after which an immediate and irreversible oxidation process takes place, whereby the harmful gases are converted into a neutral residual gas.

PAARS™ WILL PERMANENTLY REMOVE:

- Hydrogen sulphide
- Sulphur dioxide
  Oxides of nitrogen (NOX)
- Chlorine
- Formaldehyde
- Ethylene
- Light VOCs

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TYPICAL APPLICATIONS AND INSTALLATION AREAS

- Sewage pumping stations.
- Water treatment plants.
- Pulp and paper plants.
- Chemical plants.
- Refineries.

The best solution for your situation can be determined based on the application, the types of gases to be removed, the gas concentration and the quantity of air.

Ask our specialists for the best advice in your specific situation.

PAARS™ protects against aviation fuel vapors at airports.

PAARS™ does not burn, suitable in environments prone to fire.

PAARS™ does not support microbial colonisation.

PAARS™ provides essential protection for artefacts in museums, art galleries and archives against acid gases.

ADDITIONAL BENEFITS

PAARS™ | Consumption indication system
The color change that occurs during use serves as a visual indicator that indicates the consumption level of the product at all times.

100%
Colour: Purple
Status: Fully operational

75%
Colour: Red/Brown
Status: Fully operational

50%
Colour: Brown
Status: Fully operational

25%
Colour: Black
Status: Less operational
Contact Entec for advise

0%
Colour: White
Status: Worked out
Contact Entec for advise

PAARS™ | Toxicity
Classified as non-toxic upon oral, dermal and inhalation exposure, according to definitions adopted by US Federal product Handling.

PAARS™ | Packaging options
- 20 kg.
- 25 kg.
- IBC sacks containing up to 800 kg, bottom discharge shute optional.

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COMPOSITION AND PROPERTIES

Base media:	Spheres formed from activated alumina powder.
Impregnation system:	Potassium permanganate (8 %) KM_nO_4 + proprietary chemicals.
Moisture content:	(As packed) 20 % max *ASTM D2867*
Particle size:	Nominal 3-6 mm *ASTM D2862*
Apparent density:	0.86 g/cc *ASTM D2854*
Crush Strength:	2.3 kg minimum
Ball Pan Hardness:	80 % minimum *ASTM D3802*
Flammability:	Class 1 UL 900
Pressure loss at 0.25 m/s per 30 cm of bed depth:	130 Pa
Recommended contact time:	Min 0.5 s
Colour:	Purple
Specific Surface area:	299 m^2/gr

REMOVAL CAPACITY EXAMPLES

Hydrogen Sulfide:	12 - 14 % min by weight (or 0.120 - 0.140 g/cc min) *ASTM D6646*
Sulfur Dioxide:	7 % min by weight
Nitric Oxide:	5 % by weight
Formaldehyde:	2.5 % by weight

QUALITY CONTROL

In order to maintain the highest quality, we systematically test PAARS™ from random batches, in an independent laboratory.

Product name:	Impregnated Activated alumina with $KMnO_4$
Test based on:	HG/T 3927-2007
Test year/month	2018, January

Item	Unit	Required Index	Test result
Size	mm	4...6	4...6
Chemical	AL_2O_3 %	>70 %	75.98 %
composition	$KMnO_4$ %	>8 %	8.98 %
Surface area	m^2/gr	>300	305.1
Bulkdensity	gr/cm^3	0.85...1.0	0.95
Abrasion	%	<0.3 %	0.2 %
Crushing strength	N	>80	106

APPLICATION EXAMPLES

In order to give you an even better idea of the possibilities and the scope of the application, here are some examples where PAARS™ has been implemented. Besides filter media, Entec is the manufacturer of the odour filters themselves as well.