PRODUCT BROCHURE FOR THE EMERGENCY GAS SCRUBBER

PREVENTING TOXIC GAS RELEASES

WITH CHLOROSORB® ULTRA MEDIA
The media’s chemisorptive process removes \( \text{Cl}_2/\text{SO}_2 \) by means of adsorption, absorption and chemical reaction. \( \text{Cl}_2/\text{SO}_2 \) are trapped within the pellet where an irreversible chemical reaction changes the gases into harmless solids. The chemical reaction occurs on the surface of the media throughout the volume of the pellet. The reaction front moves down the media column as the chlorine release proceeds. This allows for partial releases to consume only a proportional amount of media.

**Vertical Design**
The EGS is attached to a wall vent in the room containing the chlorine cylinders. In a release, the air/\( \text{Cl}_2 \) mixture from the gas storage areas is drawn into the top of the vessel and flows through the media bed and out the bottom to the blower. The blower discharges the chlorine-free air to the outside atmosphere.

The benefits of a horizontal design are the aluminum construction and a smaller profile. Horizontal designs are 8’ high as opposed to vertical designs that measure 18’ high.

**Purafil’s Chlorosorb® Ultra Media**

**Proven Performance**

Purafil Chlorosorb® Ultra media’s removal capacity for chlorine gas (\( \text{Cl}_2 \)) is 15% minimum by weight. For example, 100 lbs (45.36 kg) of Chlorosorb® Ultra Media will remove a minimum of 15 lbs (6.80 kg) of chlorine. Third-party laboratory testing demonstrates Chlorosorb® Ultra’s ability to remove the entire contents of a fully-loaded, storage cylinder with less than 25 parts per billion at discharge.

**Benefits**

Purafil Chlorosorb® Ultra offers customers the following benefits:

- Landfill disposable
- Non-toxic
- UL Classified
- Operates effectively in temperatures as low as -40° Fahrenheit
- 15% chlorine removal capacity

**Physical Properties**

Chlorosorb® Ultra has the following physical properties:

- Moisture content: 35% Maximum
- Crush strength: 35% - 70% Maximum
- Abrasion: 4.5% Maximum
- Bulk density: 45 lbs/ft³ (0.72 g/cc) ± 5%
- Nominal pellet diameter: 1/8” (3.2 mm)
Dry Scrubbers have several advantages over conventional wet scrubbers. For instance, dry scrubbers require significantly less maintenance. They have just ONE moving part — a blower. No need to replace pumps, spray nozzles or valves!

Dry scrubbers are much SAFER. Instead of using toxic caustic liquid, they neutralize gases with non-toxic dry-scrubbing media, which permanently transforms gases into harmless solids. In addition, dry-scrubbing media is landfill disposable.

Unlike toxic caustic liquid, dry-scrubbing media are immediately available for INSTANTANEOUS reaction, regardless of the load rate.

Dry scrubbers discharge less than 25 parts per billion, while wet scrubbers discharge 1-4 parts per million.

### OPERATIONAL COMPARISONS: Purafil VERSUS Wet Scrubbers

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>PURAFIL</th>
<th>WET SCRUBBER</th>
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<tbody>
<tr>
<td>Contains liquid toxic chemicals</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Secondary containment required</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Liquid plumbing joints with leak potential</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Caustic recirculation pumps with mechanical seals</td>
<td>None</td>
<td>1-2</td>
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<tr>
<td>Media reacts with other gases in air to deplete capacity</td>
<td>(Chlorosorb® Ultra) No</td>
<td>Yes CO₂, SO₂, H₂S</td>
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<td>Requires a complex control panel to integrate multiple functions</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Requires materials that resist corrosion from wet Cl₂ and caustic</td>
<td>No</td>
<td>Yes</td>
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<td>Requires periodic sampling to ensure optimum chlorine removal</td>
<td>Yes</td>
<td>Yes</td>
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<td>Has the potential to release NaOCl</td>
<td>No</td>
<td>Yes</td>
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<td>Has the potential to precipitate salts and plug nozzles</td>
<td>No</td>
<td>Yes</td>
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<td>Spent media is landfill disposable</td>
<td>Yes</td>
<td>No</td>
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</table>
Purafil Emergency Gas Scrubbers are:
- Available in Fiberglass or Aluminum Construction
- Suitable for indoor or outdoor use
- Designed for chlorine, sulfur dioxide or other contaminants
- Sized for 150 lb or 1, 2, or 3 ton releases