

CLS Vari-Zeo

Hg Removal Systems

Product Description

Vari Zeo is a λ cell distribution zeolyte with **fully** reacted aluminosilicate bearing cations of Fe, Na, K, Mg and Ca manufactured by CLS Industrial Purification. The **Hg** is transitioned to a **mercury** metal salt which is encapsulated within the tecto-silicate lattice, thus non-hazard and easy to handle once spent systems are the same.

Application / Function

This product is loaded into fixed absorbent beds used to remove Hg from various gas streams

Advantages

1. Performance **independent of moisture** or **H2S** content of gas.
2. **Steam out** during purging means no requirements for hot nitrogen
3. Faster purging times.
4. Free flowing spent material - much faster change out times.
5. Encapsulation of contaminants.
6. Spent product can be disposed of as Class 2 Non – Hazardous waste.
7. High activity means small mass transfer zone (**mtz**) leading to high bed utilization.

Typical Properties

Appearance – 6mm or range 3mm to 1.5 mm sized cylinders or variable sized shapes.

Color – Grey, Red, Beige, Brown

Design mtz	< 10% vs < 60% for conventional Hg guard.
Nominal Cell Size:	λ - cell size distribution 3 Angstrom to 15 Angstrom
Hg removal	From 120 $\mu\text{g}/\text{Nm}^3$ to 0.01 $\mu\text{g}/\text{Nm}^3$
Operating Temperature	10 degC to 250 degC
Operating Pressure	Independent
Operating Humidity	Independent

Services

Provided with the purchase of CLS **Vari-Zeo Hg** Removal System, CLS will provide the implementation of our **MMP** (Mercury Management Program). This includes Kinetic Modeling of each bed for EOR run prediction, quarterly onsite visits to test performance of the systems, and spent sample analysis of our systems to determine **Hg** retention, contamination, **H2S** retention, as well as MTZ placement at the time of discharge.

Recommended Loading

1. Load into treater vessel from the top.
2. Must use hopper to sock method
 - A. Goal is achieve an even dense loading

Packaging

1. Super sacks 42 ft³ each or Drums of 6 ft³ each
2. Loaded Density 58 lbs/ft³ to 70 lbs/ft³ Average 65 lbs/ft³



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CLS Industrial Products, “Custom Hg Removal Systems”

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