

FILTRATION MEDIA



8 X 30 GRANULAR ACTIVATED CARBON FOR CLEANAMINE™ FILTER

8 x 30 Granular Activated Carbon for Cleanamine Filter is specifically for use in the oil refining and gas processing industries for the treatment of amine solutions (DEA, MEA, etc). It has shown excellent adsorption characteristics when used in slipstream amine treatment applications.

FEATURES

- Reagglomerated metallurgical grade bituminous coal
- Uniformly activated granules
- High pore volume
- Faster adsorption

BENEFITS

- Reagglomeration creates optimal transport pores for faster adsorption.
- A consistent, high quality product with a strongly adsorbing wide-range pore structure optimal for the adsorption of a variety of degradation products and foam causing contaminants.
- High mechanical strength and uniform transport pore distribution resulting in excellent performance in a wide range of process conditions.
- Hardness and abrasion resistance required for environmentally friendly thermal reactivation and reuse and to minimize the generation of fines in operations requiring backwashing or with intermittent flow patterns.

APPLICATIONS

Granular Activated Carbon used in the purification of recirculating amine streams, in glycol dehydration units and gas purification units where amines are used for sour gas treatment.

Specifications

Iodine Number, mg/g	900 minimum
Ash, wt%	10 maximum
Moisture (as packaged), wt%	2 maximum
8 US Mesh [2.36mm], wt%	15 maximum
< 30 US Mesh [0.600mm] (PAN), wt%	4 maximum

Design Considerations

Typical Flow Rate Velocity:

- 10% slipstream of amine flow rate
- 4.0 gpm/sq.ft. (2.7 cm/sec) maximum
- 2.0 gpm/sq.ft. (1.4 cm/sec) typical

Contact Time:

- 15 minutes minimum

Vessel Material:

- Unlined carbon steel

Typical Carbon Life:

- Dependent on amine quality, filtration bag, or cartridge filter—both upstream and downstream of carbon vessel.

Typical Design:

- Single vessel is typical, but dependent on amine flow rate.
- Multiple vessels would be in parallel mode operation.

An effective carbon system for amine purification should include a properly designed and sized carbon vessel, pre- and post-carbon mechanical filtration, and efficient carbon handling equipment. The carbon system should be installed on the lean side of the circulating amine stream. Experience has shown that when rich side treatment is applied, the CO₂ and H₂S that are absorbed by the amine can be released in the carbon bed. This gas tends to form “bubbles” around the carbon granules and inhibits the adsorption process.

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