UFR® 12x30

Impregnated Granular Activated Carbon

DESCRIPTION

UFR 12x30 (Universal First Responder) is an impregnated granular activated carbon for multi-purpose use in respirators. It is intended to be incorporated into suitably designed respirator canisters to provide multi-gas CBRN protection in accordance with NIOSH test conditions under the Title 42 Code of Federal Regulations Part 84 and NIOSH's CBRN Statement of Standards.

The base carbon utilized in the production of UFR 12x30 is made from select grades of bituminous reagglomerated coal. It is manufactured under stringent conditions by high temperature steam activation, before being impregnated with controlled compositions of chemical additives to provide protection against the above gases. No chromium is used in the formulation of UFR 12x30.

Specifications

Moisture (As Packaged), wt%	4.0 - 6.0
Hardness Number	85 (min)
Density (Apparent), g/cc	0.71 (max)
12 US Mesh [1.70 mm], wt%	2.0 (max)
16 US Mesh [1.18 mm], wt%	10.0 - 30.0
20 US Mesh [0.850 mm], wt%	40.0 - 65.0
30 US Mesh [0.600 mm], wt%	10.0 -35.0
<30 US Mesh [0.600 mm] (Pan), wt%	2.0 (max)

APPLICATIONS

Some of the chemicals effectively reduced with UFR 12x30 in respiratory canisters and cartridges include:

- Ammonia (NH_3)
- Arsine (AsH_3)
- Cyanogen Chloride ("CK" or ClCN)
- Cyclohexane (C_6H_{12})
- Formaldehyde (CH_2O)
- Hydrogen Cyanide ("AC" or HCN)
- Hydrogen Sulfide (H_2S)
- Nitrogen Dioxide (NO_2)
- Phosgene ("CG" or $COCl_2$)
- Phosphine (PH_3)
- Sulfur Dioxide (SO_2)

FEATURES & BENEFITS

UFR 12x30 has several properties which explain its superior performance for respirators and human protection:

- Dependable performance against CBRN agents to protect first responders
- The base granular material is produced from a pulverized blend of coal in a process known as reagglomeration, resulting in a consistent, high quality product. The low ash and high density results in minimum volume high activity base carbon ideally suited to compact canister design.
- Disposal issues are minimized since no chromium is used in the formulation.
- Capable of performing in high humidity environments
- Below detectable limits for the potential release of substances during normal use.
- Available in other sizes (fine mesh and large mesh) for other applications, if of interest
- Not an ITAR restricted product

★ MADE IN USA ★

SAFETY MESSAGE

Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

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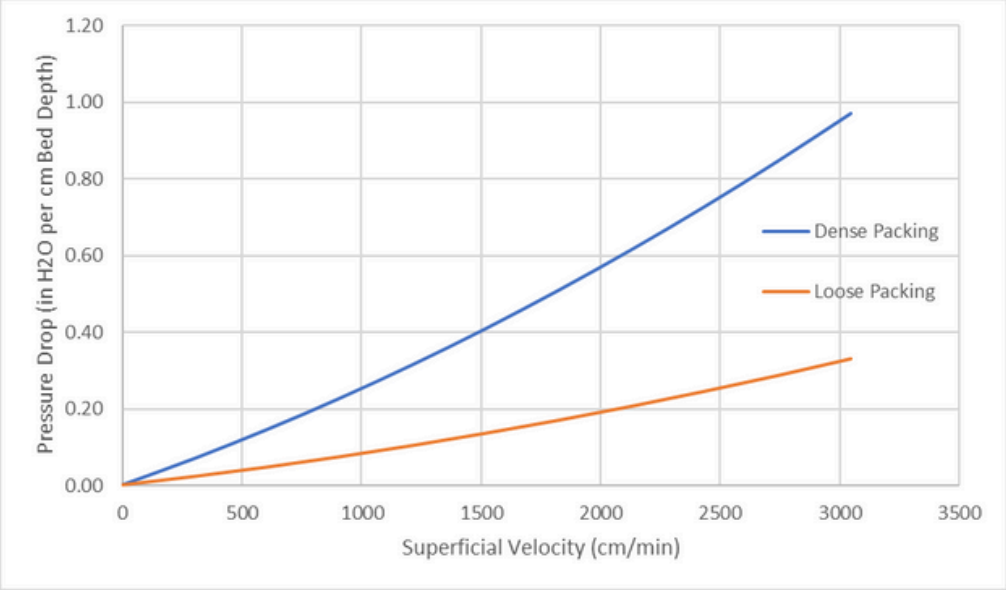
TYPICAL VAPOR PHASE PRESSURE DROP

This chart is a tool for estimating pressure drop through carbon. The actual pressure drop will vary depending on the manufacturing process for your filter, but should typically fall between the two lines based on the packing density.



DESIGN CONSIDERATIONS

Depending on the application, UFR 12x30 may provide the full range of protection needed or may be combined with other carbons. The best approach to ensuring robust protection in a filter design is to contact us and discuss your application. Calgon Carbon's technical experts are available to provide recommendations on carbon selection and utilization.

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