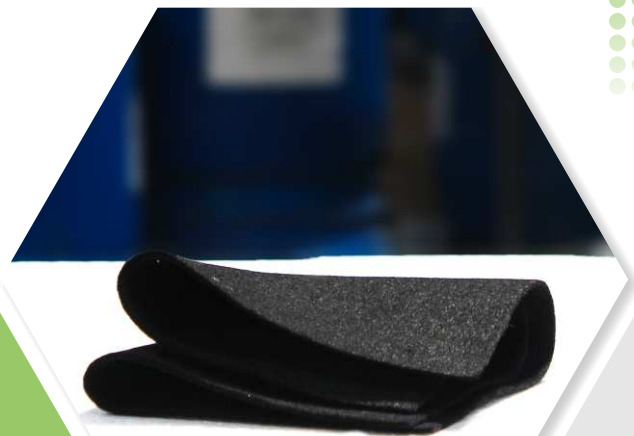




Reticulated Vitreous Carbon Foam

C

99.9%



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NS6130-10-1298

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Reticulated Vitreous Carbon Foam

- Reticulated vitreous carbon foams are an open pore foam material which is comprised solely of vitreous carbon having highly interconnected porosity.
- Mainly carbon foams synthesize by using commercially available polymeric foams as templates and thermosetting phenolic resin as carbon source.
- Novel features of the carbon foams such as adjustable thermal conductivity and electrical conductivity, high porosity, low thermal expansion Coefficient, high-temperature tolerance, etc.
- Carbon foams also find their way to used as Radar absorbing materials, mainly owing to their well matched impedance, high durability, light-weight, and effective EM wave absorbing capability.
- Because of the larger pore sizes as well as fully open pore structure, the permeability is usually high in reticulated carbon foams.
- Moreover, the carbon foam can be shaped according to the requirement.
- The machinability of carbon foam is also convenient.
- These can be tailored to have low or high thermal conductivity with a density.
- These foams have high modulus but low compression and tensile strength.
- These foams are stable at high temperatures and also resistant to thermal shock.
- These are also chemically inert and variable pore sizes.



Additional Characteristics

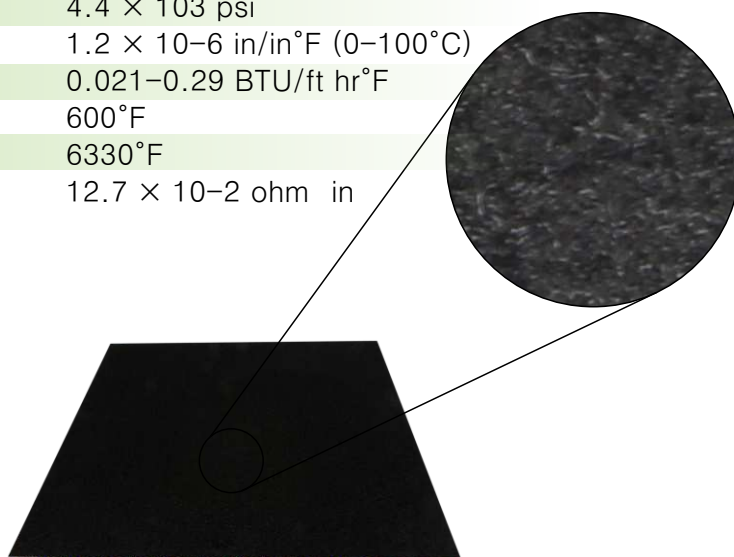
| Stock No. | Purity | Thickness | Dimension |
|----------------|--------|-----------|------------------|
| NS6130-10-1298 | 99.9% | 5mm | 500 x 500 x 5 mm |

Technical Specification

| | | |
|------------------------------------|---|--|
| • Pore Size | : | 0.040" |
| • Shear strength | : | 4.4x10 ³ psi |
| • Specific heat | : | 0.3 BTU/lb °F |
| • Compressive Strength | : | 15–75 psi |
| • Tensile Strength | : | 25–50 psi |
| • Hardness | : | 6–7 Mohs |
| • Shear Modulus | : | 4.4 × 10 ³ psi |
| • Coefficient of Thermal Expansion | : | 1.2 × 10 ⁻⁶ in/in°F (0–100°C) |
| • Bulk Thermal Conductivity | : | 0.021–0.29 BTU/ft hr°F |
| • Temperature In air | : | 600°F |
| • Limitations Inert environment | : | 6330°F |
| • Bulk Resistivity | : | 12.7 × 10 ⁻² ohm in |

Purity

99.9%



Applications Of Reticulated Vitreous Carbon Foam

- Ships
- Battery case for electric cars
- High- speed trains

Lead - acid batteries

Lead-acid battery systems are characterized by low specific capacity concluding from plate grid which has large share in a total plate mass. Carbon has the porous structure and it is lightweight and the application of lightweight porous structure of carbon that is coated with metals especially lead/lead alloys as current collectors provided opportunity to improve these parameters. They have applied RVC both as current collectors and carrier of active mass as an alternative for lead alloy cast grids.

Gas filtration

RVC has also been explained to serve as a separator intended to filter and clean the gas streams containing liquid or solid particles. The size of the particles is mainly smaller than one micrometer or of the order of one micrometer. The RVC separator possesses channels estimated for turbulent flow of the gas streams that flow from one end of particle channel to the other. The separator is developed also to separate solid particles suspended in a gas. The separator can also be used to remove liquid droplets like e.g. of oil that are contained in fogs, especially viscous ones.

Acoustic absorption

Carbon foams have high porosity, rigidity, strength and low thermal conductivity, RVC open cell foam structure considered as a good candidate for application as sound absorber.



ISO 9001:2015
CERTIFIED COMPANY



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