

## Ecoflex® 500 Substrate Support Mat

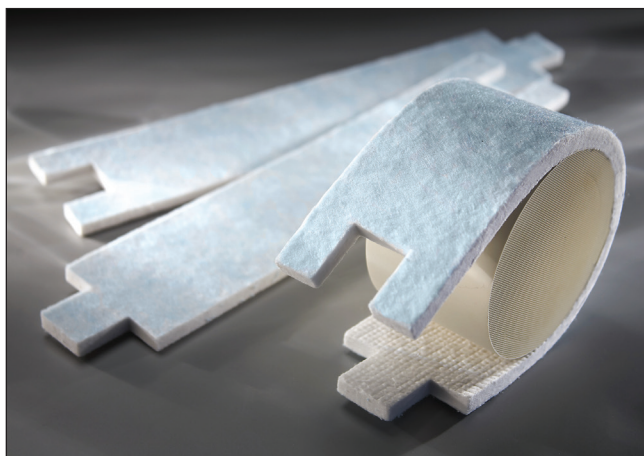
Ecoflex® 500 is a robust and durable catalytic converter support mat made from Unifrax proprietary X-Fil® polycrystalline wool (PCW) fibers, engineered to achieve optimum performance in challenging emission control mounting mat applications. Ecoflex 500 combines the success of the Ecoflex brand with the innovation of the latest fiber technology to deliver superior performance for the most demanding high vibration, high temperature, and large gap expansion applications. This innovative new material has extremely high resiliency and contains a negligible amount of respirable fiber. With less than 0.1% by weight of World Health Organization (WHO) respirable fiber, X-Fil fiber and Ecoflex 500 mat make it easy to meet the most stringent workplace regulations.

Ecoflex 500 is suitable for the full spectrum of exhaust after-treatment applications, whether the requirements call out the need for ultra-thin wall substrates, oxidation catalysts, selective catalyst reduction, diesel and gasoline particle filters. A key performance advantage of Ecoflex 500 when compared to other available polycrystalline fiber support mats, is its higher holding force when installed on applications with a large relative gap expansion (RGE%). The extra performance offers engineers the desired cost savings that comes with using less support mat material to gain the same relative performance. With a low binder content of less than 7% by weight, Ecoflex 500 delivers the necessary low temperature performance expected from a polycrystalline fiber support mat while meeting OEM requirements for low binder content. The superior erosion resistance of Ecoflex 500 against direct gas impingement is the most durable in its class, eliminating the need for extra edge protection measures.

Ecoflex 500 is easy to process in all common canning methods, such as hard and soft stuffing canning operations. To enhance crack resistance and facilitate canning, the product is available with a low density organic scrim on one side.

### Applications

- Diesel Oxidation Catalysts (DOC)
- Diesel Particulate Filters (DPF)
- Selective Catalyst Reduction (SCR)
- Underbody Converters (gasoline, diesel and ethanol)
- Ultra Thin-wall Monoliths
- Endcone Insulation
- Gasoline Particulate Filters (GPF)



### Physical Properties

Fiber Basis Weight	Nominal Thickness	Target Gap*
(g/m <sup>2</sup> )	(mm)	(mm)
1200	7.1	3.0
1600	9.4	4.0
2000	11.8	5.0
2400	14.1	6.0

Additional basis weights available upon request

\*Mat Mount Density design range (0.30-0.50 g/cm<sup>3</sup>)

### Typical Composition

Fiber Weight % Range	93.0 - 96.0
Organic Binder Weight % Range	3.0 - 7.0

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## X-FIL Fibers Health and Safety Information

X-Fil Fibers were designed with the expert advice of toxicologists to minimize the potential for biological activity.

The fibers are produced with a unique manufacturing process from a viscous aqueous solution to give diameter distribution with less than 0.1% by weight of WHO (World Health Organization) respirable fiber (test data available upon request).

## Worldwide Technical Support

Unifrax is a worldwide sales and service organization with several international locations and representatives. The services that we provide include thermal modeling, system design engineering assistance, and failure analysis as well as technical exchange programs. For additional information regarding Ecoflex 500 or any of our catalytic support mats, please contact your local Unifrax Sales Engineer or visit: [www.unifrax.com](http://www.unifrax.com).

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The Ecoflex logo consists of the word "Ecoflex" in a bold, sans-serif font. The "E" is significantly larger than the other letters and is positioned to the left of the rest of the word. The entire logo is in a dark purple color.

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