



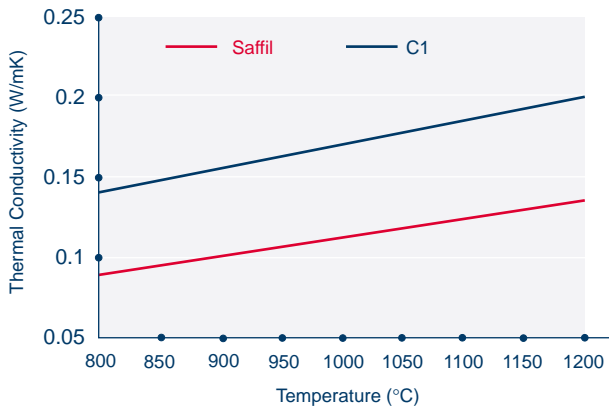
Ecoflex Substrate Support System Technical Differentiators



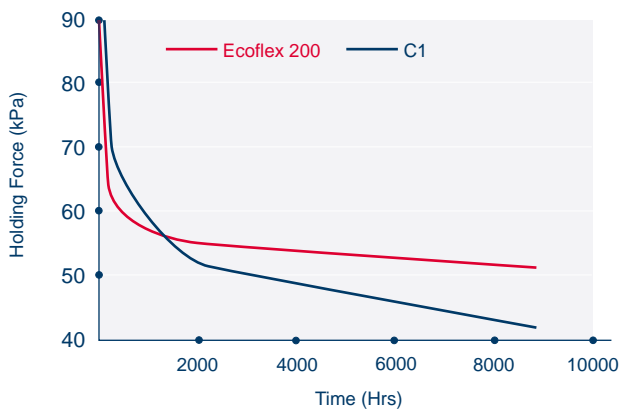
SAFFIL
Automotive

Low Thermal Conductivity

Ecoflex substrate support systems can meet cold face (Shell) temperature requirements using a reduced nominal gap.



High Temperature Durability (1000°C)



NB: Data extrapolated after 48 hours.

Ecoflex 200 products containing Saffil alumina fibres have higher thermal stability than competitor fibres. This translates to higher long term holding force at exhaust gas temperatures (900 - 1050°C) and hence greater material durability.

Emission Control Systems

In response to the introduction of tougher emission control standards, Saffil has developed a new family of catalytic converter substrate support systems and insulation products under the trade name Ecoflex™.

These new products, based on the proven Saffil fibre, have been carefully designed to operate over the wide range of temperatures experienced in gasoline and diesel engine emission control systems. Novel technology is deployed to produce "Ecoflex substrate support systems" (auto wraps) to support the full range of current and future (including ultra thin-wall) ceramic monoliths.

Utilising Ecoflex mats in your converter system can deliver...

- ❖ Lighter weight mats
- ❖ Reduced need for heat shield
- ❖ Reduced packaging/volume requirements
- ❖ Option for lower grade steel
- ❖ Faster light off potential
- ❖ Reduced thermal shock effects

Ecoflex insulated substrates also reduce heat transfer to the engine compartment in close coupled catalysis and offer improved acoustic properties.

Ecoflex insulation products are available

- ❖ twin-walled end cones
- ❖ manifolds
- ❖ down pipes

Greater Lifetime Durability

Ecoflex substrate support systems have a unique performance flexibility which is not dependent on heat activation...

This allows them to perform in both high temperature close coupled applications and in low temperature diesel applications.

Ecoflex delivers:

- ❖ Secure holding throughout temperature range under diesel operating conditions
- ❖ Ideally suited to cope with low temperature operation and regeneration peaks in DPF applications
- ❖ Unique binder structure which retains performance during burn out phase

Low Gas Permeability

Ecoflex substrate support systems are designed not only to provide superior holding force and temperature durability but to act as a gas seal around the monolith. This:

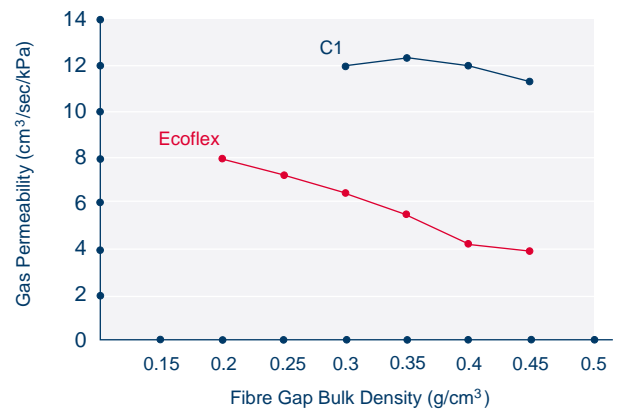
- ❖ Creates preferential gas flow through substrate
- ❖ Promotes steady state operation
- ❖ Delivers improved converter efficiency
- ❖ Retains mat integrity due to excellent gas erosion properties
- ❖ Eliminates the need for edge seals

Boardiness

Ecoflex substrate support systems offer superior holding force at the low temperatures encountered in diesel engine exhaust systems.

Low Gas Permeability

Ecoflex substrate support systems provide a more effective gas seal than competitive product (C1) being offered for use in a close coupled catalyst application.



Keeping World Class Companies Supplied

Saffil supplies over 10 million parts annually to the automotive industry



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Saffil North America

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