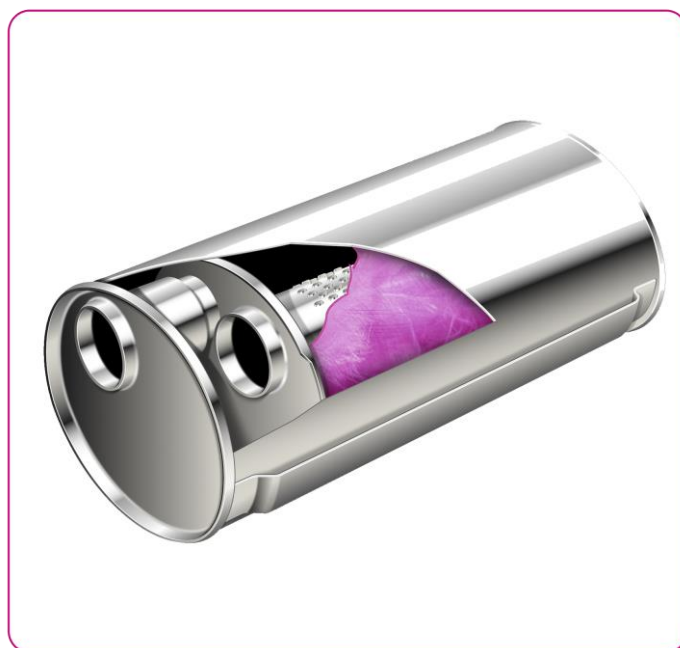
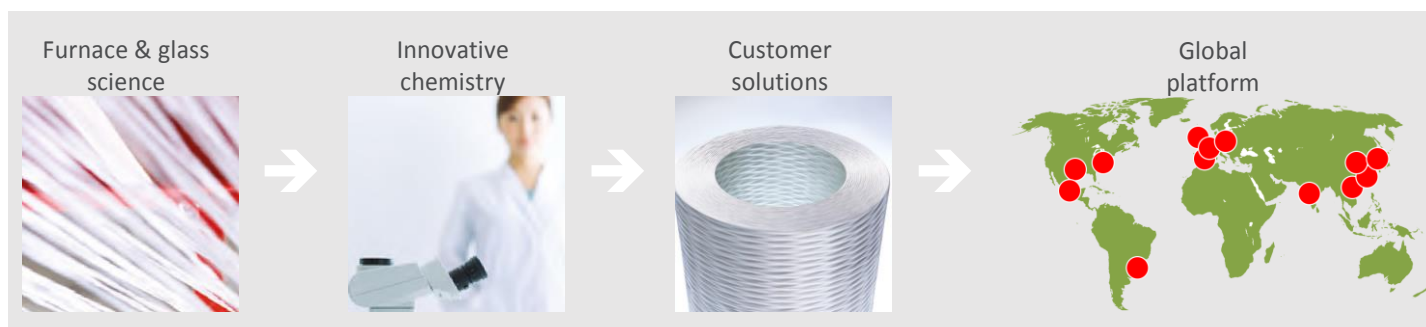




Silentex® glass fiber noise control solution for vehicle exhausts



Owens Corning is a leader in glass science responsible for numerous innovations in glass including E, Advantex® brand and high performance glass over a period of more than 30 years. Our expertise in chemistry enables leading solutions in every product form from continuous roving to converted products. Our state-of-the-art facilities allow us to work in partnership with our customers to develop solutions for their specific applications. Owens Corning's global manufacturing platform ensures delivery of consistent solutions in all regions.



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THE NEED FOR MORE EFFECTIVE, LIGHTER SILENCERS... AT REDUCED COST

The emphasis on quiet motor vehicles has increased significantly in the last few years through governmental regulations around the globe. In addition, in the eyes of the consumer, quiet cars are often associated with quality cars. Thus, automotive manufacturers and exhaust suppliers are taking a closer look at the technology involved in vehicle silencers or mufflers*.



Globally, a clear need has emerged for an exhaust sound dampening system that is more effective, lighter in weight, and lower cost. To help meet all these requirements, Owens Corning offers a total system approach to vehicle silencers, the **Silentex® noise control system**.

*Depending on the geographic region of the world, the words "silencer" and "muffler" can be used interchangeably.



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EXCEPTIONAL PERFORMANCE AND DURABILITY

It is estimated that on a global basis, as many as half of the automotive vehicles produced have silencers that contain some type of sound-absorbing material and this percentage is continuing to increase. In addition, other types of vehicles such as motorcycles, ATVs, snowmobiles, etc. are utilizing sound-absorbing materials to improve sound quality, reduce weight, reduce cost, and prolong the life of the silencer shell.

Owens Corning has been providing sound-absorbing materials for silencers for more than 30 years.

The Silentex® system and the Advantex® E-CR glass composition are an exceptional combination for solving the acoustic challenges of silencers. The Silentex® system utilizes continuous fiberglass filaments to fill chambers in silencers. (Materials such as basalt wool and needle felt mats are made up of discontinuous fibers which have a tendency to blow out of the silencer.)

Additionally, the Advantex® glass composition has higher temperature capability and greater resistance to the corrosive gases present in the exhaust system than any basalt wool glass fibers or standard E-glass compositions.



The glass fiber roving in these silencers, filled with the Owens Corning Silentex® noise control system, essentially is unaffected after six years and 270.000 km of service.

THREE TECHNOLOGIES FOR SUPERIOR SILENCER PERFORMANCE AND COST

ADVANTEX® GLASS FIBER FOR OPTIMUM PERFORMANCE

Advantex® E-CR glass fiber higher melting temperature than traditional E-glass means that it is particularly suitable for high temperature vehicle exhaust applications – even peaks in temperatures in excess of 800 °C (1470 °F).

To learn more about Advantex® glass:

<http://composites.owenscorning.com/aboutAdvantex.aspx>

PATENTED TEXTURIZATION PROCESS FOR SPEED AND ACCURACY

At the core of the injection process is a nozzle that separates the single continuous Advantex® glass roving and “texturizes” it into individual (up to 5800) – but still continuous – filaments, which are inserted into a silencer cavity. Well-texturized materials optimize the acoustic performance of the fibers.

VERSATILE FILLING EQUIPMENT AND PARTS FOR HIGH PRODUCTIVITY

The Silentex® direct fill process is the most effective method to introduce Advantex® glass fiber into the silencer cavity, enabling reduced raw material storage space requirements and the lowest material costs. The Silentex® technology can also be utilized to provide well texturized roving in plastic or glass fiber bags that can be hand stuffed directly into the muffler cavity without the need for specialized glass handling equipment. For many applications, preforms matching the geometry of the muffler cavity can be utilized to very efficiently introduce texturized glass into a muffler cavity without any significant modification to existing muffler manufacturing lines. Texturized roving can be provided for use in filament winding operations where muffler space constraints make the use of direct filling, bags, or preforms not practical.

BENEFITS

- Excellent sound absorbency
- High heat resistance
- High corrosion resistance
- A cost effective solution for high quality materials
- Easily tailored to meet different silencer designs
- Potential for weight reduction
- Direct filling machines
- Plastic or glass filament bags
- Preforms
- Boxes of texturized roving



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GLOBAL SUPPLY AND SUPPORT SERVICES



Owens Corning’s corporate scientific labs and analytical facilities staffed by hundreds of scientists and engineers can be tapped into to help you solve the most difficult technical issues you encounter.

At Owens Corning, we:

- Supply Advantex® glass fiber to silencer manufacturers located around the globe from glass manufacturing facilities located on four continents, as well as filling equipment and global technical service
- Help you determine the most cost effective method of placing Silentex® material into your particular silencer design
- Help you to determine the optimum amount of Silentex® material to place in your muffler, taking account of acoustic performance, cost, and material weight
- Advise you on how to design your silencer to ensure ease of filling
- Provide feasibility assessments, prototyping and tool design support
- Assist you in the acoustic design of your silencer

Please email Silentex@owenscorning.com to request our Silentex® glass solution design guide.

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