

System information

OC™ Advantex® 162A

SC3000 (162A) Single-End roving

High thermal & corrosion resistance designed for Silentex™ noise control solutions

Innovative solutions

The *Silentex* noise control solution is a unique system that enables improved durability and acoustic performance while significantly reducing overall system cost. Owens Corning's worldwide technical and marketing network will provide you with products and services that continue to meet your needs.

Product solutions

Owens Corning's System Thinking™ approach is targeted at meeting ongoing customer demands for higher productivity, improved performance and excellent support. *Advantex* continuous roving is an integral part of the *Silentex* system and is designed with higher thermal and corrosion resistance than any other acoustic absorbent except ZenTron® roving. The *Advantex* glass composition represents a technological advance in Owens Corning's commitment to provide value-added products to our customers. The *Silentex* process, combined with *Advantex* continuous roving, offers a robust solution to meet demanding acoustic requirements, increasing engine temperatures, reduced weight and volume, reduced back pressure, and lower overall cost.

Product description

The 162A product is Owens Corning's 24µm 4800 tex single end Type 30® roving based on the *Advantex*

high temperature composition and is specifically engineered for use in the *Silentex* process. To minimize process interruptions and ensure overall efficiency, Owens Corning produces 162A globally with the most advanced equipment, innovative surface chemistry and a major commitment to statistical process control. The Quality Management Programs of all Owens Corning manufacturing facilities are certified as meeting the requirements of ISO 9002. 162A is appropriate for applications with global or regional specifications.

High density 40kg balls of 162A roving are spliced together in a very precise manner to ensure package transfer that is transparent to the *Silentex* process. 162A is designed to ensure that the strand consistently texturizes into 4,000 filaments with practically no fiber damage to ensure that each muffler will be filled with continuous fibers, highly effective in attenuating sound.

Owens Corning understands that not only meeting, but exceeding your product and process requirements translates into success for you - today and into the future. This is why the *Advantex* continuous roving is engineered to provide optimum end-use performance, as well as processing properties.

Features

- Annealing and softening point are over 65°C (117°F) higher than standard E glass
- 5 times the fiber strength of basalt wool and over 2 times the fiber strength of E glass needle felts
- High fiber strength maintained even at glass temperatures exceeding 750°C
- Nearly 3 times more resistant to degradation in corrosive fluids than standard E glass
- High linear density of 4800 tex
- Narrow and consistent fiber diameter distribution
- Does not contain unfiberized beads like most basalt wool

Benefits

- Able to withstand increasing exhaust temperatures
- Stainless steel wool is not required to protect the fiber from the exhaust gas
- Fibers will remain continuous and resist blowout in the exhaust
- Fiber will resist degradation under exposure to exhaust gases and continuous vibration within the muffler
- Fiber strength will be retained even under the most corrosive conditions in the exhaust
- Extremely high process efficiency
- Direct fill rates as fast as 0.16kg/second
- Consistent acoustic absorption
- Fibers not respirable into the deep lung
- Fill density can often be reduced by 20-30% over basalt preforms or needle felt



Features (Cont'd)

- Excellent processability in the *Silentex* machines
- Large 40kg balls with only 17 splices per pallet
- Extremely high package density at 700kg per pallet

Benefits (Cont'd)

- Maintains high production efficiency
- Excellent strand texturization
- Minimal fuzz generation
- Very few ball transfers during filling operations
- Reduces required floor space
- Typically requires only one pallet per shift

Typical thermal properties

Physical property	Standard E glass	Advantex glass
Softening point °C	846	916
Annealing point °C	670	736
Strain point °C	630	691
Thermal expansion (ppm/°C) at -30°C to 250°C	5.4	5.9

Typical physical properties

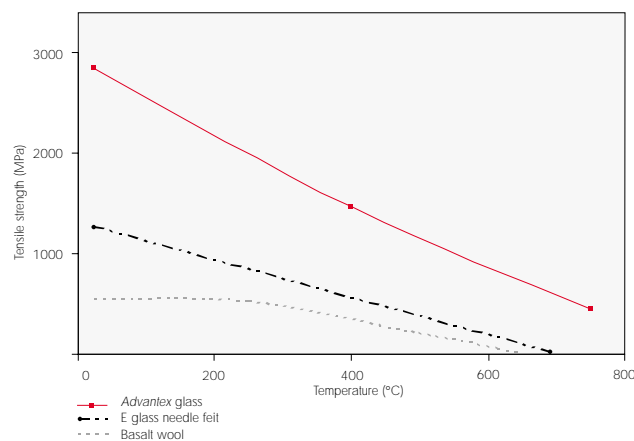
Physical property	Standard E glass	Advantex glass
Density (g/cc)	2.60	2.62
Young's modulus at 23°C (GPa)	72.3	76.6
Young's modulus at 540°C (GPa)	81.3	84.3
Refractive index	1.558	1.561

Glass fiber nominal compositions

Oxide	Standard E glass	Advantex glass
SiO ₂	52-56%	59-62%
CaO	16-25%	20-24%
Al ₂ O ₃	12-16%	12-15%
MgO	0-5%	1-4%
B ₂ O ₃	5-10%	<0.2%
Other oxides	<5%	<2%

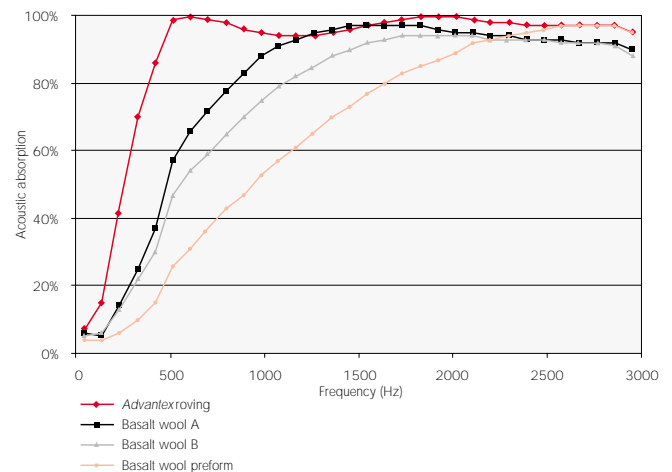
Single filament tensile strength

2 hours heat treatment



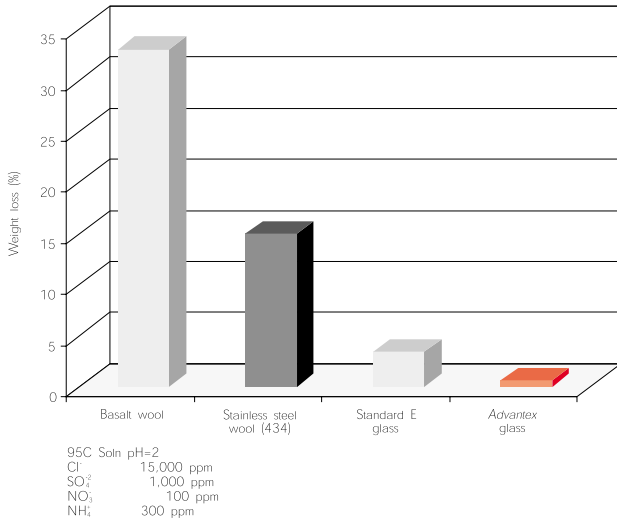
Normal acoustic absorption

Impedance tube at 100g/L and 50 mm thick



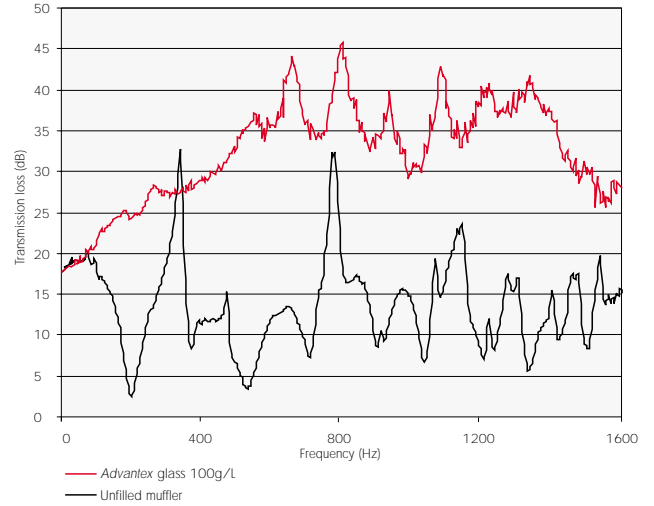
Weight loss in acids

24 hours at 25°C



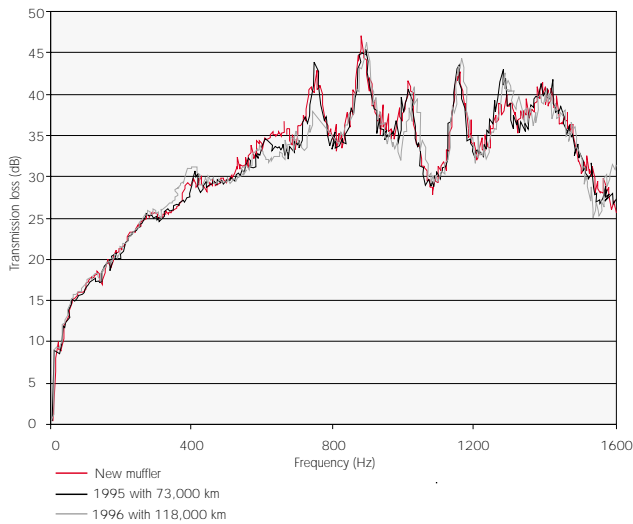
Acoustic performance of *Silentex* system

Volvo 850 Turbo muffler



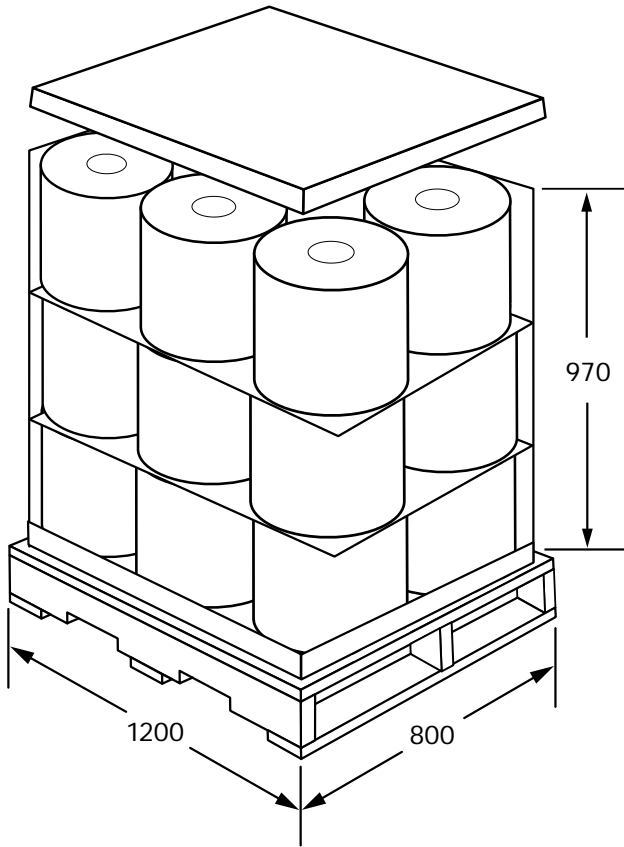
Durability of *Advantex* in *Silentex* system

Volvo 850 Turbo muffler



Packaging

- Creel Pack® - All spools spliced to make a single end
- Tack-Pack® wrapped spools - Facilitate spool transfer
- 18 spools per pallet



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SYSTEM THINKING™
Makes the Difference

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