



Automotive

Quieter, Smoother, Cooler, Lighter

Market leading solutions for the reduction of automotive noise, vibration and heat from the class leading automotive NVH specialists.



Quieter, Smoother, Cooler, Lighter

One of the most important challenges facing automotive manufacturers in the vehicle development process is the reduction of noise, vibration and harshness (NVH) and efficient thermal management. These are becoming increasingly important facets in strongly influencing the overall perception and value of the vehicle.

Also the increasing legislative pressures on the reduction of drive-by noise and the challenges posed by the growth of electric vehicles require swift and innovative solutions.

This is where the partnerships of car manufacturers with their supply chain partners become critical in achieving premium results with greater efficiency and less cost.

Avon Group builds partnerships with OEM's, Tier 1 and Tier 2 customers that deliver unrivalled scope, skills and capability in the worldwide automotive NVH and thermal management products marketplace.

A world-class manufacturing business based in the UK with the engineering, design, development and testing skills to offer exceptional quality and value across the entire spectrum of cutting-edge NVH and thermal management products.



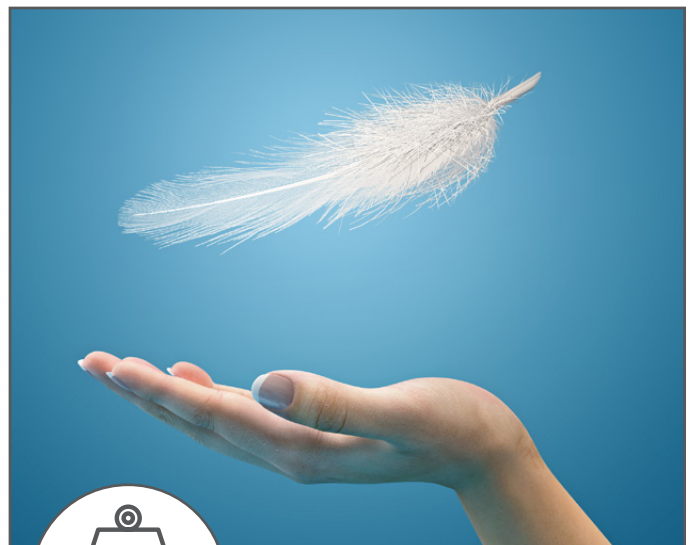
Superior acoustic performance



Ride quality improvement



Thermally advanced



Weight saving

Reducing Noise

Avon Group designs and manufactures class-leading products in a huge range of specialist materials. These are all fine tuned to tackle cabin noise reduction by accurately targeting specific spaces and surfaces inside and outside the vehicle. Using the right materials with the most accurate performance characteristics, often carefully engineered to fit awkward spaces, is a one of our key skills.

Whether it's in the cabin, in the boot, on the roof or under the bonnet, we have developed solutions that really work.

Avon Group continues to innovate; developing new materials, bonding substrates, thermoforming and cutting materials. We deliver products that set new standards for performance, ease of application/fitting and most importantly, reduce cost.

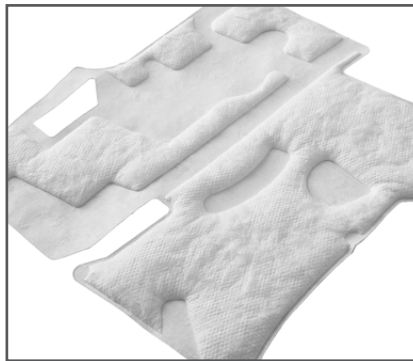


Innovative materials - refined performance



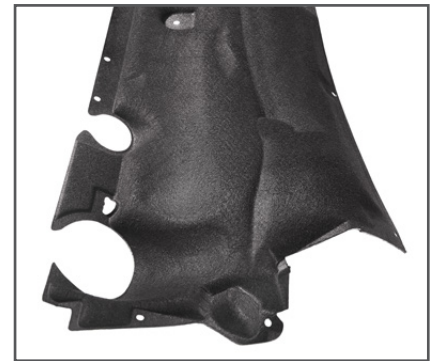
Noise reducing materials

- **Polyesters** - for interior and exterior, with or without scrims, in a range of weights, thicknesses and colours
- **Felts** - in a range of weights, thicknesses and colours
- **Polyurethane Foams** - in a range of densities, thicknesses and colours
- **Thinsulates** - in a range of weights, thicknesses and colours
- **Melamine Foams** - mouldable and non-mouldable in a range of densities and colours
- **Injection moulded Polyurethane** - in a range of densities, with or without integral skin



Applications

- Bonnet liners
- Roof headliners
- Boot & load bay liners
- Insulation foams and stuffer blocks
- Wheel arch liners
- Door liners
- Transmission & engine bay liners
- Foam in a bag



Processing capabilities

- Thermo forming
- Vacuum forming
- Injection moulding
- Die cutting
- Water jet cutting
- PU moulding

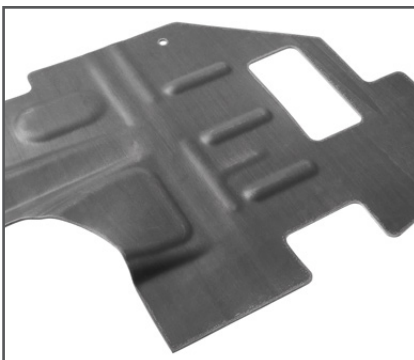
Reducing Vibration

Avon Group has countless solutions to eliminate the effects of vibration throughout a vehicle's structure and through the friction and mounting points between component parts, drive train and suspension.

Specialists in the field of gaskets, seals, tapes and sealants, we have a solution to silence that squeak or rattle. Soft foam stuffer blocks can be compressed and inserted into inaccessible spaces or heavy layer applied to eliminate the transmission of vibration through panels or chassis. Even our rubber grommets, clips and foam stoppers contribute to enhancing driver perceptions.

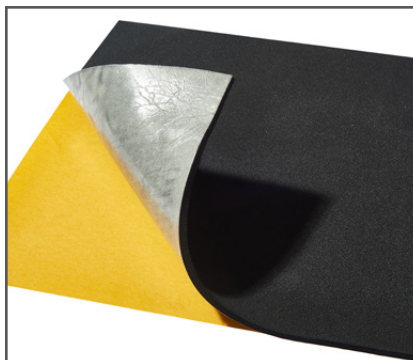


Limitless solutions - enhanced comfort



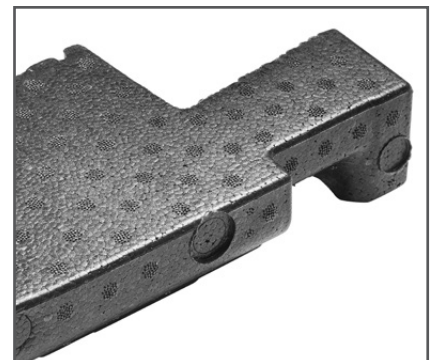
Vibration reducing materials

- **Heavy Layer** - in a range of thicknesses and weights
- **Bitumen** - in a range of thicknesses and weights
- **EPDM** - solid or sponge in a range of shore hardness
- **Expanded Polypropylene** - in a range of densities, thicknesses and colours



Applications

- Instrument panels and closures
- Sealing tapes and gaskets
- Foam stuffer blocks
- Heavy layer
- Bumper and bonnet baffles



Processing capabilities

- Thermo forming
- Single and twin sheet vacuum forming
- Die cutting
- Water jet cutting

Reducing Heat

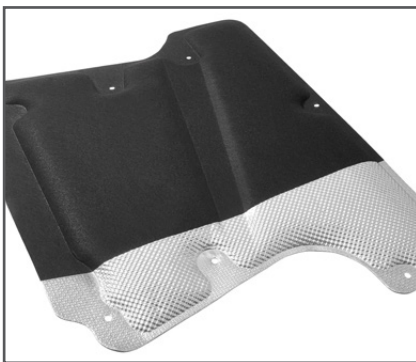
Avon Group develops and manufactures a wide range of solutions to reduce and dissipate heat in the vehicle cabin and engine bay.

Foil laminated composites, fleeces, foams and waddings can be engineered to specific tolerances and shapes for limitless applications. We're expert at selecting material combinations and designing innovative solutions that offer excellent heat reflection or absorption characteristics which are also cost-effective.

Our Airflow products, manufactured in lightweight foam, can be used effectively for cooling battery compartments in conventional and electric vehicles as well as providing efficient air circulation through other areas of the vehicle in confined or awkward spaces.



High performance combinations - efficient results



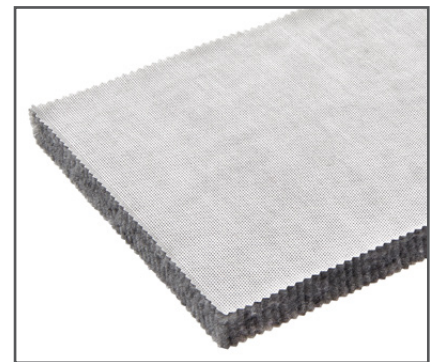
Heat reducing materials

- **Thinsulates** - in a range of weights, thicknesses and colours
- **Aluminium foil** - in a range of thicknesses and finishes
- **Polyester** - for interior and exterior, with or without scrims in a range of weights, thicknesses and colours
- **Polyurethane foam** - in a range of densities, thicknesses and colours



Applications

- Bonnet & engine bay shields
- Seat squabs & backs
- Battery cooling ducts
- Air distribution ducts



Processing capabilities

- Thermo forming
- Die cutting
- Water jet cutting
- PU moulding

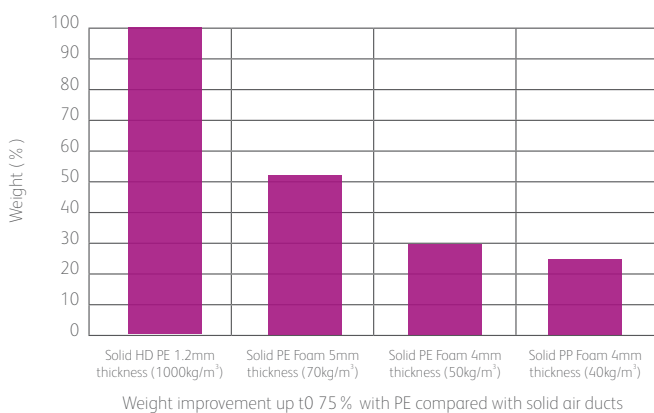
Comprehensive Expertise

Avon Group's engineering and materials experts have unrivalled expertise in how best to use an extensive range of materials – everything from thermoformed polypropylene to recycled lightweight polyurethane. This enables us to create individually tailored products that tackle a wide array of customer challenges. We are often able to combine materials, through lamination or bonding, to develop specific solutions that solve a variety of acoustic or thermal issues. But it's not only this extensive materials expertise that sets us apart, it is our ability to combine this with an in-depth understanding of the production processes required to manufacture the solution to high performance quality standards.

Just some of the benefits we routinely engineer into our products:

- Excellent thermal insulation
- High efficiency acoustic absorption
- Weight-saving
- Water & Oil resistant
- Production line readiness
- Quick and easy to fix
- Durability
- Recyclability

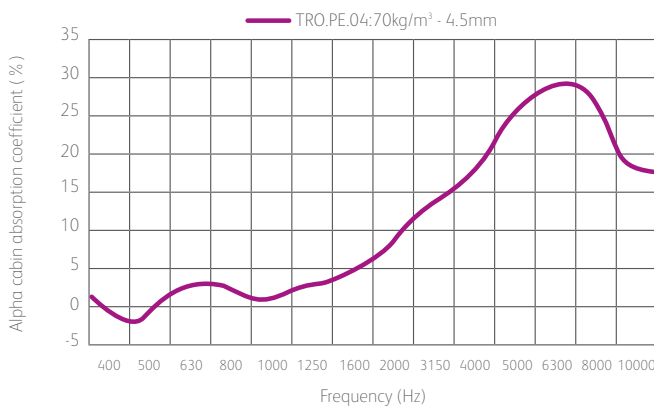
Weight: PP vs HDPE



Up to 90% weight reduction



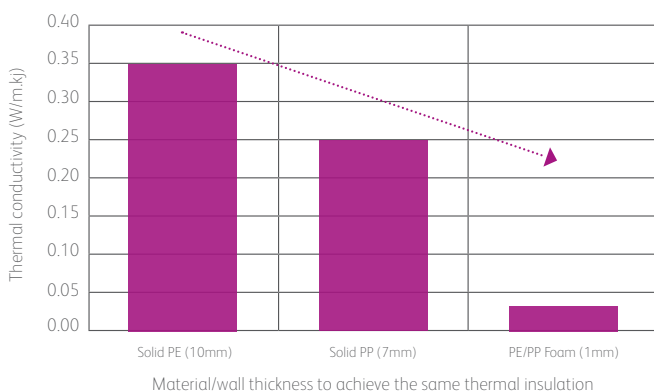
Acoustic performance PE



50% quieter (at 2000Hz)



Thermal insulation



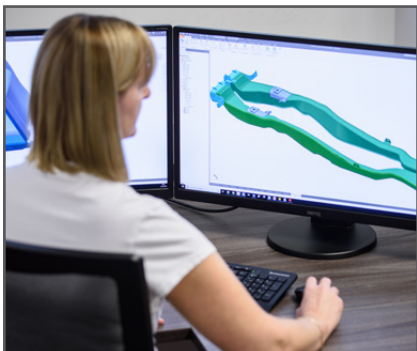
25% less energy loss



World Class Manufacturing

Significant and continual investment in product testing facilities and manufacturing plant means that Avon Group has the capability to manufacture an extensive range of NVH products in a huge range of different materials. Our world-class manufacturing plants all operate to internationally recognised quality standards and employ lean manufacturing processes. This enables us to maximise efficiencies, reduce waste and meet the most stringent certification testing and environmental requirements. We compete on a global scale, serving not only the needs of many of the UK's largest vehicle manufacturers but also plants in Europe and beyond.

The scope of manufacturing capability across the Group encompasses;



Tooling - in-house design and tooling manufacture



Bonding - combining materials to create heat protection or acoustic barriers



Thermo forming - creation of lightweight foam products engineered to fit awkward spaces



Pressure sealing - providing durable seal-edged scrims, waddings and laminates to facilitate fixing

Global
manufacturing
capabilities



Rubber moulding - extrusion and injection moulded parts for flexibility and durability



Waterjetting, CNC - engineered precision-cut parts in a wide range of materials



Assembly - affixing, joining and assembling products to 'ready to fix' state



Knife and die cutting - engineered precision-cut parts in a wide range of materials



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