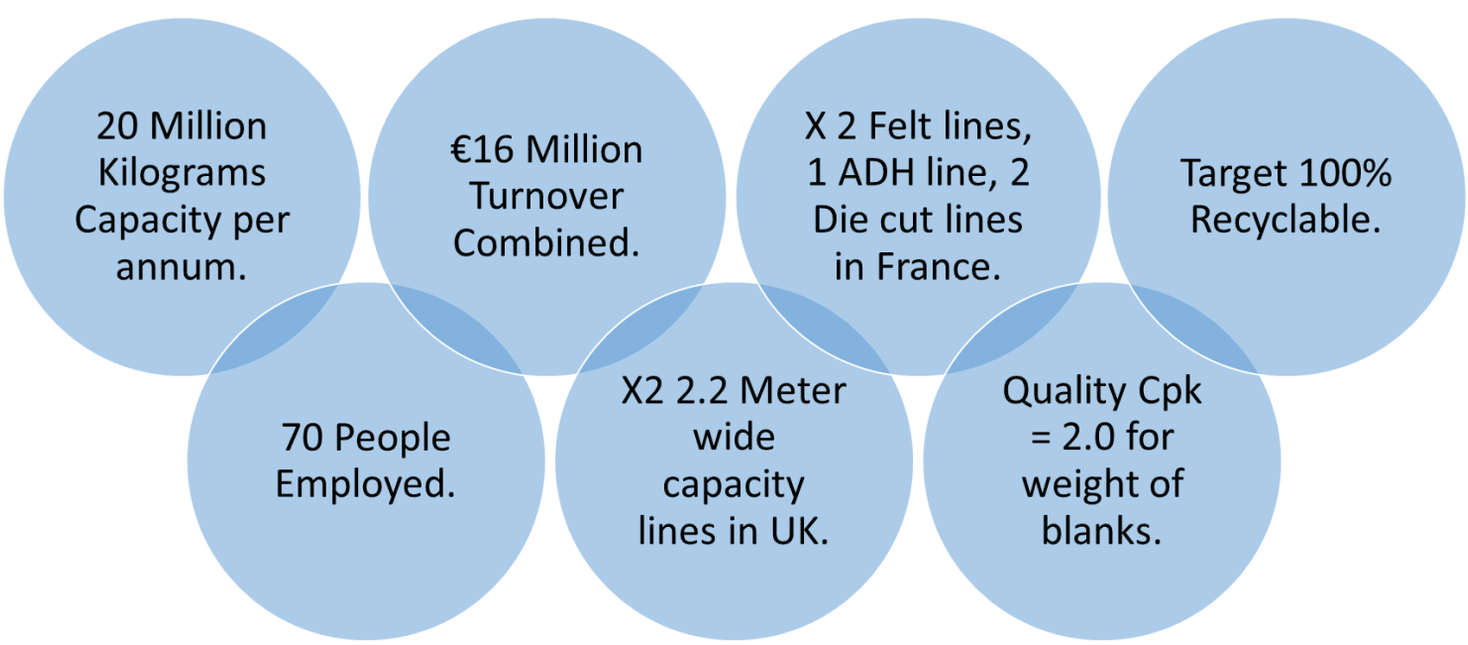
lacus
FELT

LEADERS IN ACOUSTIC FELT MANUFACTURING

About

Lacus Felt, part of the Lacus group, is the leader in acoustic felt manufacturing, dedicating itself to the design, development and production of felts holding a variety of acoustic properties to be implemented within the automotive industry, as well as household and agriculture industries.

The Lacus Felt product range includes a wide variety of felts, characterized by different processes, fibres and resin mixes. These products are used in a vast range of applications within the automotive industry and the manufacture of household appliances supplied by customers throughout Europe.



The Environment

- Raw material is 70% from recycled material.
- Lacus Felt products work towards helping the environment
- Production waste is recyclable
- End of life is recyclable.

Lacus felt have a strong environmental management System (EMS) focussed around the core targets and objectives of the companies environmental policy.

- Environmental aspects, objectives and targets.
- Pollution prevention and control.
- Property and processing operations.
- Environmental management.
- Packaging, design and re-cycling.
- Animal welfare and bio-diversity.

BSI ISO 9001 & BIS ISO 14001 Certified

bsi. ISO 9001 Quality Management | ISO 14001 Environmental Management

CSR assessment ecovadis

REACH Compliant: - Registration, Restriction, Evaluation and Authorisation of Chemicals

Lacus FELT

Location

Lacus Felt UK

Unit 7, Harby Road

Langar

Nottingham

NG13 9HY

UK

Tel: +44 (0) 1949 861020

- 2.2M Air lay lines x 2
- Felt cut via guillotine
- Automatic weighing systems
- 80% recyclable

Lacus Felt France

17, rue de la Mécanique

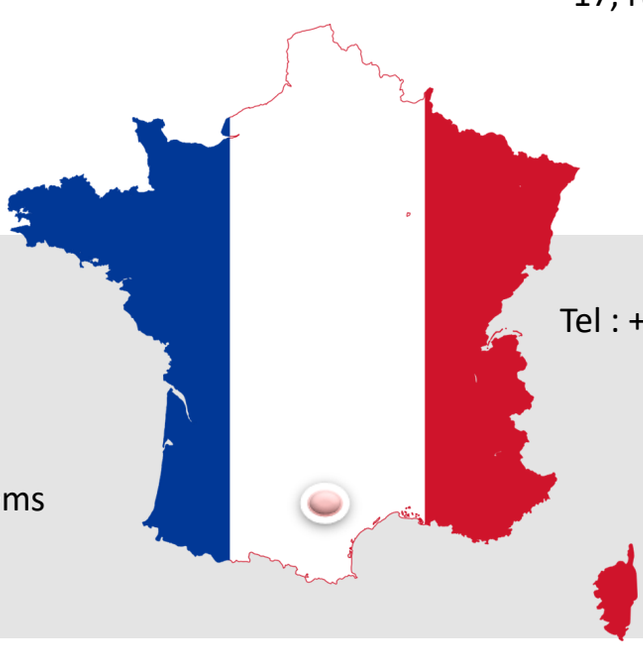
Z.I. La Rougearié

81200 AUSSILLON

France

Tel : +33 (0)5 63 98 85 13

- 2.5M Air Lay line
- 2.5M Carding line
- Die-cut, ADH lines
- Felt cut via guillotine
- Automatic weighing systems
- 80% recyclable



Services

Bespoke quotes and production

Each product that is produced by us has gone through a customised quote system considering customer requirements.

Quotes will be based on current raw material prices, and will factor in costs of packaging and a delivered price when necessary using the latest transportation prices.

Die cut and Lamination.

Felts can be die-cut into a variety of shapes based on customer demand, tools are manufactured to customer specifications and cut as per. As well as die-cut, felts also have the option for adhesive lamination if needed.

Bale and Roll formats

We can produce products in bale formats, roll format, or if required for cutting, then we can arrange for these to be packaged in returnable containers or cardboard boxes. All organized within the quote stage and made to meet customer requirements.

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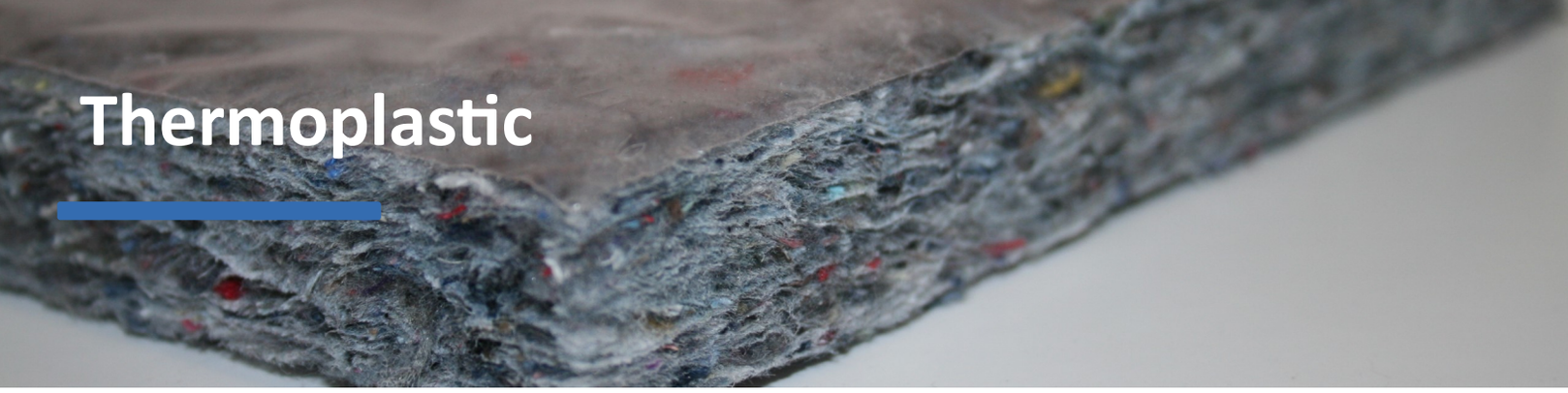


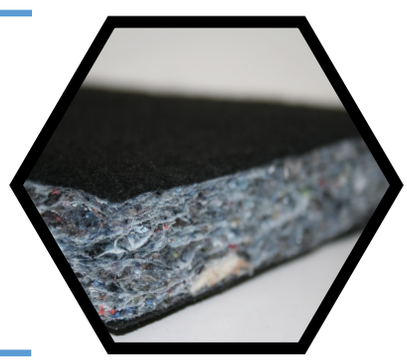
Thermoplastic

Thermoplastic type felt is a combination of textile fibres, bonded by thermoplastic fibres or resin to give a firm felt with rigidity depending on the customer specified composition. Thermoplastic + epoxy resin is also an option.

Material weight from 550 G/M² to: 2000 G/M² (weight increase by gluing sheets together to achieve higher weight spec)

Fibre content from: 60% to 80%

Bico Content from: 10% to 40%



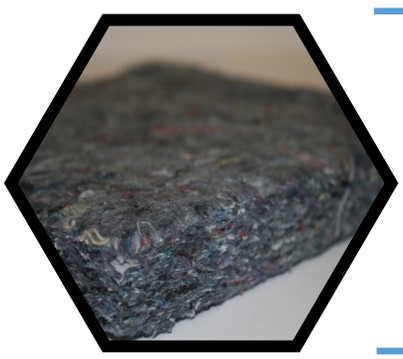
Thickness from: 5mm to 40mm

Resin Content from: 15% to 40%

Semi-cured Optional glass

Semi-cured type felt is a combination of textile fibres, bonded by cured duro plastic phenolic resin or epoxy polyester resin, optional with flame retardant or expansible flame retardant agent to give a firm felt with rigidity and fire retardancy depending on the customer specified composition ideal for moulding. Optional with or without glass.

Material weight from: 600 G/M² to 2400 G/M²

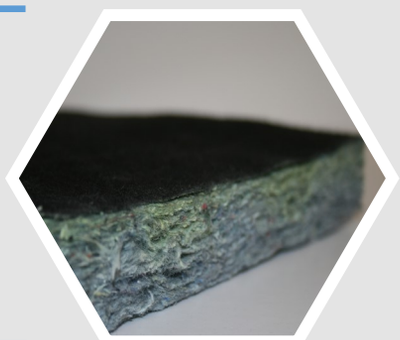


Fibre content from: 60% to 76%

Resin from: 24% to 40%

Thickness from: 8mm to 40mm

Optional glass content from: 10% to 40%



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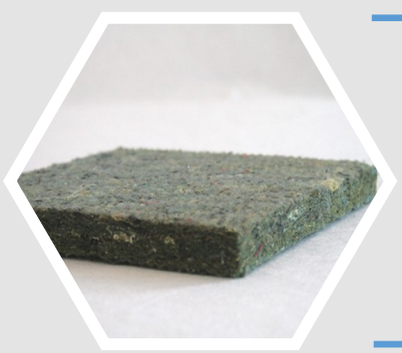
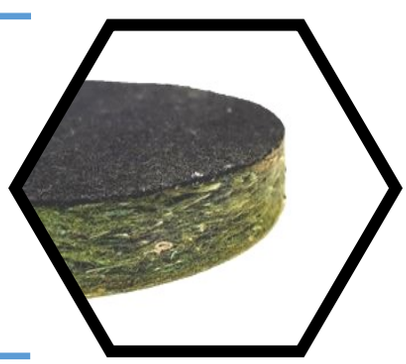
Fully-cured

Fully-cured type felt is a combination of textile fibres, bonded by cured duro plastic phenolic resin or epoxy polyester resin, optional with flame retardant or expansible flame retardant agent to give a firm felt with rigidity and fire retardancy, depending on the customer specified composition ideal for die cut parts. Different to semi-cured by heat temp and duration.



Material weight from: 550 G/M² to 2400 G/M²

Thickness from: 6mm to 40mm



Resin from: 25% to 40%

Fibre content from: 60% to 75%

Needlepunch

Felt made of textile fibres and thermoplastic needle punched fibres, optional with non woven. Raw material for parts shaped in a cold mould after heating**. This felt type is made at our French facility.**

Material weight from: 200 G/M² to 1600 G/M²

Thickness from: 2mm to 40mm

Resin from: 20% to 40%

Fibre content from: 65% to 80%

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Carding

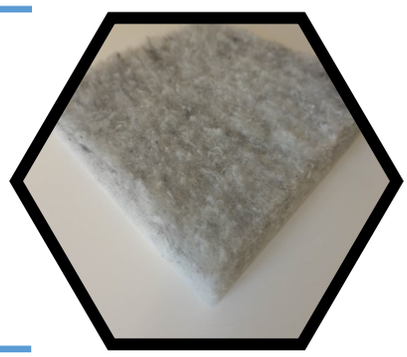
Felt made of textile fibres, bonded by a thermoplastic binder, optional with non woven one or both sides, adhesive on one side. For parts shaped in a cold mould after heating, die-cut parts and adhesive parts. **This felt type is made at our French facility**

Synthetic fibres from: 25% to 75%

Bico content from: 15% to 30%

Material weight from: 200 G/M² to 2000 G/M²

Thickness from: 2.5mm to 100mm (100mm for hemp and wool)



Animal / vegetable fibre from: 70% to 85%

PP from 15% to 25%

Cotton content from: 20% to 50%

Fibres, Binders and Resins

Felts can be produced using a range of raw materials including, but not limited to the below mentioned. Consisting of a wide range of bespoke compositions all designed to enable felt characteristics trough customer request.

- Cotton, Polyester, Wool
- Glass
- Jute, Hemp
- Plus more

Felts are bound together during the thermobonding process by using fibres such as low melt polyester or duro plastic phenolic / epoxy powered resins.

- Epoxy Resin
- Phenolic Resin
- FR Phenolic Resin
- Plus more

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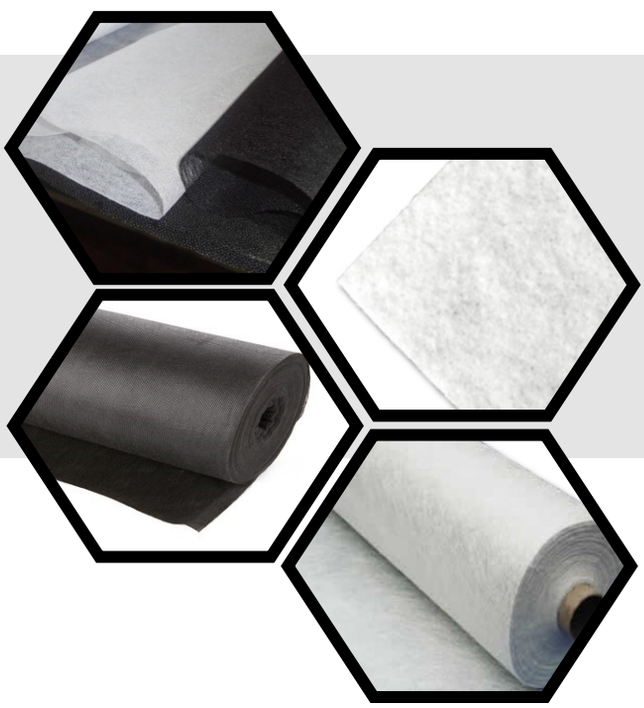
Non-woven & Films

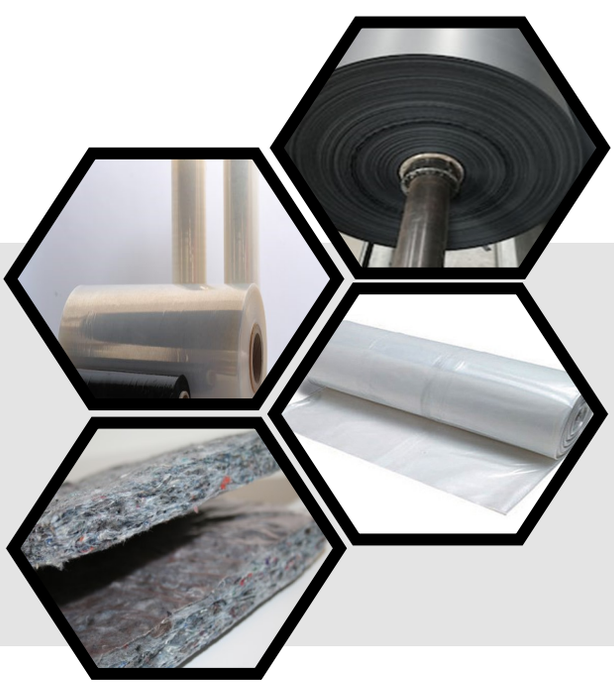
Felts can be laminated with a variety of light scrims or thick non-woven. From 17g + 5g coating black/white scrim, to 130G Black Hydrophobic, Oleophobic with S.E / DNI flammability properties.

These non-woven are added before the thermobonding process allowing for a clean bond between felt and non-woven.

- Variety of weights
- Hydrophobic / Oleophobic
- Flame retardant (S.E, DNI)
- Plus more



Felts can be laminated with a variety of plastic films depending on customer specification and desired application. Films can also have a Non-woven attached.

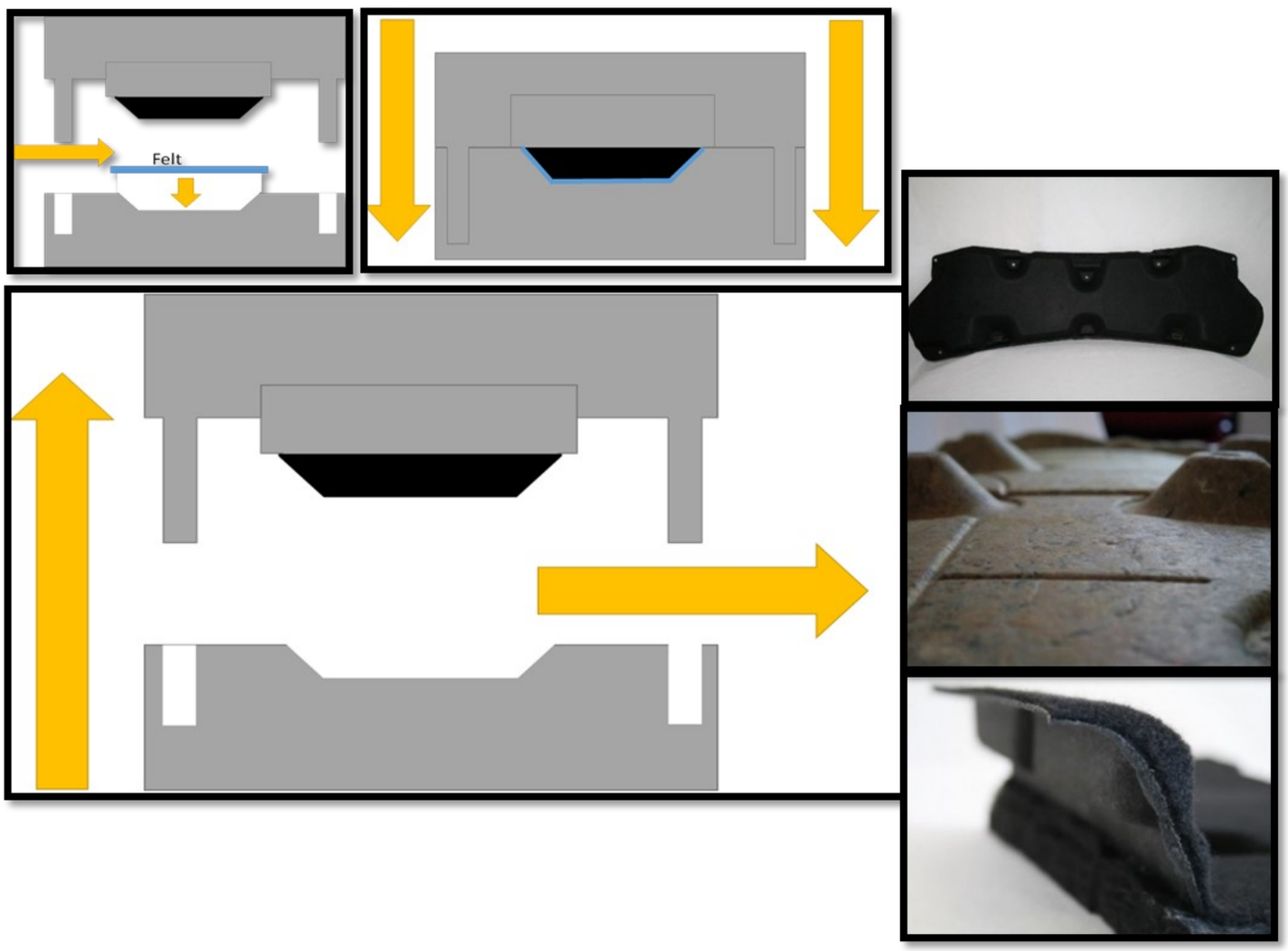


- Variety of weights / Microns
- PE/PA/PE Films
- High-density polyethylene
- Low-density polyethylene

Moulding Process

Moulding is one of the last processes our felt will see before its implementation into its intended vehicle. The felt blank will be placed within a compression moulding machine, fitted with the desired tool shape. The blank is then re-heated and cold (110°C -180°C) or hot moulded (180°C - 220°C) depending on customer spec and desired rigidity and then left for the necessary time for the shape to take. Once complete the part is then ready to be put into stock ready for its shipment to the OEM.

Moulding



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Adhesive coated and die cut

Felt produced has the option (dependant on customer specification) to have an adhesive coating applied so enable it to meet particular needs within its intended vehicle. A variety of glue characteristics can be used and also full adhesive coverage or striped adhesive. As well as adhesive lamination, the felt can be finished ready for vehicle implementation by being cut into the desired shape and sizes all digitized and mechanically cut to ensure minimal waste.

Lamination

Automotive application

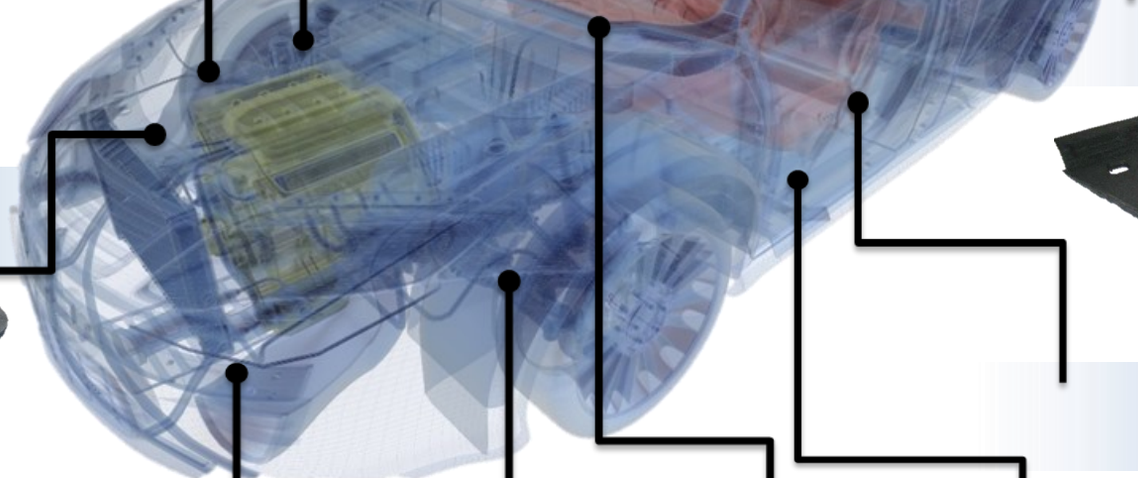
Bonnet liner

Dash inner

Parcel shelf

Boot liner

Bonnet liner inner

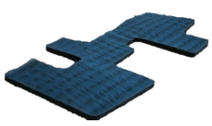


Trunk panel

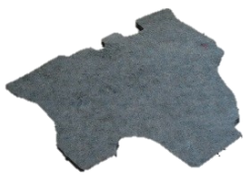
Engine insulations

Door panel

Front panel



Floor insulation



Wheelarch

Transmission tunnel

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Household and Horticulture application

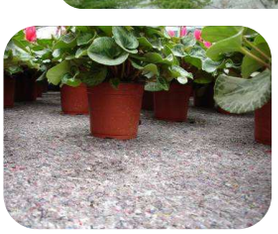
Outer roofing

Inner roofing

Wall interior

Bedding

Horticulture



Appliances

Bedding

Lacus felt France specializes in the manufacture of protective textile felts for the mattress and manufactures two types of felt from a mixture of textile and thermoplastic fibers mechanically bonded (cross-fibre) and thermosetting at oven temperature.

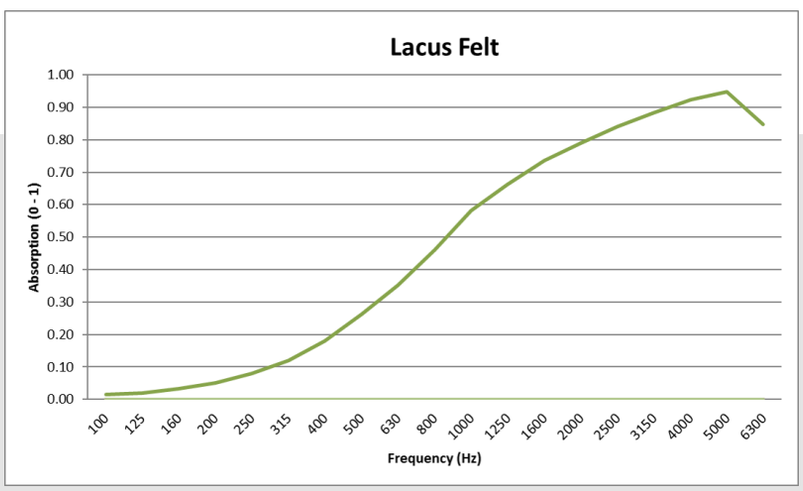
FLEXEL:
Hard and strong felt on both sides to protect against the hardness of the springs.

BICOMPOSE:
Hard and durable felt on one side for the protection of the springs and soft and soft on the other to give more comfort to the person on the mattress.

Needled punched felt is made out of various cotton recycled textile fibers. It is used for the filling of the mattresses for economical types.

Assembly of different layers by the customer

Testing



Impedance Tube

Acoustic absorption can be evaluated using the impedance tube method, ranging from 100hz to 6300hz.

Absorption curves can be displayed graphically and several curves can be compared with each other.

Flammability

The FMVSS 302 is manufactured according to the Federal Motor Vehicle Safety Standard No. 302.

- < 100mm /mm
- <80mm/mm
- S.E—Self Extinguishing
- DNI—Does not ignite

Materials can also be tested against other standards such as UL 94

Laboratory

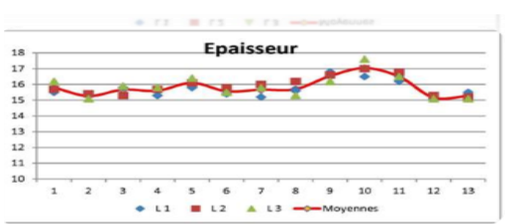
Internal material testing

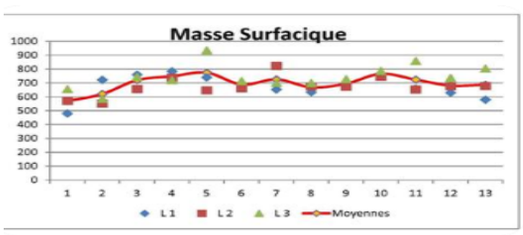
Products are checked on a regular basis to ensure material composition are as required. Tests such as :

- Acetone extraction to determine resin content
- Determination of Formaldehyde through extraction
- Various fibre content tests

Weighing balance micrometre

On-process product checks are carried out on the weight and weight per unit area of the product, to ensure correct weight and homogenous distribution of weight.





Dynamometer

Tensile strength, elongation & peel strength can all be tested up to a force of 1KN on our dynamometer.

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www.Lacusfelt.com

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