CREATIVE FOAM CORPORATION

Confidential

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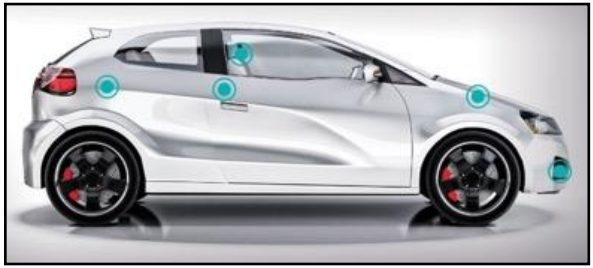
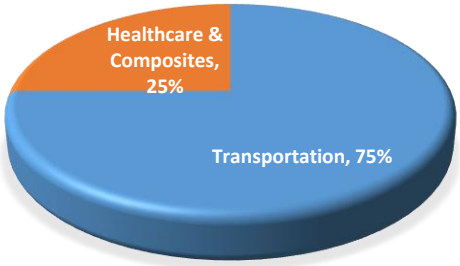
Discussion Overview



- Company Overview
- Customers
- Manufacturing Expertise and Materials
- R&D Support
- Product Portfolio

Company Overview

- Established 1969 – Celebrating 53+ Years of Service.
- 13 Production Facilities in six States and Mexico.
- Dedicated Engineering and Development Center.
- Serving Transportation, Healthcare and Composites.
- Forecasted Sales Exceed $286 M in 2023.
- Fully Registered With ISO/QS/TS/IATF/ISO14001 Certifications.

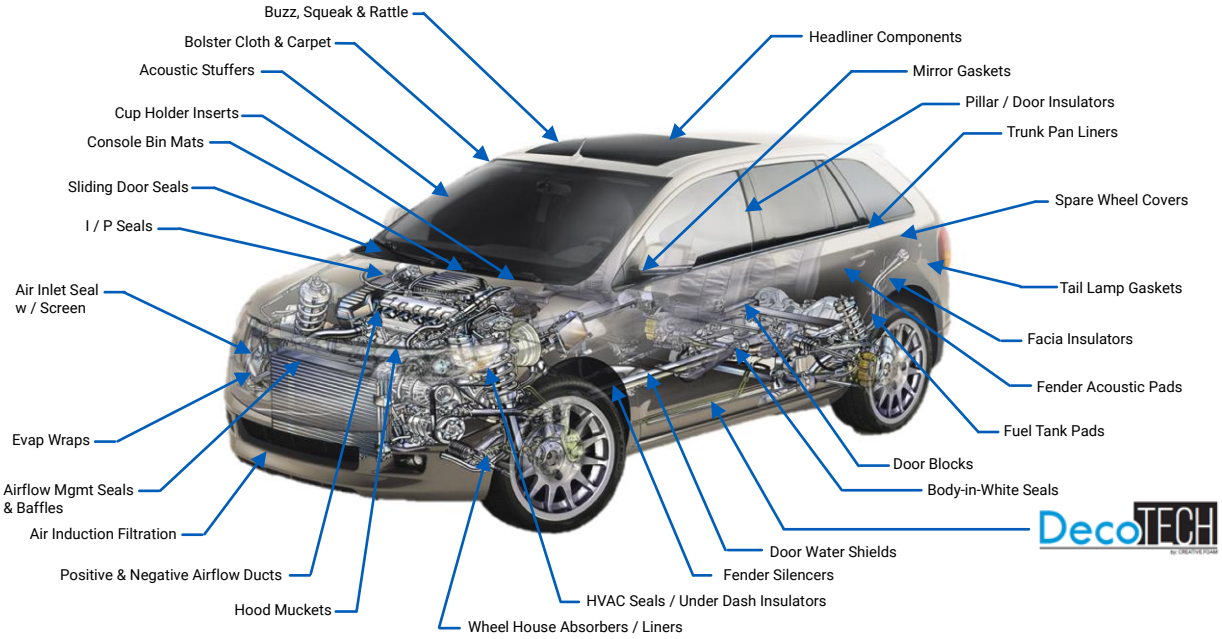


- Transportation
- Healthcare
- Composites

Key Transportation Customers

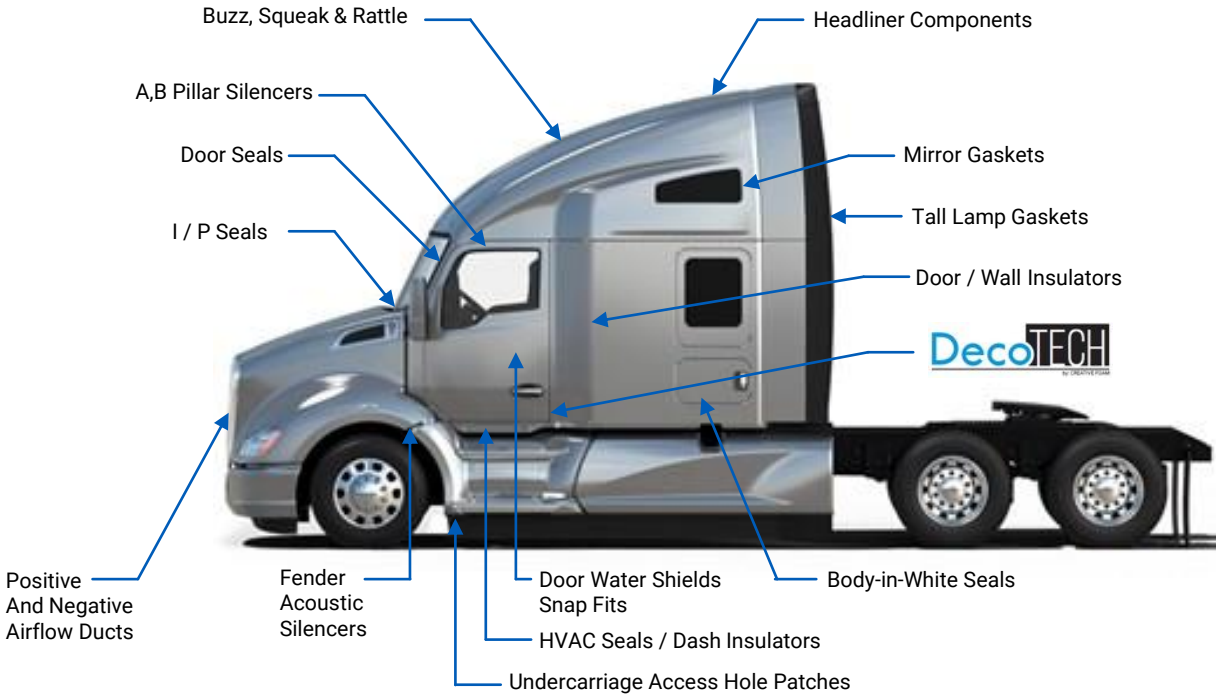
Key Composites and Healthcare Customers

Transportation Product Portfolio



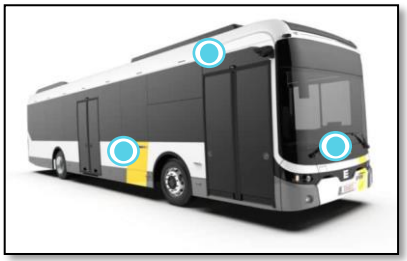
Engineering and manufacturing solutions that help you put quality on the road

Transportation Product Portfolio



Engineering and manufacturing solutions that help you put quality on the road

New Market Segments



Manufacturing Expertise

Compression Molding

Vacuum Forming

Fusion Molding

Molded Urethane

Die Cutting, Laminating, Adhesive Application

Manufacturing Expertise

Additional Processes:

- CNC Machining (3&5 Axis)
- RF Welding
- Adhesive application
- Vertical / Horizontal cutting
- Sonic Welding
- Assembly

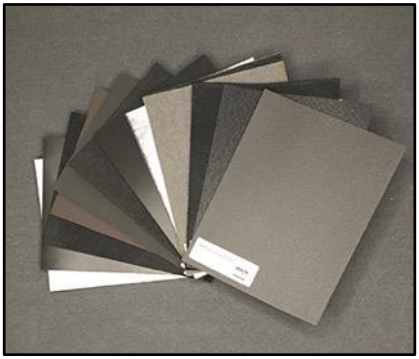


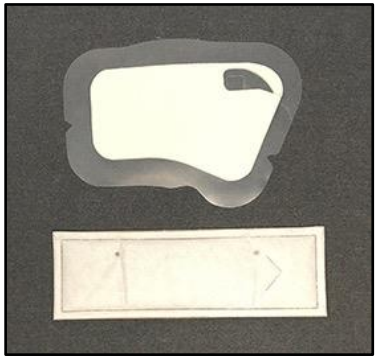



Material Expertise

Unbiased Material Offering:
In Excess of 300 Materials…

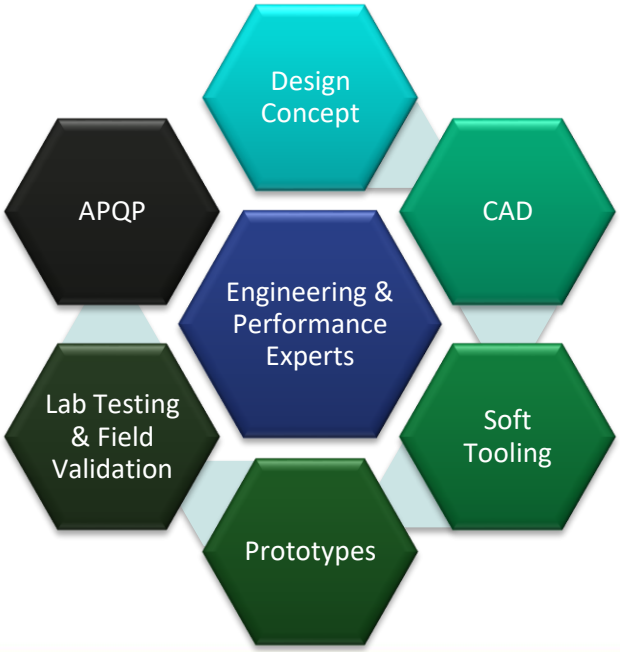
- Polyolefins
- Polyurethanes
- Nonwovens
- Felts
- Plastics
- Barriers
- Composites
- Scrims
- Closed Cell Rubbers
- Foam Tapes
- Adhesives





R&D Support

Creative Foam offers design and development support for NVH products, water and dust seals, heat shields, flooring systems, door pads among many other products. On site service available with native English, Spanish and German language speakers.



Engineering and Development

Technology and Innovation Center

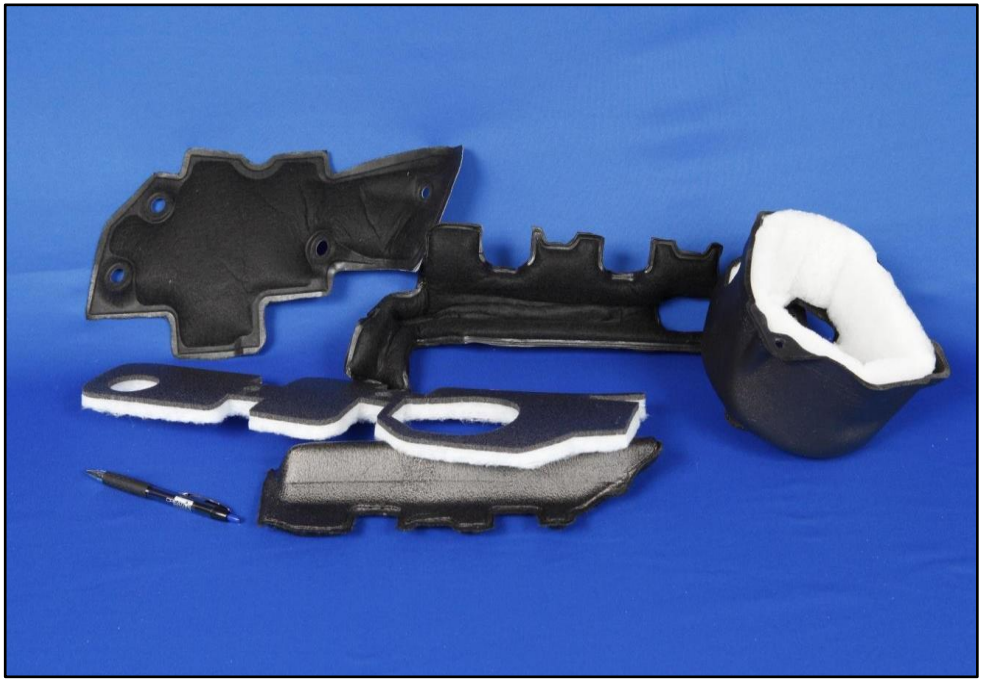
- 31,000 sq. ft. Dedicated Facility
- Program Management, Design and Development
- CAD/CAM and Automation Design
- Design and Build Specialized Machinery and Tooling
- Laser Scanning for Reverse Engineering & Prototyping
- Production Intent Prototyping Processes
- New Materials Engineering, Testing and Validation
- Corporate Test Laboratory
- Vehicle Tear-Down / Competitive Benchmarking

Corporate Lab Capability

Testing capabilities include:

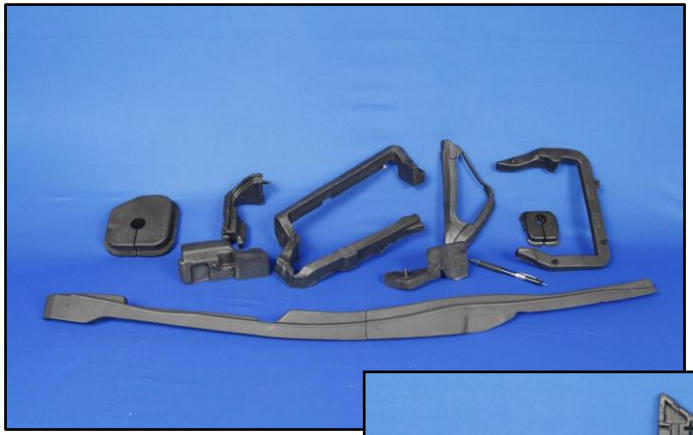
- Compression Deflection
- Adhesion – Peel, Release, Shear
- Dimensional Evaluation
- Compression Set
- Corrosion
- Elongation
- Flammability
- Heat Aging
- Steam Age
- Humidity Resistance
- Low Temp Flexibility
- Non-Volatile Content
- Radiant Heat
- Mildew
- Sealability
- Slam
- Specific Gravity / Density
- Odor
- Wicking
- Temperature Ranges
- Stain / Resistance
- Tear Resistance
- Tensile Strength / Modulus
- Water Absorption
- Viscosity
- Blocking Adhesion-State
- Loft Thickness

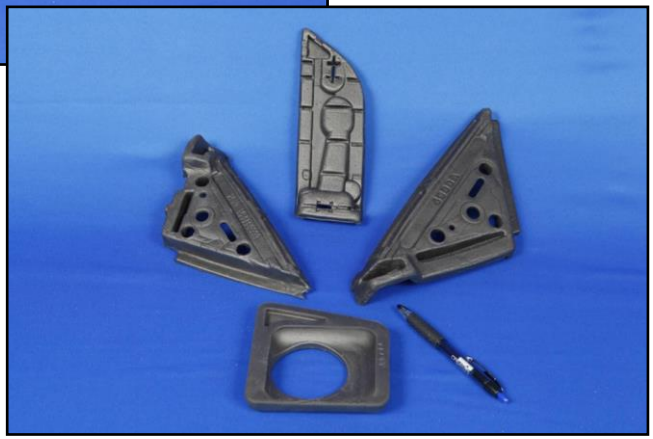
Compression Molded Parts



Vacuum Formed Parts

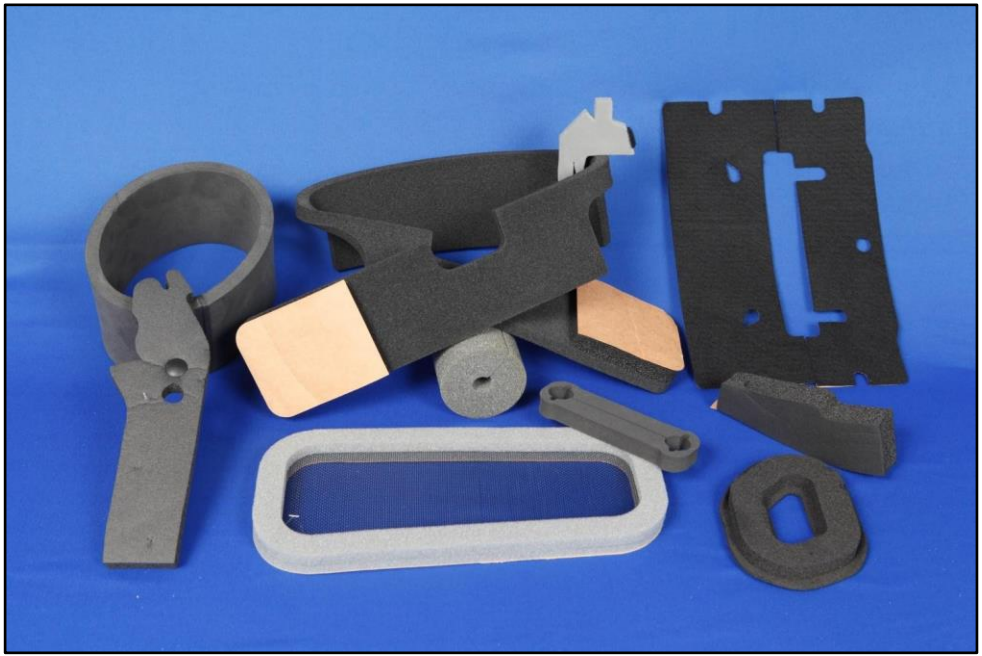
Fusion Molded Parts



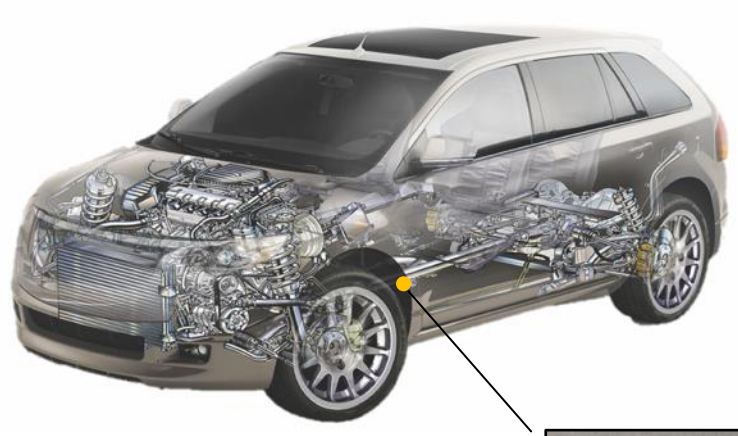


Urethane Molded Parts

Die Cut Parts

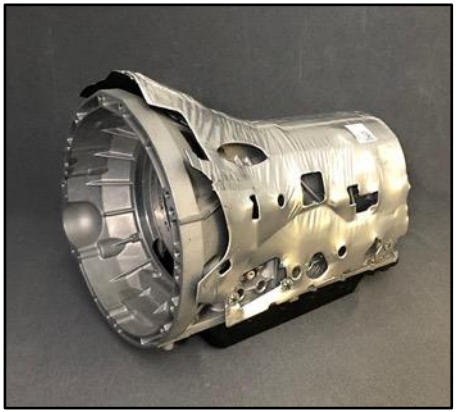


Fender Insulator



- A Fender Insulator seals the noise/wind leak path between engine and passenger compartments
- We offer many different material options, and convert into 2-D and 3-D parts
- We will select the best material and conversion option for your application

Case Study – Transmission Insulator



Challenge

- Ten Speed Transmission Creates New and Unwanted Engine Compartment Noise

Solution

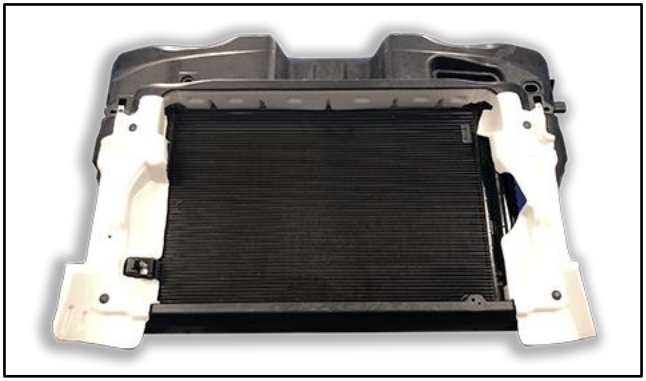
- Acoustic Shield to Solve Noise Problem and Hold Up in Heat Environment

Outcome

- Expertise in Materials Yielded a Multi-Layer solution
- Quick Prototype Capabilities Provided Samples Within Days for In-Vehicle Validation
- This solution has been Carried Over to Multiple Vehicles

Radiator Seal / Air Deflector

- Air flow control and sealing is critical to the proper function of a Radiator
- Our depth of material types, custom designed and converted using one of our many manufacturing techniques, offer lightweight and effective sealing and air flow control for all vehicle front end modules
- Regardless of material type, weight, performance, or cost, Creative Foam has the solution for your application



Engine Compartment Seals

Applications:

- Noise Seal
- Wind Seal
- Dust Seal

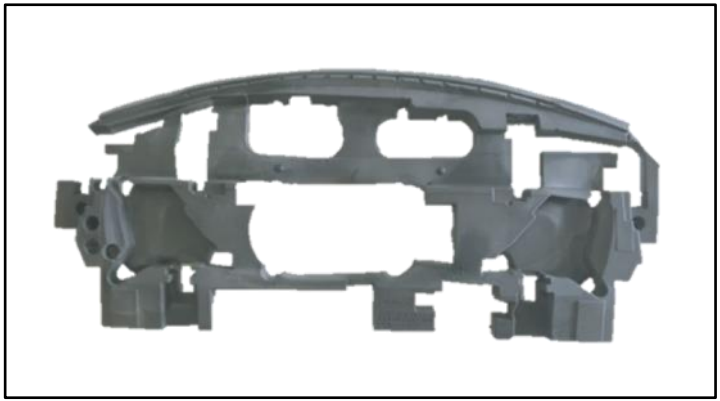
Performance:

- Lightweight
- Acoustic Absorber
- Water Resistant
- Mold – In Clips
- High Temperature Resistance

Process / Material Options:

- Foam in Place PUR Foam
- Fusion Molded XLPE Foam

Case Study – Package Tray Insulator



Challenge

- High Cost of Twelve Separate Die Cut Foam Attached to Package Tray for NVH and Support

Solution

- Creative Foam Designed a Molded Urethane Part to Replace all Twelve Pieces

Outcome

- Improved Installation Efficiency
- Over $5 Cost Savings
- Improved NVH

Case Study – Fuel Pump Cover

Fusion Molded

Vacuum Formed

Challenge

- Fuel Pump Flange Corroding Due to Chemical Contamination

Solution

- A Lightweight Molded Foam Protector Resistant to Chemical Corrosion
- Includes a Snap Fit Top Seal to Protect Electric Connectors

Outcome

- Two Applications of Successfully Protecting Fuel Pump From Field Failures
- Solution to Carry Across Platforms

Case Study – Sheet Metal Stiffener

Challenge

Traditional “Bake-On” Sheet Metal Stiffeners Can Cause
- Corrosion Issues
- Contamination of the E-Coat Bath

Solution

- Adhesively Applied Stiffener After Paint Ovens
  - Closed Cell XLPE Foam at 1 Inch Thick
  - Closed Cell XLPE Foam (with stiffening film) at 0.25 Inch Thick

Outcome

- Lower Cost (-15%)
- No Corrosion Risk as Bake-On-Stiffeners
- No Risk of Contaminating the E-Coat Bath
- Potential Additional Acoustic Advantages for Vibration Damping

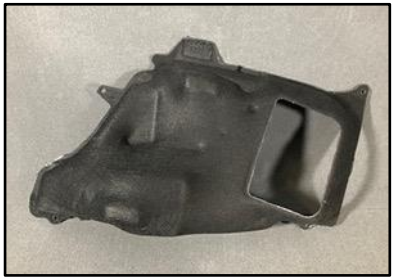
Cargo Management Systems

Load Floors and Storage Bins Acoustic Treatments

- Integration of Aesthetic Textile, Printed Films and Functional NVH material
- Load Floor Honeycomb Constructions with Thermoplastic or PU / Glass Skin Layers
- Acoustic Mass – Decoupler Constructions, as well as Multi Layer Air Permeable Solutions for Optimized Part Weight and NVH performance

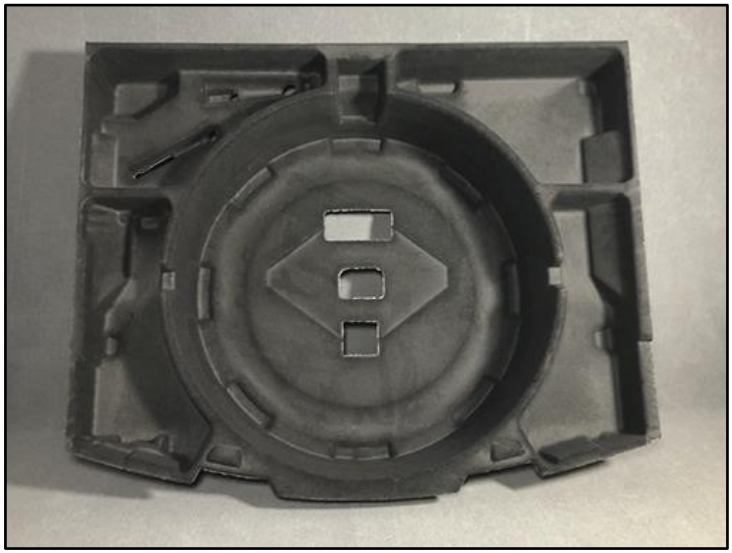
Load Floor

Storage Bin / Spare Tire Ins.



Interior Wheelhouse Insulators

Case Study – Trunk Storage Bin



Challenge

- High Cost of Separate EPP Parts to be Replaced by a Cost Effective One-Piece Solution

Solution

- Creative Foam Designed a Molded PP/ Glass Part with Carpet Facing

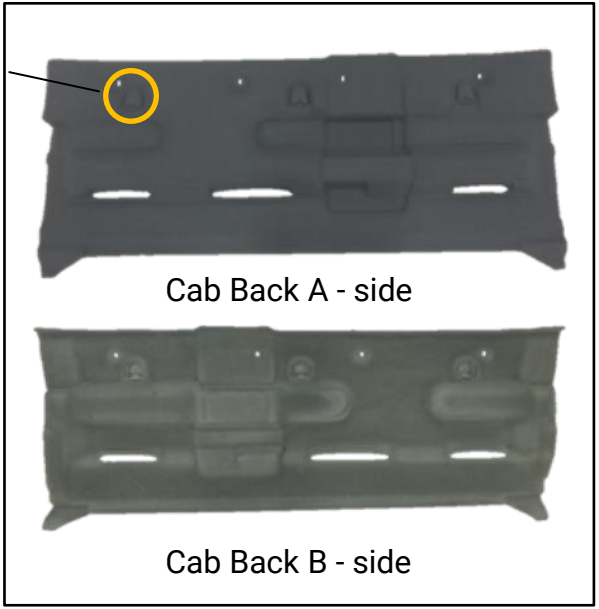
Outcome

- Deep Draw Design Maintaining Structural Integrity and Support for Load Floor
- Reduced cost and complexity

Pick-Up Cab Back Panel

Expanded View

Tri-Laminate Process



- Provides Precise Interface to Mating Parts
- Multi-layer Integrates Sound Transmission
- Loss at Air Extractor
- Creates “Torturous Path” for Noise Control
- Maintains Proper Air Flow
- Integrated Child Tether Cover Molded-in

PU Spray Technology

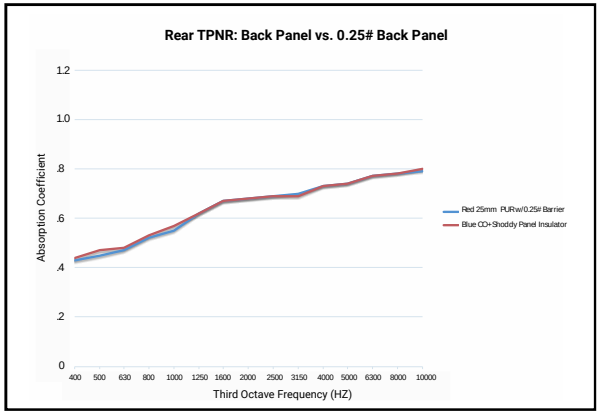
Established Technologies:

- Needled fiber facing with moldable backing and fiber or PU foam torturous path
- Injection molded trim panel with absorber

New Development:

- In-Mold PUR Coating for superior appearance and wear resistance
- Foam-In-Place PUR to sheet metal side
- Higher Degree of Freedom for Design
- Weight Save at superior Acoustic and Air Flow Performance
- Lower Cost

Acoustic Performance



Side A

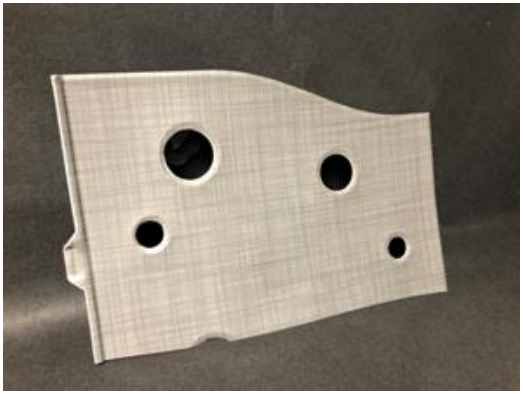
Side B

Engine Beauty Cover Insulator

- Front Side-Injection Molded Thermoplastic, Printed Raised Letters
- Back Side - Polyurethane Molded Foam, Aluminum heat Shield, Rubber Isolators for Mounting
- Integrated Engine Cover Assembly Injected Molded Exterior Provides Appearance and Branding Urethane Foam on the Back Insulates Against Acoustic Mid and High Frequency As Well As Heat Aluminum Heat Shield is to Deflect the Heat Source of the Turbo.

Turbo Diesel Cover

Case Study Class 8 Truck Flooring



Challenge

- Replace black Rubber Flooring with a Decorative Surface
- Meet Customer Performance Requirements

Solution

- TPO Film with Graphic Print, Wear Coating and Acoustic Barrier
- Polyurethane or PET Nonwoven Underlayment
- Meets OEM Specification
- Passed Vehicle Validation using Parts off Production Tool

Outcome

- Product meets OEM specifications
- Passes In-Vehicle Validation

Structural Lightweight Composites

Machined Rigid Foam

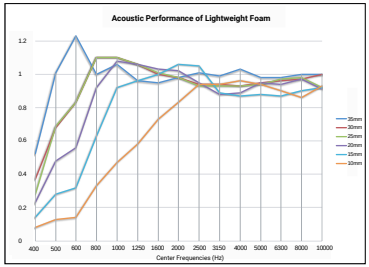
- Provides structural integrity / reinforcement
- Ultra light construction
- Materials: PET, PUR, XLPE, PVC, balsa and
- other specialty woods
- Dedicated prototype team

Applications in Automotive, Heavy Truck & other industries

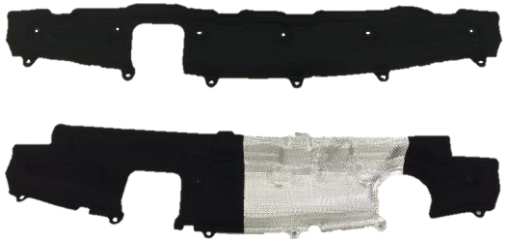
- Complex shapes are possible
- CNC machines used for precision cutting for seamless joining
- Maintaining tight tolerances
- Kitting of various components is possible
- Consists of fewer pieces, resulting in quicker assembly
- Intuitive engineering and design support to provide robust lightweight solutions
- Largest part processing size is 4'x8'

Engine Compartment Insulator

- Lightweight Foam is 30-40% Lighter Weight than Other Comparable Materials Used in the Application
- Excellent Weight / Acoustic Performance Value
- One Step Mold / Pinch Production Process for Optimized Manufacturing
- Elimination of Sharp or Open Trim Edge, for Ease of Installation at Customer Assembly Process



Upper/Lower Outer Dash Insulator



Hood Insulator

Tunnel Insulator w/ Alu foil

Acoustic Heat Shields

Material Description

NV693: Mechanically bonded blend of Polyester non-woven fibers with a foil facing
NV690: Mechanically bonded blend of Polyester and carbon fiber non-woven fibers with a foil facing

Heat shielding material can be supplied with a selection of pressure sensitive adhesives for use on a variety of applications, or with mechanical fasteners (as shown)

Heat Shield with Acoustic Performance

NV693

- Rated for radiant heat exposure of + 650° C (1,202° F) temperatures with a 1” space between the heat shield and the heat source.
- Proven to withstand 10 hours heat soak testing, starting at
- 200°C (392° F) and increasing 10°C (50° F) every two hours up to 240° C (464°F).

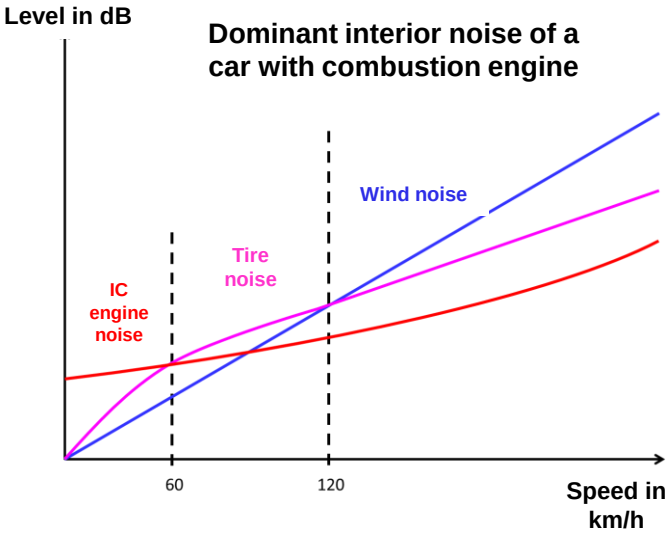
NV690

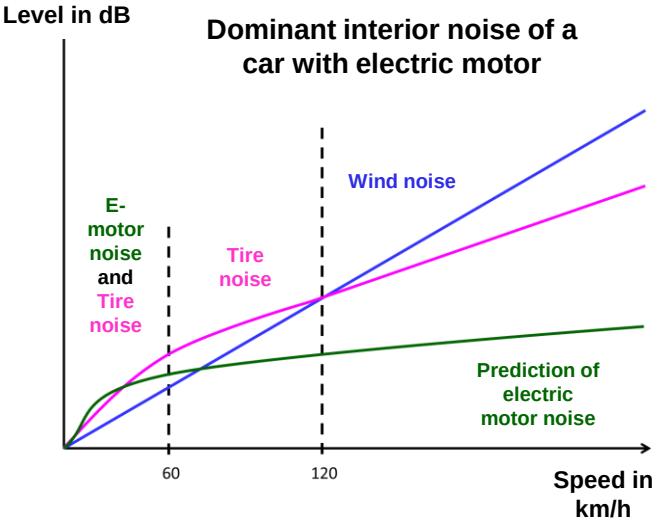
- Rated for radiant heat exposure of + 650°C (1,202°F) temperatures with a 1” space between the heat shield and the heat source.
- Proven to withstand 14 hours heat soak testing, starting at 200°C (392°F) and increasing 10°C (50°F) every two hours up to 260°C (500°F)

Electric Vehicles

Noises from internal combustion (IC) engines dominates at US driving speeds

Due to their tonal frequency spectrum, electric motors are subjectively noticeable especially at low speeds

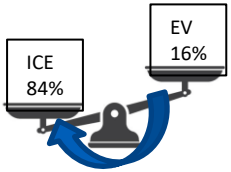




Electric Vehicles

EV Market and expected changes

- EV market share is gaining momentum:
  2020: 1.8%; 2021: 3.5%; 2025: 16% (IHS)
- Traditional interior Sound Packages will remain with shift to light weight absorptive solutions
- Noise from auxiliary equipment will not be masked by engine noise
- Tire noise will become the dominant sound source
- Added Front Trunk space
- Lower temperature requirements



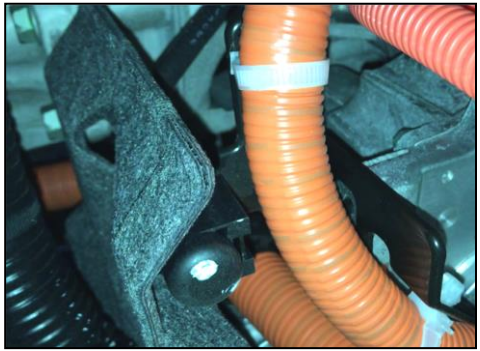
Market share (IHS) 2025

EV specific parts Creative Foam produces

Utilizing our PUR technology with optional barrier or spray skin for Electric Motor Covers

- Rear and Front Electric Motor Cover
- Compressor Cover
- Auxiliary equipment such as pumps or electric motors

EV Motor NVH Benchmarking



Creative Foam Corp. performs benchmarking analysis and can develop and produce typical EV Motor Wraps.

Current EV NVH Applications

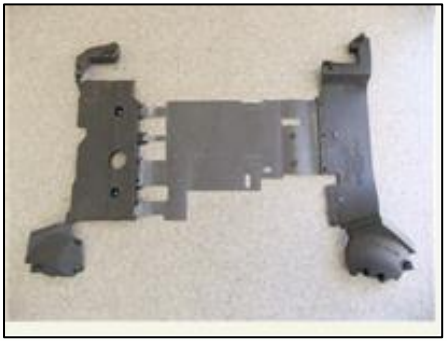
Electric Motor Cover
(SDU Front Motor Cover)

Compressor Cover

- Molded PUR
- Line to line fit to Motor Housing
- Typical density: 4 - 8 pcf
- Optional spray skin water absorption, scratch resistance, acoustics
- Optional integration of barrier layer

Electric Motor Cover
(SDU Front Motor Cover)

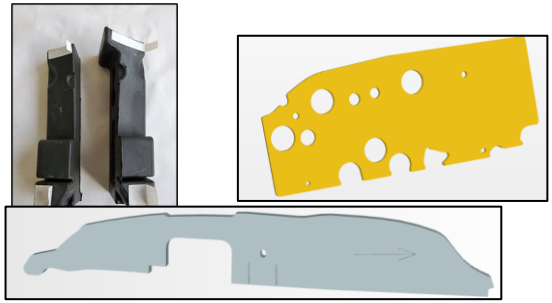
SDU Front Motor Cover,
PUR/ barrier



Current NVH Applications EV & Hybrid

The EV Interior Acoustic Package is very similar to the traditional ICE Package

Body Plugs
Typical materials: PE foam, barrier, fibrous absorbers



Die cut Absorbers such as Fender Stuffers, Quarter Panel Insulator

Hush Panel

Storage Bin

Transmission Cover (Hybrid Vehicle)

CREATIVE FOAM

THANK YOU!