

INSULATORS

INJECTION-MOLDED DASH INSULATORS



Injection-molded Dash Insulators Provide Acoustical Benefits, Weight Reduction, Part Consolidation, Installation Ease and Cost Savings

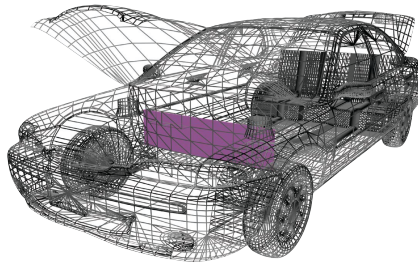
Dow Automotive is a global provider of NVH solutions for body-in-white (BIW), interior and powertrain applications. Our material science and characterization expertise, combined with design engineering, processing knowledge and program management, enable us to provide OEM and tier customers with solutions that meet or exceed vehicle performance targets at lower weight and cost.

Injection-molded dash insulators from Dow Automotive are one of a number of solutions that provide acoustical advantages, while improving cost and weight efficiencies.

Designed for use as a double-wall barrier on the front of the dash, between sheet metal and carpet, the injection-molded dash insulator helps prevent engine and drivetrain noise from entering the passenger compartment. The thermoplastic barriers come with slab polyurethane (PU) foam or molded PU foam decouplers.

Typical injection-molded part weight:

- ▶ TPO barrier range –
.6 lbs/ft² to 1.1 lbs/ft²
- ▶ PU foam options –
1.2 lbs/ft³ to 4 lbs/ft³
- ▶ Typical weight of injection-molded dash insulator is 7 lbs to 14 lbs



Applications

Vehicle interior between engine and passenger compartment



Thermoplastic barriers come with slab PU foam or molded PU foam decouplers.

Product advantages

Superior Acoustic Performance

- ▶ Precisely designed pass-through areas minimize sound leaks
- ▶ Ability to maintain tight barrier tolerances minimizes sound leaks
- ▶ Controlled-mass design process allows us to place mass in acoustic "hot spots" and minimize mass in less critical areas

System Cost Reduction

- ▶ Molded-in options such as footrests, electrical wiring channels, fasteners, cowl sides, cowl tops, and sealing features reduce system cost by eliminating the need for separate components

Installation Ease

- ▶ A wide variety of TPO formulations allow us to optimize part stiffness for specific needs
- ▶ Hinges and assembly assist features are easily integrated

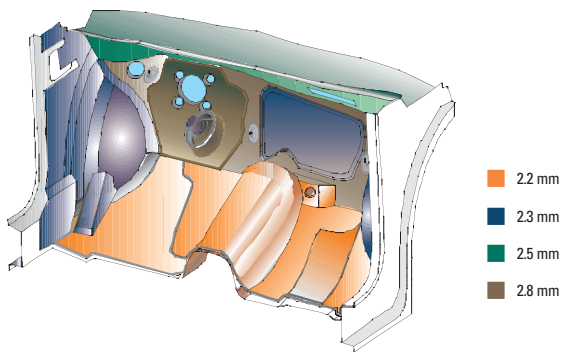
Mass Reduction

- ▶ Our controlled-mass design process and innovative pass-through designs allow us to provide a lightweight part with excellent acoustic performance

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Controlled mass distribution



Performance benefits

Excellent choice for complex BIW geometries.

- ▶ Our controlled-mass design process allows us to provide a part with precise wall thickness tolerances.
- ▶ Thermoformed dash insulators may have excessively thin or weak barrier regions in deep draw zones. Additional sheet thickness may be required to overcome this problem, thus adding overall mass to system. Or the thin zones are left, leaving acoustic weak spots.

Numerous patented features which help reduce system cost or improve acoustic performance. Examples of part integration cost savings:

- ▶ Integral footrest – estimated savings of \$.75 to \$2.00
- ▶ Attached cowl-side panels – estimated savings of \$2.00 to \$3.50
- ▶ Integrated electronic module clips – estimated savings \$.25 to \$.94
- ▶ Integral fasteners – estimated savings of \$.03 to \$.05 each

Full-service support from a single-source supplier

In addition to the largest selection of material solutions, Dow Automotive offers the following capabilities to support injection-molded dash insulators:

- ▶ Acoustic development and test facilities in Auburn Hills and Grand Rapids, Michigan
- ▶ CAE capabilities in Michigan (Auburn Hills, Grand Rapids, Midland), Germany and India
- ▶ Program management
- ▶ Engineering/design
- ▶ Prototyping
- ▶ Material optimization capabilities

Contact your customer service representative, or visit dowautomotive.com for more information. For technical information select "Downloads" on home page and "Technical Data Sheets" on the next page.

We listen. We deliver.



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