

# Quieter ride, lower carbon emissions

## A quieter ride + lower carbon emissions. Jackpot!



### Did you know?

Two important factors in auto design are **reducing weight** and **keeping the interior quiet from noise and vibrations**.

Common materials used to control vibration noise include heavy bitumen or butyl rubber pads. These pads have to be die-cut and manually positioned in each vehicle on the assembly line. Plus, they take up room, have odors and cannot be easily customized on demand.

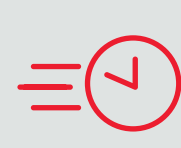
There's got to be a better way!

## The smarter choice

### ACOUSTICRYL™ Liquid Applied Sound Damping Resins (LASD)

ACOUSTICRYL™ Resins are waterborne, have low VOC emission and can be formulated into coatings that can be spray applied using robots.

The process is:



fast



precise



effective



efficient

& can reach difficult to access spaces.

They help reduce ergonomic injuries for workers, reduce odor in the assembly area and in the car.

And let's not forget:

Free from APEO, plasticizers and PVC.

Up to **35% lighter**<sup>(1)</sup>

Light weighting leads to improved mileage and lowered CO2 emissions.



Addressable market for LASD technology is 38 million vehicles globally<sup>(2)</sup>



About **1.2 million** MT of CO2 emissions saved<sup>(3)</sup>

This is equivalent to **275K vehicles** off the road each year.

## What about electric vehicles? (EV)

**No engine - no noise problems, right?**

**Actually...** Not quite... while the EV powertrain is quieter than a combustion engine, it is not silent. Road and wind noise still cause unwanted sound and vibrations that can now be heard prominently. These vibrations may be more extreme due to the lightweight materials employed to reduce EV weight and maximize range. DOW is developing new treatments to quiet the unique noise and vibrations of an electric motor, while keeping them lightweight and easily applicable.



Noise and weight reduction can be simultaneously achieved using

ACOUSTICRYL™ Liquid Applied Sound Damping Resins

## Is this a better outcome for everyone?

### For auto makers

it's an environmentally superior alternative, improving ergonomic safety of the workers while increasing productivity and cost reduction due to one step spray process.



### For car owners

Enjoy the comfort of a quiet and more productive ride - don't let anything get in the way of your Mozart!

### For society

Lower total carbon emissions over the lifetime of an automobile.



### For Dow

Transition to a future with low carbon mobility is one of the most important innovations happening at the moment in the auto industry. Adding LASD noise reduction tech nicely complements Dow's numerous automotive technologies that are being leveraged via the Mobility Science platform.

## What can you do?

1.

### Walk or bike

is always best if you want to lessen your personal CO<sub>2</sub> footprint, plus it is good exercise!

2.

### Use mass transport

when feasible and consider car-pooling.

3.

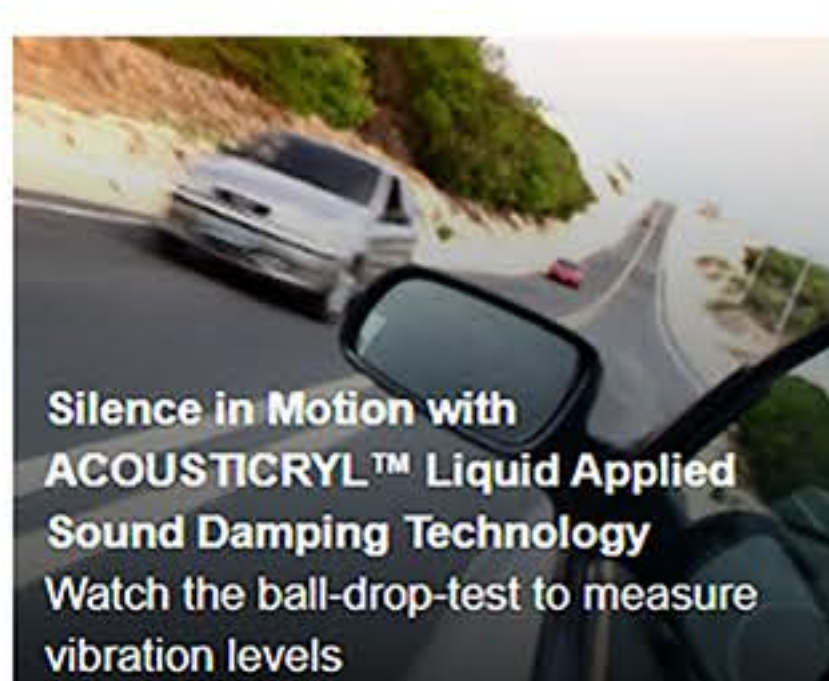
### Invest

in fuel efficient cars that will save you money and lower CO<sub>2</sub> emissions.

## Learn more

### Check out the MobilityScience™ platform

where you can find all about delivering transportation innovation for a world on the move.



### Watch the video

check it out



<sup>1</sup> vs. bitumen pads.

<sup>2</sup> Pre-pandemic in 2019: ~70 million new cars and ~25 million new commercial vehicles entered the road.

<sup>3</sup> 35% weight reduction using LASD material versus bitumen pads, with an addressable market for LASD of 38 million vehicles, assuming a 12-year lifetime, an annual average of 12,000-mile travel distance.