Dynaplate™

DESCRIPTION

Dynaplate is a light-weight aluminum constrained-layer vibrational damper. Dynaplate conforms with effort to sheet metal and other hard substrates. Material performance is optimized for temperature ranges between -10˚C to +60˚C (14˚F to+140˚F) Material can withstand temperature extremes between -54˚C to +170˚C (-65˚F to +350˚F) and is highly resistant to aging.

ACOUSTIC PROPERTIES

The acoustic loss factor “n” is used as a measure of ability to damp structure-borne sound. It states how much vibrational energy (in steel sheets for instance) is converted to heat rather than sound. For constructions containing several layers of damping material, the combined loss factor “n comb” is used. The theoretical maximum loss factor is 1 (no vibration). An undamped 1mm thick steel panel has a loss factor of roughly 0.001 at 200 Hz. Dynaplate applied to that panel would increase the loss factor to 0.17 @ +20˚C (+68˚F) Multiple layers of Dynaplate can be used for significant improvement of sound damping.

APPLICATIONS

Dynaplate can be die cut to shape and placed onto the body surface after sheet metal cleaning operation and prior to paint system (typically at the sealer application operation) or on painted panels. Dynaplate is used as treatment for metal panels, partitions, ducts, doors, bins, panels etc. in railroad cars, buses, automobiles and ships. It is also used for ventilation ducts, relay cabinets, steel furniture, home appliances, sink units, computer equipment and machine tools and for many other purposes.

INSTALLATION

Dynaplate should be cut to the desired size before the release liner is removed. It may be cut with scissors, knife or die. Remove dust, grease, moisture, and other foreign matter from the application surface. Peel off the release liner. The simplest application technique is to bend the mat slightly and attach it along its shortest edge. The mat is then pressed firmly into place, preferable with a roller for larger pieces. This reduces the risk of leaving air pockets, which reduce the sound damping capacity. The temperature of Dynaplate and application surface should not be below room temperature during fitting. Heating the material is not necessary.

SPECIFICATIONS

Appearance:
10 mil 99.995% pure aluminum with aerospace damping adhesive, craft paper release liner

Thickness:
0.014" (0.51mm)

Mass:
0.17lb./ft2 (0.83kg/m2)

Acoustic Loss Factor @ Temperature (Using ASTM method E756 @ 200 Hz):

0.05 @ +14˚F (-10˚C)
0.08 @ +32˚F (+0˚C)
0.11 @ +50˚F (+10˚C)
0.17 @ +68˚F (+20˚C)
0.15 @ +86˚F (+30˚C)
0.13 @ +104˚F (+40˚C)
0.11 @ +122˚F (+50˚C)
0.08 @ +140˚F (+60˚C)

Temperature Range (optimal performance):
-10˚C to +60˚C (14˚F to+140˚F)

Temperature Range (resistance):
-54˚C to +177˚C (-65˚F to +350˚F)

Chemical Resistance:
Resistant to water and mineral oils

Adhesive Peel Strength (Bond Strength):
12.9 lbs/inch (22.5N/cm) on cold steel

Federal Standards Tests:
FMVSS 302: Meets

Handling And Application:
Material stored at room temperature for best application

Storage Information:
Number of sheets in stack: 200 maximum
Material must be stored horizontally in its wrapping

DYNAMIC CONTROL
3042 Symmes Road · Hamilton, Ohio 45015
phone: 1-800-225-8133 · fax: 1-800-873-2423 · www.dynamat.com

Part No. 2231

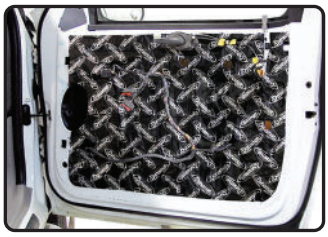
DO THIS 1st

MAKE YOUR CAR COOL AND QUIET

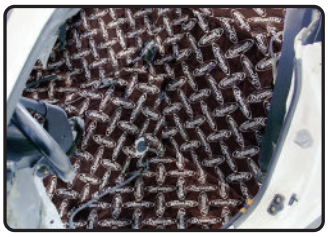
APPLY DYNAMAT XTREME

to any accessible interior sheet metal, fiberglass or plastic

IN ORDER OF IMPORTANCE

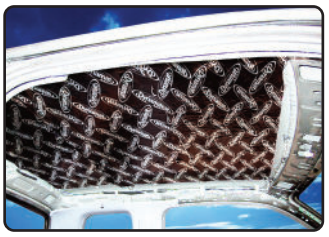


DOORS



FLOOR

TRUNK



ROOF

DO THIS 2nd

ADD EVEN MORE COOL

APPLY DYNALINER

over the top of the Dynamat Xtreme

IN ORDER OF IMPORTANCE

FLOOR

FIREWALL

DOORS

ROOF

DO THIS 3rd

ADD EVEN MORE QUIET

HOODLINER

Apply **The Hoodliner** to the underside of your hood to absorb engine noise and control heat. If a black finish is desired, **Dynaliner** can be used. Both products are heat resistant.

DYNAPAD

Replace **Dynaliner** with **DynaPad** on floor, firewall and trunk floor when a heavy duty barrier is needed. Common applications include: high performance exhaust noise & car audio installations.