

## DESCRIPTION

Dynamaplate is a light-weight aluminum constrained-layer vibrational damper. Dynamaplate 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. Dynamaplate applied to that panel would increase the loss factor to 0.17 @ +20°C (+68°F) Multiple layers of Dynamaplate can be used for significant improvement of sound damping.

## APPLICATIONS

Dynamaplate 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. Dynamaplate 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

Dynamaplate 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 Dynamaplate 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./ft<sup>2</sup> (0.83kg/m<sup>2</sup>)

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

0.05 @ +14F (-10C)

0.08 @ +32F (+0C)

0.11 @ +50F (+10C)

0.17 @ +68F (+20C)

0.15 @ +86F (+30C)

0.13 @ +104F (+40C)

0.11 @ +122F (+50C)

0.08 @ +140F (+60C)

### 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

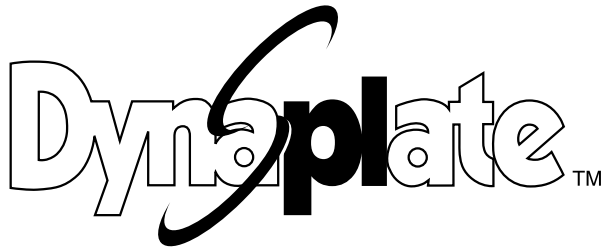
Material must be stored horizontally in its wrapping



DYNAMIC CONTROL

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

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## REFERENCE CHART

### 24" x 30" DYNAPLATE

**Coverage:** 5.0 ft<sup>2</sup> (0.46m<sup>2</sup>)

**Weight:** 0.80 lbs (0.36 kg)

**Dimensions:** 24"x30" (609mm x 762mm)

