Polymer Technologies Inc.
Engineering Sound Solutions ™
Elastomeric Solutions Division

Technical Data Sheet
Materials Specifications For:

Damping Material 7361D

Applications

The 7361D damping material is produced as constrained layer or non constrained layer depending on the application. The constrained version is a viscoelastic damping material, a constraining layer, and a protective release paper. The 7361D material is designed to offer the maximum amount of structural damping to panel structures by shearing the highly damped viscoelastic layer between the two constrained layers.

Material Properties

Hardness (Shore 00)——————— 60-80
Color——————————————— Black
Temperature range——————— 25F to 180F
Thermal Conductivity————— 1.972 BTU-IN/HR/FT^2/F
Breakdown Voltage——————— 60 KVAC
Specific Gravity (ASTM D792) ———1.40 Grams/CM^3
Dielectric Strength——————— 490 Volts/MM
Tensile Strength (ASTM C907) ———10-18 PSI
Elongation at Break (ASTM C908)——300%
Lap Shear Strength (ASTM C961)———6 PLI Min
Adhesive Peel Strength——————49 OZ/IN after 5
————————73 OZ/IN after 24 HR
Fungus Resistance——————— No Growth

Attributes

The 7361D material effectively and efficiently reduces the amount of vibration transmitted to a structure resulting in longer fatigue life of the structure or components. Typically, un-damped structures have resonant transmissibility's of 30:1 to 50:1 compared to the input. Damped systems have transmissibility's of 3:1 to 10:1. This significant decrease in transmissibility directly correlates to a reduction in sound power transmission from the structure at resonance. 7361D has an aggressive surface tack and high tensile strength that provides an immediate bond while remaining flexible.

Installation Data

To install the 7361D material, simply remove the protective release paper and place the damping material on the un-damped structure. The 7361D material must cover at least 80% of the back of the structure. Hand pressure is all that is required to adhere the 7361D damper. No additional pressure or curing is needed. The 7361D material is flexible enough to adhere to imperfect surfaces no primer is required.

Dimensions

The 7361D material is available in sheets of different sizes and shapes as well as different constraining layer materials polyester, stainless steel, aluminum, galvanized steel as well other unique materials . The thickness of the constraining and viscoelastic layers can be varied depending on the application's requirements. The data below is based on a .005 inch thick aluminum layer and a .039 inch thick viscoelastic layer. We have found that this configuration provides optimal damping of un-damped structures.

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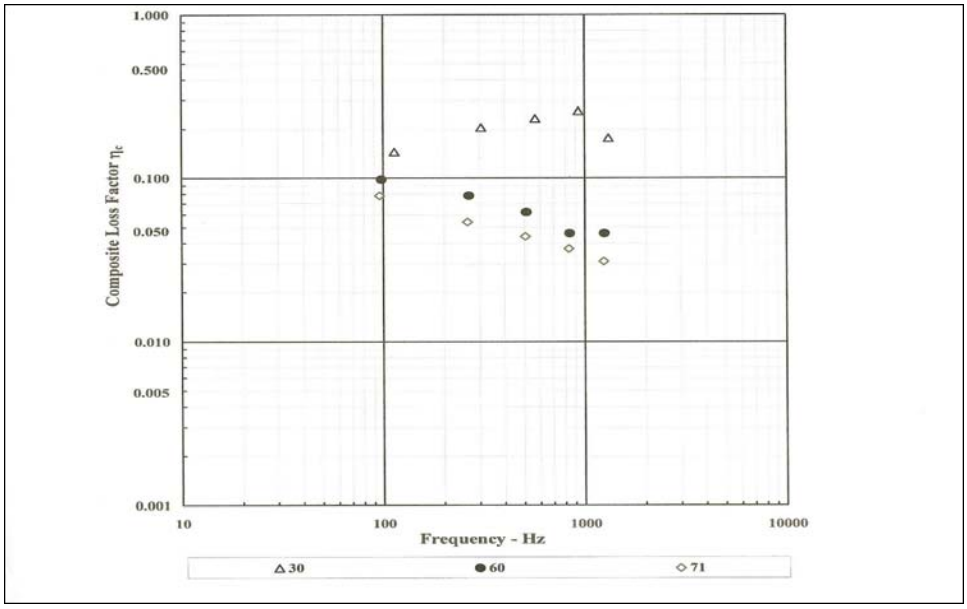
Composite Loss Factor of 7361D at 30, 60 and 71 C from Oberst Bar Damping Tests
Sample Description: .005 aluminum with 1 MM 7361D
Measured Sample Thickness 1.3 MM
Measured Sample Surface Weight 1.7 kg/m^2
Steel Bar– **Free length** 200 mm, **Thickness** 0.8 mm, **Width** 12.7 mm



Dynamic Mechanical Thermal Analysis Test