

# Damplifier Pro Technical Data

Second Skin Audi

8/1/2013

[Edition 1, Volume 1]

## *Damplifier Pro*

### **Description:**

Damplifier Pro is a patented, dense elastomeric butyl rubber with a 6.5 mil annealed foil constraint layer. Damplifier Pro conforms to and forms a strong bond with sheet metal and other solid materials, including fiberglass. Material Performance is optimized for temperatures between 14°F(-10°C) and 140°F(60°C). Damplifier and Damplifier Pro materials can withstand temperatures between -75°F(-60°C) and 450°F(232°C) and will last the life of any vehicle it is correctly applied to

*Damplifier Pro is the most effective sound deadener available in low temperatures, and has the highest heat resistance of any and all other sound deadeners on the market*

## *Acoustic Properties*

The acoustic loss factor, "n", is used as a measurement of a material's ability to reduce structure-born sound by presenting how much vibrational energy or resonance (in the sheet metal of an automobile, for example) is converted to heat instead of sound. For constructions containing several layers of deadening material, the combined loss factor "n comb" would be used. The theoretical maximum loss factor would be 1 or 100%(no vibrations after material is installed). An un-deadened sheet of 1mm thick steel has a loss factor of approximately 0.001 at 200Hz vibration. A

## *Modal Loss Factor*

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(-10.8°C) (n = 0.224)

(-0.5°C) (n = 0.374)

(+9.9°C) (n = 0.437)

(+20.9°C) (n = 0.224)

(+29.8°C) (n = 0.271)

(+40.0°C) (n = 0.155)

(+50.1°C) (n = 0.102)

(+60.6°C) (n = 0.071)

### **Optimal Temperature Range:**

14°F – 140°F(-10°C – 60°C)

### **Temperature resistance:**

-75°F – 450°F(-60°C – 232°C)

### **Chemical Resistance**

Highly resistant to water,

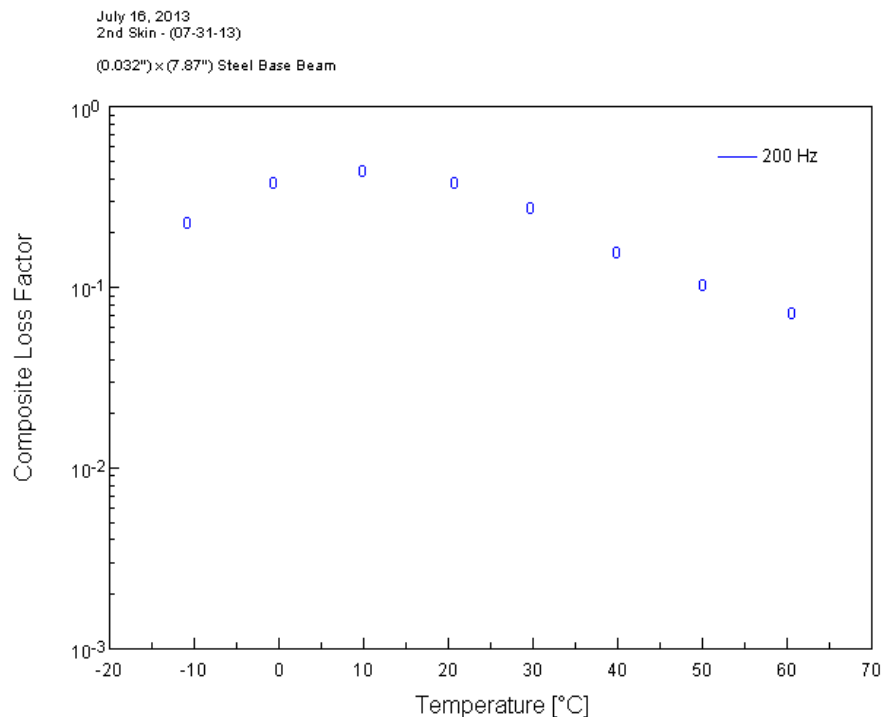
Moderately resistant to most solvents

Single sheet of Damplifier Pro would increase that to 0.272 @ 86°F. The product can be applied in multiple layers to increase this loss factor.

## Applications

The Applications for Damplifier and Damplifier Pro range far beyond that of the automotive industry can be used in any applications involving metal panels, partitions, ducts, doors, bins, panels, and so forth in railroad cars, buses, automobiles, and ships. It is also used for ventilation ducts, relay cabinets, steel furniture, home appliances, sink units, computer equipment, machine tools and many other objects that suffer from vibration-produced noise.

## Graphs



### Handling and application:

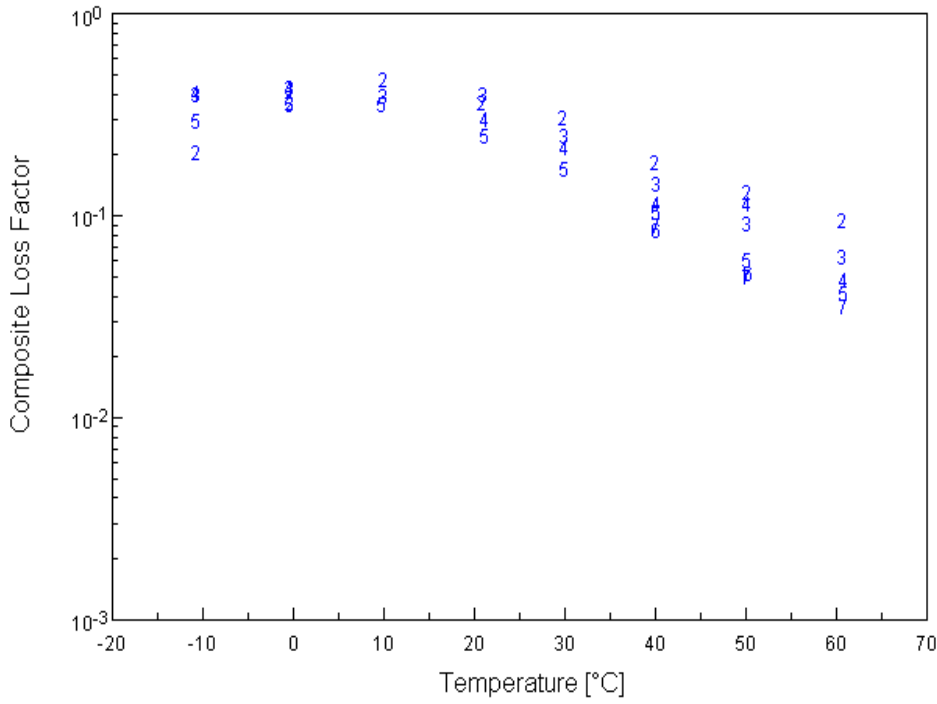
Product can be stored at any temperature within the resistance range listed above. Recommended application temperature range is 70°F – 90°F, although product can be applied at any temperature within the temperature resistance range (a heat gun may be helpful at lower temperatures). Gloves are highly recommended as the edges of the product are sharp and can cause cuts. Product must be applied to an oil-free, rust-free surface for optimal results.

### Storage Information:

Product must be stored on a flat surface with paper backing still on. It is best to leave any product that is not being installed in the box which it was delivered in. Do not exceed a stack size of 50 sheets to avoid pressing the butyl out from under the foil layer on the lower sheets. Product should be installed within a year of being received.

July 16, 2013  
2nd Skin - (07-31-13)

(0.032") x (7.87") Steel Base Beam



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