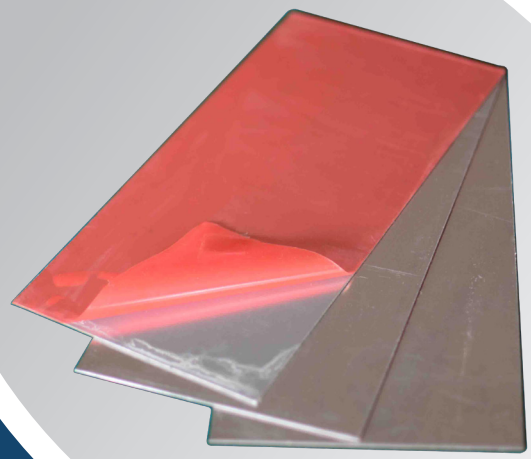
Marinsu
İZOLASYON SANAYİ TİC. LTD. ŞTİ.



SilenTile®

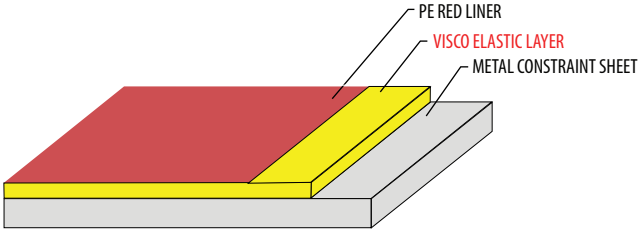
FEATURED PROPERTIES

- **Reduce panel vibration and resonant noise effectively**
- **Increase sound transmission loss**
- **Low installation cost – just peel and stick on**
- **Thin and light weight damping tiles**
- **Easy application**
- **High damping efficiency for thick metal plates**
- **Excellent adhesion to most substrates**
- **Extended operating temperature range (-20~120° C)**
- **Non-toxic**
- **Good flexibility/softness for curve line and good to fill the gap**
- **Good weatherability, Solvent resistance**

DESCRIPTION

SilenTile® is self-adhesive constrained layer vibration damping tile. Using the latest polymer alloy technology, SilenTile® has a unique viscoelastic polymer blend designed to provide high viscous damping and isolation properties over a wide temperature range (-20°C/120°C) with built-in self-adhesive technology. The built-in self-adhesive provides for ease of installation. This unique adhesion enables the product to withstand temperatures up to 120ºC without delaminating from the substrate (short term exposure only). In addition, SilenTile® has excellent adhesion to primed steel, lacquered steel, aluminium and low surface energy substrate such as polypropylene , PVC and polyethylene.

SilenTile® is designed to damp the low frequency structure-borne noise as well as increasing the sound transmission loss. SilenTile® is specially developed to provide sufficient damping for thick substrates such as steel, aluminium, plastic and GRP composites.



MATERIAL CHARACTERISTICS

Core layer of SilenTile® is made of a viscoelastic layer. When the composite sheet subject to flexural vibrations, there is slight relative movement between the cover sheets which results in periodic shear deformations in the viscoelastic layer. The internal friction generates in the viscoelastic layer and causes vibrational energy to be " lost/converted"
as mechanical energy, i.e. it is converted into heat; this dampens vibration in the composition.
Withins working range(25-80 ºC) and the material achieves optimal vibration damping through a correspondingly high loss factor.

Types

SilenTile Type	Aluminum	Galvanized Steel
Tempreture of application area	(-20°C/120°C)	(-20°C/120°C)
Deforming temperature	200ºC	200 C
Decomposition temperature	230ºC	230ºC
Processing temperature	15ºC	15ºC
Composition	05-1/1-2	05-1/1-2

Adhesion
The force required to pull a strip of tape from a surface at a 180degree angle, at the rate of 300±10mm per minute.

Instrument : Peel adhesion tester
Speed: 300±10mm/Min
Tape width : 10mm
Backing: 25 micron polyester film
1) Initial Stage : 30mins after adhesion, measure at room temperature
2) Normal State: 24hrs after adhesion, measure at room temperature
3) High Temperature aging: 40mins after adhesion at 80° measure
4) Low Temperature aging: 30mins after adhesion at -30° measure

Item	Silentile
Initial Stage	1000
Normal Stage	1400
High Temperature	1600
Low temperatue	900
Remarks	gf/10 mm

APLICATIONS

It is one of the most suitable damping material for weight sensitive applications, such as automotive, boats, buses and trains.

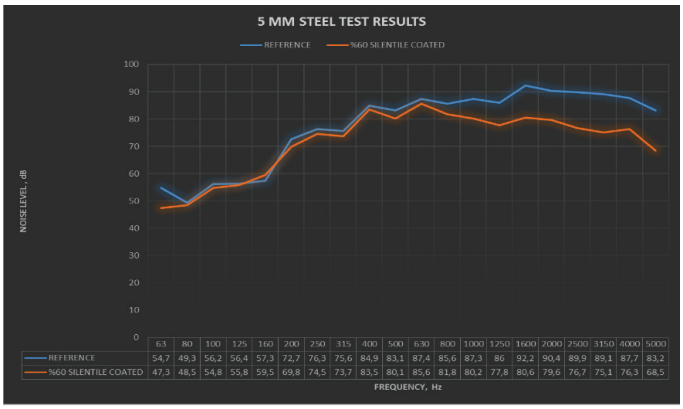
High efficiency vibration damping and isolation material for reducing impact or vibration induced noise:

Vibration damping for thick metal substrates, typically from 4mm to 12mm thick

Ship bulkheads, decks, hulls and other marine applications
Vibration damping for thick metal plates in locomotives, trains and trucks, enclosure, metal housing

INSTALLATION

Surface preparation:
The surface must be dry, free of oil, dust, grease, rust and other contaminants.
Application method:
Peel off the release liner on the back of the damping tile and apply the tile onto the substrate. After the initial contact, apply firm hand pressure or use a roller to push the damping tile onto the substrate. The damping tile must be in full contact with the substrate and free of any trapped air bubbles.
The damping tile is designed to be re-positionable within 24 hours after application. The damping tiles will reach their full bond strength after 24 hours.
Minimum coverage:
70% of total area.
Recommended application temperature:
Above 10°C.



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