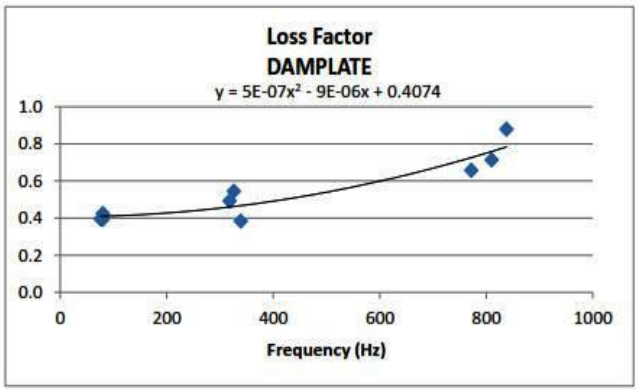
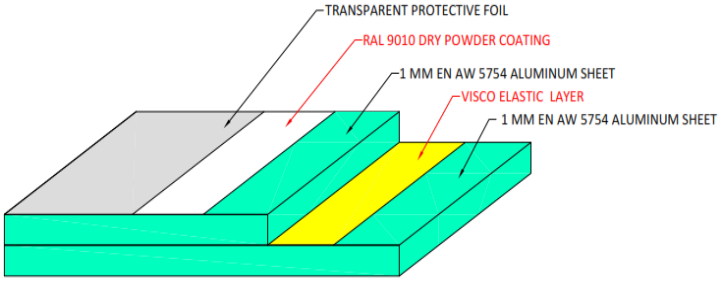
FEATURED PROPERTIES

- **Excellent damping ratio. Damping Loss Factor is greater than 0,426.**
- **For skin damping lightweight solution**
- **Superior acoustic insulation performance above 20dB**
- **Two versions of product is available up on application purposes for steel and aluminum surfaces.**
- **Electrostatic dry powder coating surface (standart RAL9010. Other colour upon request)**
- **Protective foil for coating surface**
- **Fire resistant viscoelastic layer**
- **EN AW 5754 (H22) aluminum and galvanized steel sheets**
- **Easy to install and quicker application process.**
- **Extended operating temperature range (-20→200 °C)**
- **May be formed by shaping machine.**



DESCRIPTION

damplate® is a sandwich sheet, consists of two galvanized steel or aluminium (EN AW 5754 /H22) plates with a visco elastic layer. Two plates are not touching each other due to visco elastic layer in between the two plates. **damplate®** is right choice for steel or aluminum structures and it's components are subject to vibrations which transmitted as structure-borne sound waves. This composite material displays high structure-borne and airborne sound damping properties and particulary designed for reducing acoustic loads where noise avoidance or damping is either uneconomical or impossible for design reasons. The viscoelastic core layer absorbs vibrations by allowing slight relative movement between the cover sheets and converting the vibration energy into heat. Compared with conventional steel or aluminum, **damplate®** can reduce structure-borne sound levels by up to 20dB.



ISTITUTO GIORDANO
Qualità al Plurale.

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MATERIAL CHARACTERISTICS

Core layer of **damplate®** is made of a viscoelastic resin. 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 interlayer. The internal friction generates in the resins and causes vibrational energy to be " lost/converted" as mechanical energy, i.e. it is converted into heat; this dampens vibration in the composite sheet.

Withins working range(25-50 ºC) and the material achieves optimal vibration damping through a correspondingly high loss factor.

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PROCESSING

Joining

damplate® may be united by all common joining techniques. Mechanical methods including joining with screws or riverts, but also folding and clinching. Adhesive bonding, resistance and fusion welding are other commonly used methods. Most mechanical joining techniques commonly used with normal metal sheet and this can be applied to the composite material without tooling modifications.The strenghts of resulting joints are in the same order of magnitude as those obtained with steel sheet. Screws requires to tighten to a specific torque and it should be noted that the viscoelastic interlayer, which exhibits viscoelastic properties in the specified temperature service range, will yield locally under the resulting pressure. damplate® can be riverted both manually(e.g using hand-held riverting tongs) and with automatic machinery. Conventional riverting (from both sides) and blind riverting have both given good results. Self-piercing/riverting techniques with solid and semi-tabular riverts may also be used. Adhesive bonding eliminates (or at least greatly reduces) the thermal and mechanical loading,as typical as of other joining methods. damplate® suitable for adhesive bonding and it is generally equavalent of steel or aluminum sheet and of indentical surface quality. Although it is important to note that only one of cover sheets is involved in the joint.

Cutting

Cutting processes are known to give good results with damplate® including mechanical methods such as shearing,punching,blanking and drilling, but also water jet cutting.

Coating

Typical pretreatment and painting processes(electrocoating) can be used without impairing the baths. damplate® can be painted like normal steel and aluminum sheet. To prevent run-out the overheating temperatures should not exceed the admissible limits (see below application table). damplate® will resist these temperatures without interlayer bleed-out cutting edges or decomposition of the visco elastic layer.

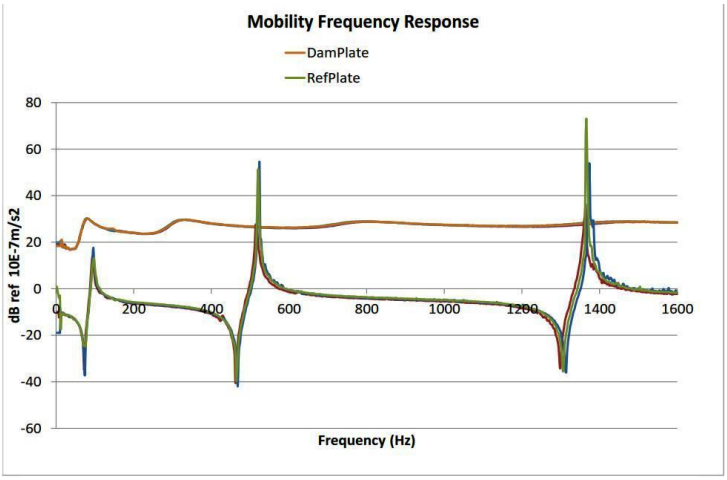
Recycling

The damplate® core interlayer has a maximum nominal thickness of 0,100 mm, allowing damplate® to be recycled or disposed of in the same way as painted steel and aluminum scrap. It does not have to be treated as hazardous waste.

APLICATIONS

This product is mostly applied as a (sheet) construction in the machine construction, yacht and shipbuilding, dumping bunkers, partition walls, floors, footbridges, pipeline insulation and numerous ways of other applications. Additionally it is used on oil sumps, valve and transmission covers and dash panels. damplate® is available in two variants depending on application purposes in numerous metal grades (steel or aluminum).

damplate® TYPE	Aluminum	Galvanized Steel
Tempreture of application area	-10°C/75°C	-10°C/100°C
Deforming temperature	200°C	200°C
Decomposition temperature	230°C	230°C
Processing temperature	15°C	15°C



Functioning of damplate® compared with conventional solid sheet

TECHNICAL INFORMATION AND SERVICE

In addition to supply of this product Marinsu İzolasyon San. Ve Tic. Ltd. Şti. offers competitively- priced in the Turkey. Use of our service ensures that installation is performed to highest standarts by tradesman fully experienced in the specialist skills of fitting acoustic materials correctly. For further details contact our technical team on +90 216 395 07 18. See table for technical parameters.

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