Damping loss factor ($\eta$)

25 mm core material / 3mm plywood skin PU glued.

Level of vibration (RMS) on the partitions of a power boat depending on the function of the rotation speeds of the engine.

The damping loss factor of nidaplast® is substantially higher than other traditional materials. The viscoelastic character of the polypropylene used in our honeycombs structure makes nidaplast the right material for absorbing the vibrations from your boat. It helps reducing vibrations and contributes to acoustic comfort of the whole structure.

NIDAPLAST SERVICES

Nidaplast team remains at your disposal to respond to your needs and to address any technical question you may have:

- Our engineers are highly experienced in using nidaplast products in traditional industrial techniques: hand lay-up, spray-up, RTM, infusion... They will work closely with your design and production teams for manufacturing the first prototypes in order to optimise your production costs and thus adapt our products to your requirement.

- Thanks to its 25 years of experience, nidaplast composites can help you to pre-size your composite panels Nidakits. Our engineers will help you to produce the right structures using analytical or digital methods.

- Nidaplast composites has a high-performance laboratory in order to make mechanical tests on its products. Our team will help you with your choice of materials and will work with you to check the mechanical resistances. This laboratory is constantly carrying out quality control for nidaplast products in accordance with the company’s ISO 9000 and ISO 14001 certification.

The information contained herein may be used as a guide for the use of the product but must not be considered as a guarantee for correct installation. Furthermore, the application, use and/or processing of the products are beyond our control, and consequently the installer and/or user and/or the processor shall be fully responsible for this work.

Nidaplast honeycombs have a capacity of absorption higher than wood. Even if the wood would be strengthened by a viscoelastic damping sheet, nidaplast remains the best choice in terms of acoustic performances. This reduces the sound level generated by the vibrations of the engine and the movements, which are propagated throughout the structure.

The honeycombs core for lighter structures

NIDAPLAST WINNING ASSET: ACOUSTIC ABSORPTION

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NIDAPLAST IS THE INVENTOR OF THE EXTRUDED POLYPROPYLENE HONEYCOMBS. USED AS A CORE IN DAILY APPLICATIONS, THIS MATERIAL ENABLES THE PRODUCTION OF LIGHTWEIGHT AND HIGH PERFORMANCE SANDWICH STRUCTURES.

For 25 years, these sandwich structures are used mainly for the production of large parts. Thanks to the mechanical features of the honeycombs core, our products are found in various sectors: Boat Building, Transport, Building, Wind Turbine, Sports and Leisure, Industrial Goods and Lightweight stone.

From design to delivery, Nidaplast composites adapts its services to meet your requirements. In order to be able to follow and ensure the success of your projects, our team of Engineers and Technicians will provide you with the best technical-economic solutions for the structural applications. Its commitment and technical prowess make Nidaplast composites the ideal partner for driving projects in the field of boat building.

Depending on the use and the constraints applied to the finished panel, several finishings are possible: association of honeycombs core with polyester, aluminium or wooden skins. It is also possible to put local reinforcements or inserts before the stratification of the panel for affixing parts to it.

Advantages of honeycombs for boat building

NIDAPLAST CORES FOR SANDWICH PANEL ARE WIDELY RECOGNISED FOR THEIR MECHANICAL QUALITIES AND THEIR ECONOMIC ADVANTAGES:

- LOWER WEIGHT MEANING ENERGY SAVING
- GOOD DIMENSIONAL STABILITY SAVING
- WATER PROOF AND RESISTANT TO CORROSION AND BACTERIA
- GOOD LIGHTNESS/RIGIDITY RATIO
- GOOD ACOUSTIC PROPERTIES

The Nidaplast cores offer all the benefits of a sandwich structural panel and are adapted to the different processes which are used (contact, projection, infusion, RTM, gluing).

NIDAPLAST RANGE AND PROCESSES

LAMINATION AND GLUING

Infusion and RTM

Certifications

Approved by a DNV Type Approval certificate no. K-4475 and a Germanischer Lloyd certification, the honeycombs structure possesses recognised physical and mechanical features. These assets meet numerous requirements for the production of light and resistant structural panels for boat building.