

# nidalu

isothermic aluminium-plated panel  
in recycled, recyclable  
honeycomb cardboard



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## The « nidalu » isothermal Panel

Where heat insulation is concerned optimal performance of packaging is key and is based on simultaneous reduction of any heat transfer between the transported merchandise and the external environment.

The combination of heat resistance, the capacity of reflection of heat radiation and being totally sealed makes an isothermal packaging material that guarantees satisfactory preservation and transport of merchandise in predetermined conditions.

- The cardboard honeycomb internal structure takes advantage of the strong insulating power of air while confining it in perfectly sized “cells” to stop any movement and therefore limit heat transfer by convection.
- Thanks to the high reflection coefficient, the two aluminium facings of the panel protect against the effects of heat radiation in a very efficient manner. Heat reflection by the facings, when efficiency is immediate, equally plays the role of a vapour barrier that deters the formation of condensation due to a thermal shock and therefore ensuring a better lifespan of the insulation.

The total heat resistance of the 60mm thick « nidalu » panel, or « nidalu 60 », takes into account reflection of the two aluminium facings, it has a value of  $1.1\text{m}^2.\text{K}/\text{W}$ , for a heat resistance of the component of  $0.472\text{m}^2.\text{K}/\text{W}$ , under the same conditions this is equivalent to approximately 27 mm of polyurethane foam, 35 mm of expanded polystyrene or 43 mm pf rock wool (CSTB report n° EMI 14-26051102 and calculated according to the NF standard NF EN ISO 6946 of June 2008).



The honeycombed material provides a light, rigid isothermal « nidalu » panel and guarantees excellent protection against impacts. It is made of recycled cardboard and is entirely recyclable (paper/card) making it a completely environmentally friendly option.

Its various features all go to make an isothermal material which is simple, efficient under defined conditions, easily recyclable and particularly economical. The “nidalu” panel has proved its efficiency for more than 20 years with the insulation of sea containers for transporting heat sensitive products such as wine.

# « nidalu 60 » panels for isothermal containers

With more than 20 years experience in the manufacture of isothermal panels for sea containers we are now developing a range of container pallets using our “nidalu” panels and of course we are at your service for the creation of your tailor made isothermal packaging.



« l'hexagone » has conducted trials and simulations with the collaboration of the l'Ecole Nationale Supérieure des Arts et Métiers (National School of Arts and Trade) in order to consider the performance of the « nidalu 60 » packaging and containers and can present on an indicative basis the temperature evolution curves for the transport of merchandise according to standard NF S99-700.

These isothermal containers are destined for the transport of chilled merchandise. **It is the responsibility of the user to define and validate his complete isothermal packaging system, with or without eutectic compounds, for the correct transport of his merchandise under the required conditions.**

The isothermal containers are put on a pallet or on honeycombed double sided adhesive cardboard blocks (not supplied).

The sizes are standard to facilitate logistics and can be loaded without having to palletise goods beforehand.



Measurements and packaging	1261 litres	832 litres	362 litres	179 litres
Exterior L x w x h mm	1200 x 800 x 1932	1200 x 800 x 1320	800 x 600 x 1320	800 x 600 x 720
<b>Interior L x w x h mm</b>	<b>1068 x 656 x 1800</b>	<b>1068 x 656 x 1188</b>	<b>668 x 456 x 1188</b>	<b>668 x 456 x 588</b>
Weight per unit kg	20	15	10	6,5
Quantity per pallet	4	5	5	6
Pallet L x w x h mm	1800 x 1200 x 1400	1200 x 1200 x 2010	1200 x 920 x 1400	1200 x 800 x 1250

**« The team at l'hexagone » is at your service for the manufacture of your tailor made packaging and containers.**