

# KNAUF INSULATION ULTRASPACE™ N

July 2023

## Optimal-performance vacuum insulation panel



## DESCRIPTION

**Knauf Insulation Ultraspace™ N** is built from newly developed very thin and long specially needled fibres, giving unique possibilities to reach optimal thermal conductivity ( $< 3.0 \text{ mW/mK}$ ).

It's designed to provide energy efficiency and boost the space efficiency of home appliances, temperature-controlled packaging, refrigerated transportation systems and any other products or applications that require low energy loss from heat transfer. The combination of carefully selected films will meet the requirements of each application whether opting for long life, optimal temperature conditions or puncture resistance.

## PERFORMANCE

### VIP specification

Optimal thermal conductivity  $\lambda \leq 3.0 \text{ mW/mK}$   
Low thickness 10 - 25 mm  
Density approx.  $210 - 240 \text{ kg/m}^3$

### Certified quality

Complies with RoHS Directive  
Complies with REACH Regulation  
RAL  
EUCEB

## BENEFITS

- ✓ Optimal thermal conductivity ( $\lambda < 3.0 \text{ mW/mK}$ ) ensures optimal energy efficiency and energy consumption
- ✓ Low insulation thickness (10–25 mm) to increase the volume capacity of applications where lack of insulation space is critical
- ✓ Short-term temperature exposure without pressure increase ( $140^\circ\text{C}$ , 30 min)
- ✓ Stable, long-term thermal performance
- ✓ Environmentally friendly insulation solution (recyclable, non-hazardous)

## APPLICATION

Due to optimal thermal conductivity and minimal thickness, vacuum-insulated panels are especially well suited to applications where optimal temperature conditions and efficient use of energy and space are required:

- Insulation of refrigerators and freezers, providing lower energy consumption and higher energy efficiency
- Vending machines
- Cold storage units

## STANDARD

Knauf Insulation Ultraspace™ N is manufactured in accordance with ISO 9001 Quality Management Systems, ISO 14001 Environmental Management Systems, ISO 50001 Energy Management Systems and ISO 45001 Occupational Health and Safety Management Systems as certified by TÜV Nord.

## CERTIFICATES



challenge.  
create.  
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## TECHNICAL PROPERTIES:

Characteristics	Symbol	Value	Unit
Density	$\rho$	210 - 240	kg/m <sup>3</sup>
Thermal conductivity	$\lambda$	$\leq 3.0$	mW/mK
Operating temperature	-	- 80 to +80	°C
Internal gas pressure	-	1	Pa
Specific heat capacity	$C_p$	0.84	kJ/kgK
Core material	Glass mineral fibre		
Film	Multi-layers metallized		

## STANDARD DIMENSIONS

**Thickness:** 10 – 25 mm

**Panel sizes:** 300 × 300 mm to 600 × 1,800 mm

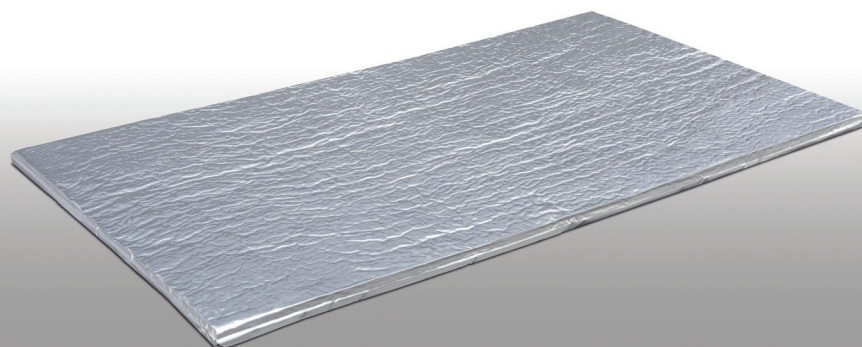
### Tolerances:

- Thickness +2/-1 mm
- Width/Length: +/-3mm

## HANDLING & STORAGE

Knauf Insulation Ultraspace™ N is packed on a wooden or plastic pallet. Products are covered with PE foil or wrapped twice with stretch foil, which is designed for short-term protection only. It is recommended to store the product either indoors, or under a cover and off the ground, for a maximum of up to 12 months.

The performance of Ultraspace™ N depends on the customer's manufacturing process. Individual customers must optimize and control their manufacturing process to ensure the material meets the requirements of their manufacturing process and their final product.



### Knauf Insulation, d.o.o.

Trata 32, 4220 Škofja Loka, Slovenia

Tel: +386 (0)4 5114 100

Fax: +386 (0)4 5114 319

E-mail: oem@knaufinsulation.com

For more info visit:

[www.oem.knaufinsulation.com](http://www.oem.knaufinsulation.com)

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