

# KNAUF INSULATION DAP NFS P

July 2023

Needled felts for self-cleaning, pyrolytic ovens.

## DESCRIPTION

### Knauf insulation DAP NEEDLED FELT P (DAP NFSP)

products are made of long mineral wool fibres specially needled to form a compact, dimensional-stable felt with high temperature stability and exceptional thermal insulation properties. Due to its highest insulation performance standards, it can be used for insulating self-cleaning pyrolytic ovens, where operating temperatures may reach as high as 700 °C and at the same time meet or even exceed energy efficiency Class A. Product dimensions, sections and facing options can all be adapted to customer requirements.

Owing to the unique fibre bonding process, the felts do not contain organic binders or process aids and therefore comply with LGA test for contaminants, valid for mineral fibres in cookers and ovens. With this special production process we are able to guarantee that no emissions of odorous and/or harmful substances are emitted during the use of ovens and cookers even at the highest temperatures.

Needled felts are tested for the presence of the restricted substances and comply to the RoHS directive and REACH regulation.



## PERFORMANCE

### Maximum service temperature

DAP NFS P has a maximum service temperature of 750 °C

### Thermal insulation

Optimal thermal insulation properties ensure ideal energy efficiency and energy consumption

### Certified quality

LGA Certified  
Complies with RoHS Directive  
Complies with REACH Regulation  
RAL  
EUCEB

## BENEFITS

- ✓ High temperature stability and resistance
- ✓ Thermal insulation properties ensure optimal energy efficiency and energy consumption
- ✓ Non-corrosive insulation material (AS Quality)
- ✓ Fire protection (European Class A1) - material melting point above 1000 °C
- ✓ Fire Hazard Classification FHC 0/0
- ✓ No organic binders
- ✓ Emission-free
- ✓ Custom forms and sections
- ✓ Can be laminated with aluminium foil or glass veil

## APPLICATION

Insulation of **self-cleaning, pyrolytic ovens** where operating temperatures may reach 750 °C, that meet or exceed energy Class A++/A+/A standards.

## STANDARD

**Technical properties of Knauf Insulation DAP NFS P are declared in accordance with EN 14303.**

Knauf Insulation DAP NFS P 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.  
care.

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## TECHNICAL PROPERTIES

Characteristics	Symbol	Value									Unit	Standard
Reaction to fire	-	Euroclass A1									-	EN 13501-1
Melting point	-	> 1000									°C	DIN 4102/T17
Maximum service temperature	ST(+)	750									°C	EN ISO 18097
Water soluble chloride ions	-	≤10									mg/kg	EN ISO 12624
Thermal conductivity in relation to temperature (ϑ/λ) EN 14303	T <sub>m</sub>	150	200	250	300	400	500	600	650	°C	EN 12667	
	λ	0.050	0.058	0.066	0.076	0.098	0.125	0.159	0.178	W/mK		
Weighted sound absorbtion coefficient	α <sub>w</sub>	0,5									-	DIN EN ISO 11654
Formaldehyde emissions at 350°	-	≤1,5									mg/kg	DIN ISO 16000-3
Fluoride emissions at 350 °C	-	≤ 0,3									mg/kg	EN ISO 10304-1
Release of MIC	-	< 0,005									mg/kg	ISO 17734-1
Surface burning chracteristics	CFC <sup>1</sup>	0									-	UL 723 ASTM E84
	FSI <sup>2</sup>	0									-	
	CSD <sup>3</sup>	0.0									-	
	SDI <sup>4</sup>	0									-	

<sup>1)</sup> CFS – Calculated Flame Spread

<sup>2)</sup> FSI – Flame Spread Index

<sup>3)</sup> CSD – Calculated Smoke Developed

<sup>4)</sup> SDI – Smoke Developed Index

## HANDLING & STORAGE

Knauf Insulation DAP NFS P is packed on a wooden or plastic pallet. Felts 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.

If the material becomes damp on location, ensure the moisture evaporates before placing the felts into a manufacturing process.

The performance of DAP NFS P 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.



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