

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-18/0889
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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Pure Floc, Pure Floc KD

Product family
to which the construction product belongs

Thermal insulation made of loose mineral wool

Manufacturer

URSA Deutschland GmbH
Carl-Friedrich-Benz-Straße 46-48
04509 Delitzsch
DEUTSCHLAND

Manufacturing plant

see Annex B

This European Technical Assessment
contains

8 pages including 2 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 040729-00-1201

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Specific Part

1 Technical description of the product

The European Technical Assessment applies to the thermal insulation product made of loose mineral wool with the designation:

"Pure Floc" und "Pure Floc KD"

The mineral fiber products are manufactured without binding agents.

"Pure Floc KD" is manufactured with an additional hydrophobic agent during the manufacturing process.

The European Technical Assessment has been issued for the products on the basis of agreed data/ information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The thermal insulation material serves for the production of insulation layers, not exposed to compression loads, by means of machine processing at the place of use. The machine processing is carried out in dry conditions.

The thermal insulation product "Pure Floc" can be used for the following intended uses:

- Exposed insulation on horizontal or moderately pitched areas ($\leq 10^\circ$) (e. g. on the ceiling or between beams)
- Space-filling insulation in closed cavities of external and interior walls of timber frame constructions and similar structures
- Insulation in closed cavities between rafters and timber beams as well as in cavities of corresponding structures

The thermal insulation product "Pure Floc KD" is usable as follows:

- Double wall masonry with core insulation (Cavity completely filled)

The performances given in Section 3 are only valid if the thermal insulation product is installed according to the manufacture's installation instructions, used in compliance with the specifications and conditions given in Annex A and if they are protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

The design value of the thermal conductivity shall be laid down according to relevant national provisions.

3 Performance of the product and references to the methods used for its assessment

For sampling, conditioning and testing the provisions of the EAD No. 040729-00-1201 "Thermal insulation made of loose mineral wool".

3.1 Mechanical resistance and stability (BWR 1)

Not applicable

3.2 Safety in case of fire (BWR 2)

| Essential characteristic | Performance |
|--|---|
| Reaction to fire | Class A1 In accordance with EC decision 96/603/EC |
| Organic content test acc. to EN 13820:2003 | ≤ 1,00 M.-% |
| Propensity to undergo continuous smouldering test acc. to EN 16733:2016 | Test passed – no continuous smouldering |

3.3 Hygiene, health and the environment (BWR 3)

Not applicable

3.4 Safety and accessibility in use (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Not applicable

3.6 Energy economy and heat retention (BWR 6)

| Essential characteristic | Performance |
|---|---|
| Thermal conductivity at mean reference temperature of 10 °C test acc. to EN 12667:2001 in accordance with EN 14064-1:2010 | Declared value for a moisture content of the insulation material at 23 °C and 50 % relative humidity: ¹ Pure Floc: $\lambda_{D(23,50)} = 0,036 \text{ W}/(\text{m} \cdot \text{K})^2$ $\lambda_{D(23,50)} = 0,034 \text{ W}/(\text{m} \cdot \text{K})^3$ Pure Floc KD: $\lambda_{D(23,50)} = 0,034 \text{ W}/(\text{m} \cdot \text{K})$ |
| Conversion of humidity acc. to EN ISO 10456:2007+AC:2009 moisture conversion factor (23 °C/50 % rel. humidity to 23 °C/ 80 % rel. humidity): | $F_m = 1,00$ |
| Short term water absorption ("Pure Floc KD") | $W_p \leq 1,0 \text{ kg}/\text{m}^2$ (WS acc. to EN 14064-1) |
| Long term water absorption | No performance assessed |
| Bulk density | |
| In case of free placing (exposed insulation) ("Pure Floc") | 20 kg/m ³ to 25 kg/m ³ |
| In case of use in closed cavities (space-filling) ("Pure Floc") | 30 kg/m ³ to 40 kg/m ³ |
| In case of use as core insulation ("Pure Floc KD") | 30 kg/m ³ to 40 kg/m ³ |

¹ The declared value is representative for at least 90 % of the production with a confidence level of 90 % and applies to the above-named density range. For the admissible deviation of an individual value of the thermal conductivity from the declared value the method described in EN 13172:2012, annex F, applies.

² Exposed insulation, density range: 20 kg/m³ to 25 kg/m³

³ Space-filling insulation, density range: 30 kg/m³ to 40 kg/m³

| Essential characteristic | Performance |
|--|--|
| Water repellency ("Pure Floc KD") water absorption after 4 h water absorption after 28 d | 0,5 kg/m ² 1,0 kg/m ² |
| Water vapour diffusion resistance coefficient | $\mu = 1$ |
| Settlement | |
| Settling under impact excitation in the case of free placing (e. g. on the ceiling or between beams) | $\leq 10 \%$ at a minimum bulk density of 20 kg/m ³ and a maximum thickness of 330 mm |
| Settling under vibration in wall cavity and between beams | SC 0 acc. to EN 15101-1:2013 at a minimum bulk density of 30 kg/m ³ and a maximum thickness of 240 mm |
| Settling under defined climatic conditions | No performance assessed |
| Airflow resistance ⁴ test acc. To EN 29053:1993, Method A | $\geq 10,0$ kPa·s/m ² at a minimum bulk density of 20 kg/m ³ $\geq 20,0$ kPa·s/m ² at a minimum bulk density of 30 kg/m ³ |

3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with the European Assessment Document EAD No. 040729-00-1201, the applicable European legal act is: 1999/91/EC.

The system to be applied is: 3

In addition, with regard to reaction to fire the applicable European legal act is: 1999/91/EC (in accordance with the decision 96/603/EC).

The system to be applied is: 4

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin 1 January 2019 by Deutsches Institut für Bautechnik

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beglaubigt:
Meyer

⁴ Also relevant in terms of BWR 5

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ANNEX A

The performances of the thermal insulation products given in Section 3 are valid if the following will be considered concerning installation and use:

- Densities at built-in stage:

| Area of application | Density [kg/m ³] |
|---|------------------------------|
| Exposed insulation on horizontal or moderately pitched areas ($\leq 10^\circ$) (e. g. on the ceiling or between beams) ("Pure Floc") | 20 – 25 |
| Space-filling insulation in closed cavities of external and interior walls of timber frame constructions and similar structures ("Pure Floc") | 30 – 40 |
| Insulation in closed cavities between rafters and timber beams as well as in cavities of corresponding structures ("Pure Floc") | 30 – 40 |
| Double wall masonry with core insulation (Cavity completely filled) ("Pure Floc KD") | 30 – 40 |

- The density is determined by calculation as a quotient from the mass of the material brought in and the full volume.
- The thermal insulation layer has a constant installation thickness taking account of the nominal thickness. For that purpose suitable height marks are arranged by the executing company in sufficient distances before the processing. The executing company check the installation thickness and the density.
- When calculating the thermal resistance of the construction elements, the nominal thickness of the thermal insulation layer is applied as follows:

| Processing of the insulation material | Nominal thickness |
|---|--|
| Exposed insulation on horizontal or moderately pitched areas ($\leq 10^\circ$) (e. g. on the ceiling or between beams) | installation thickness of the insulation material minus 10 % |
| Space-filling insulation in closed cavities of external and interior walls of timber frame constructions and similar structures | clear span of the filled cavity |
| Insulation in closed cavities between rafters and timber beams as well as in cavities of corresponding structures | clear span of the filled cavity |
| Double wall masonry with core insulation (Cavity completely filled) | clear span of the filled cavity |

- The requirements concerning ventilation openings and the ventilation section above the thermal insulation layer are considered.
- In case of installation on pitched or arched areas slipping of the thermal insulation product is prevented by suitable measures.
- In case of use as space-filling thermal insulation in closed cavities it is made sure by appropriate measures (e. g. control drillings) that the cavity is completely filled with the thermal insulation product.
- In case of installation as core insulation it is checked in advance that the facing wall is in a proper condition and has no moisture penetration. Cracks or imperfections in the masonry joints are to be repaired before installing the insulation.
- The thermal insulation products are only processed by companies stated in a list of the manufacturer which have adequate experience in installing the material. Concerning this matter the manufacturer has trained these companies.

- The executing company issue a certificate which contains the following information with reference to this European Technical Assessment for each application place:
 - Thermal insulation product made of loose mineral wool
 - trade names
 - executing company
 - building project and building component
 - date of installation
 - installation thickness

Pure Floc, Pure Floc KD

ANNEX B

Manufacturing plants

URSA BENELUX BVBA
Industriezone 7- Pitantiestraat 127
B- 8792 Desselgem
Belgium

URSA IBÉRICA AISLANTES, S.A.
Crt. Vila-Rodona, km 6,7
43810 – El Pla de Sta Maria
Tarragona-Spain