

Content

■ Basic information	1
■ LIFE CYCLE ASSESSMENT (LCA) - general rules applied	7
■ LIFE CYCLE ASSESSMENT (LCA) - RESULTS	9





SINIAT

PLASTERBOARDS

Basic information

This declaration is the type III Environmental Product Declaration (EPD) based on EN 15804:2012+A2:2019 and verified according to ISO 14025 by an external auditor.

Life cycle analysis (LCA): A1-A3, C2-C4 and D modules in accordance with EN 15804:2012+A2:2019 (Cradle to Gate with options)

The year of preparing the EPD: 2020

Product standard: EN 520+A1:2009

Service Life: 10 years

Declared unit: 1 m²

Reasons for performing LCA: B2B

Representativeness: Romanian product





MANUFACTURER

ETEX group is a manufacturer of construction products and systems dedicated for both internal and external applications across all construction sectors. Etex operates manufacturing, innovation and test centres around the world. Global and regional brands of Etex include Promat, Siniat, Durlock, Gyplac, Kalsi and Pladur.

Fig. 1. A view of the ETEX Building Performance S.A. production hall in Turceni (Romania).

PRODUCT DESCRIPTION AND APPLICATION

SINIAT plasterboard is a panel made of calcium sulfate dihydrate (gypsum) pressed between a facer and a backer. Plasterboard is also known as gypsum board, drywall, wallboard or wall panels. It is used indoors for dry wall finishings, the construction of partition walls, fixed or suspended ceilings lining and shaft walls. Plasterboards systems have become an alternative to traditional finishes made with masonry, plaster and masonry.

Table 1. Composition of **SINIAT plasterboards**

Component	Percentage in mass (%)
Stucco (base on FGD)	92.7 - 95.9
Starch	0.1 - 0.7
Fibre glass	0 - 4.6
Vermiculite	0 - 3.4
Paper	2.5 - 5.9
Additives	< 1.3

Table 2. Characteristic of **SINIAT plasterboards**

Product	Thickness	Classification	Available sizes	Colours
NIDA Standard	9.5 mm; 12.5 mm; 15 mm; 18 mm	class A	1200x2000 1200x2500 1200x2600 1200x2700 1200x2800 1200x3000	ivory
NIDA Smart	12.5 mm	class A		ivory
NIDA Flam	12.5 mm; 15 mm; 18 mm	class DF		pink
NIDA HydroFlam	12.5 mm; 15 mm	class DFH2		green
NIDA Flam Plus	12.5 mm	class DFR		pink
NIDA Acoustic	12.5 mm	class F		blue
NIDA Hydro	9.5 mm; 12.5 mm; 15 mm	class AH2		green
NIDA Flex	6.5 mm	class A		ivory

MANUFACTURER

Siniat Sp. z o.o. is Polish manufacturer of construction products which belongs to Etex Group. Siniat Sp. z o.o. specializes in the manufacturing of gypsum plasterboards and gypsum-based products. The company offers its clients full drywall systems such as partition wall, suspended ceilings and wall claddings.

Fig. 2. A view of the Siniat Sp. z o.o. production hall in Pińczów (Poland).



PRODUCT DESCRIPTION AND APPLICATION

SINIAT plasterboard is a construction product with gypsum core usually pressed between paper cladding. The composition and characteristic of NIDA gypsum plasterboards manufactured by Siniat Sp. z o.o. are presented in Table 1 and Table 2 respectively.

Table 1. Composition of **SINIAT plasterboards**

Component	Percentage in mass (%)
Stucco (base on FGD)	90.0 - 95.0
Starch	0.3
Fibre glass	0 - 0.4
Vermiculite	0 - 2.0
Paper	0.5
Additives	< 1.5

Table 2. Characteristic of **SINIAT plasterboards**

Product	Thickness	Classification	Available sizes	Colours
NIDA LaDura	12,5 mm; 15 mm	DEFH1IR	1200x2600 1250x2600	ivory

Building a
green city

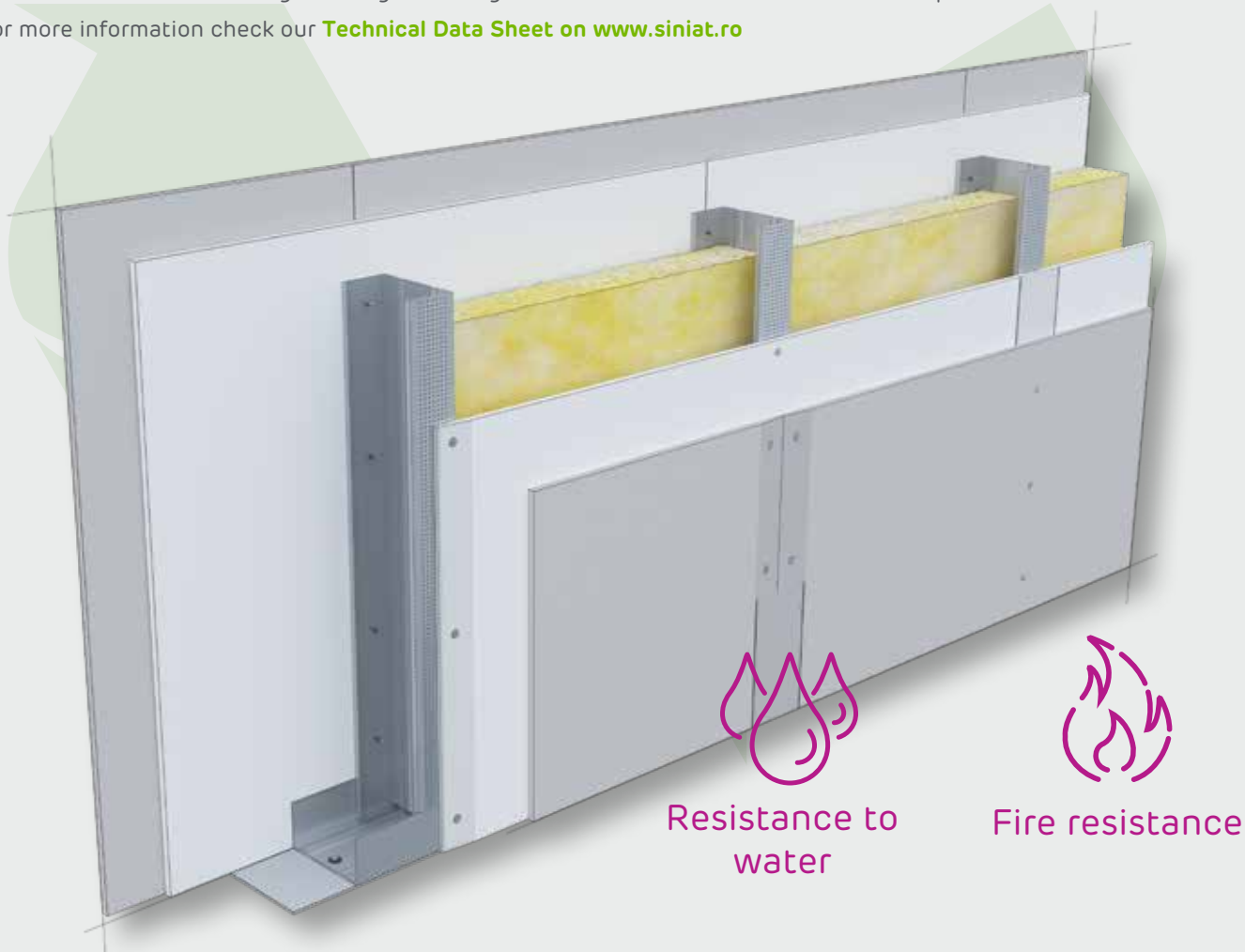


APPLICATION

SINIAT gypsum plasterboards are construction products intended for interior use. Plasterboard is also known as gypsum board, drywall, wallboard or wall panels. It is usually used indoors for dry wall finishing, the construction of partition walls, fixed or suspended ceilings and tiles. Cardboard gypsum systems have become an alternative to traditional finishes made with masonry, plaster and masonry. Application of specific types of the NIDA gypsum plasterboards is described below.

- **Standard plasterboards type A** according to PN-EN 520 - the most popular, recommended for rooms where humidity does not exceed 70%. If the water vapor concentration exceeds this level, it can swell and warp. They are mainly used for the construction of partition walls, wall and ceiling casings on the supporting structure and as dry plaster.
- **Waterproof plasterboards type H2** according to PN-EN 520 - suitable for rooms exposed periodically to increased humidity, up to 85% (e.g. bathroom). Waterproof boards are used for building partition walls, wall and ceiling casings on the supporting structure and as dry plaster.
- **Fireproof plasterboards type F and type DF** according to PN-EN 520 - intended for use in rooms with high fire protection requirements. The choice of a fire resistant plasterboard type depends on the required fire resistance class for the partition (possible solutions from EI30 to EI120). Such plasterboards are used for the construction of partition walls, suspended ceilings and for load-bearing housings of wooden structures.
- **Waterproof plasterboards with fireproofing properties type DFH2** according to PN-EN 520 - suitable for rooms where it is recommended to increase resistance to fire and moisture. They are used for the construction of partition walls, suspended ceilings and casings of installation risers.
- **Plasterboards type DEFH1IR** according to PN-EN 520 - intended for rooms where they will be exposed to impact. They are used as wall and ceiling coverings. Floating floors can also be made based on these panels.

For more information check our [Technical Data Sheet on www.siniat.ro](http://www.siniat.ro)



LIFE CYCLE ASSESSMENT (LCA) - general rules applied

Allocation

The allocation rules used for this EPD are based on general **ITB PCR A**. Production of the NIDA gypsum plasterboards is a line process in one factory of ETEX Building Performance S.A. in Turceni (Romania). Allocation was done on product mass basis. All impacts from raw materials extraction are allocated in A1 module of the LCA. 100% of impacts from line production of ETEX Building Performance S.A. were inventoried and 100% were allocated to the NIDA gypsum plasterboards production. Utilization of packaging material was taken into consideration. Module A2 includes transport of raw materials such as gypsum (natural and FGD), papers, additives and packaging materials from their suppliers to ETEX Building Performance S.A. in Turceni. Municipal wastes of factory were allocated to module A3. Energy supply was inventoried for whole factory and 100% was allocated to the NIDA gypsum plasterboards production. Emissions in the factory are measured and were allocated to module A3.

System limits

The life cycle analysis of the declared products covers **"Product Stage", A1-A3, C2-C4 and D modules** (Cradle to Gate with options) in accordance with **EN 15804:2012+A2:2019 and ITB PCR A**. The details of systems limits are provided in product technical report. All materials and energy consumption inventoried in factory were included in calculation. In the assessment, all significant parameters from gathered production data are considered; i.e. all material used per formulation, utilized thermal energy, internal fuel and electric power consumption, direct production waste, and all available emission measurements. It can be assumed that the total sum of omitted processes does not exceed 5% of all impact categories. In accordance with **EN 15804:2012+A2:2019**, machines and facilities (capital goods) required for and during production are excluded, as is transportation of employees.

A1 and A2 Modules: Raw materials supply and transport

Natural gypsum and synthetic gypsum (FGD) come from local suppliers while additives, papers and packaging materials come from foreign suppliers. Data on transport of the different products to the manufacturing plants is collected and modelled for factory by assessor. Means of transport include trucks. For calculation purposes Romanian and European fuel averages are applied.

A3: Production

The technological process for obtaining the plaster is based on the dehydration of synthetic gypsum (FGD). The dehydration of the gypsum is done in the basic equipment, rotary kiln which used steam power passed from pipes. The plaster resulting from dehydration is transported to the grinding stage and then transported to storage silos. The plaster (stucco), used as a raw material for the production of gypsum board is fed in the mixing station from the storage silo with the help of conveyor weighed on the weighing tape. The raw materials used are purchased from Romania, the countries of the European Union and Ukraine. The technological scheme for the production of plasterboards: feeding - dosing of basic raw materials - dosing of additives - mixing - molding plate - drying - stacking - packing / palletizing - storage. The production process of NIDA gypsum plasterboards is presented in Fig. 2.

PLASTERBOARD MANUFACTURE

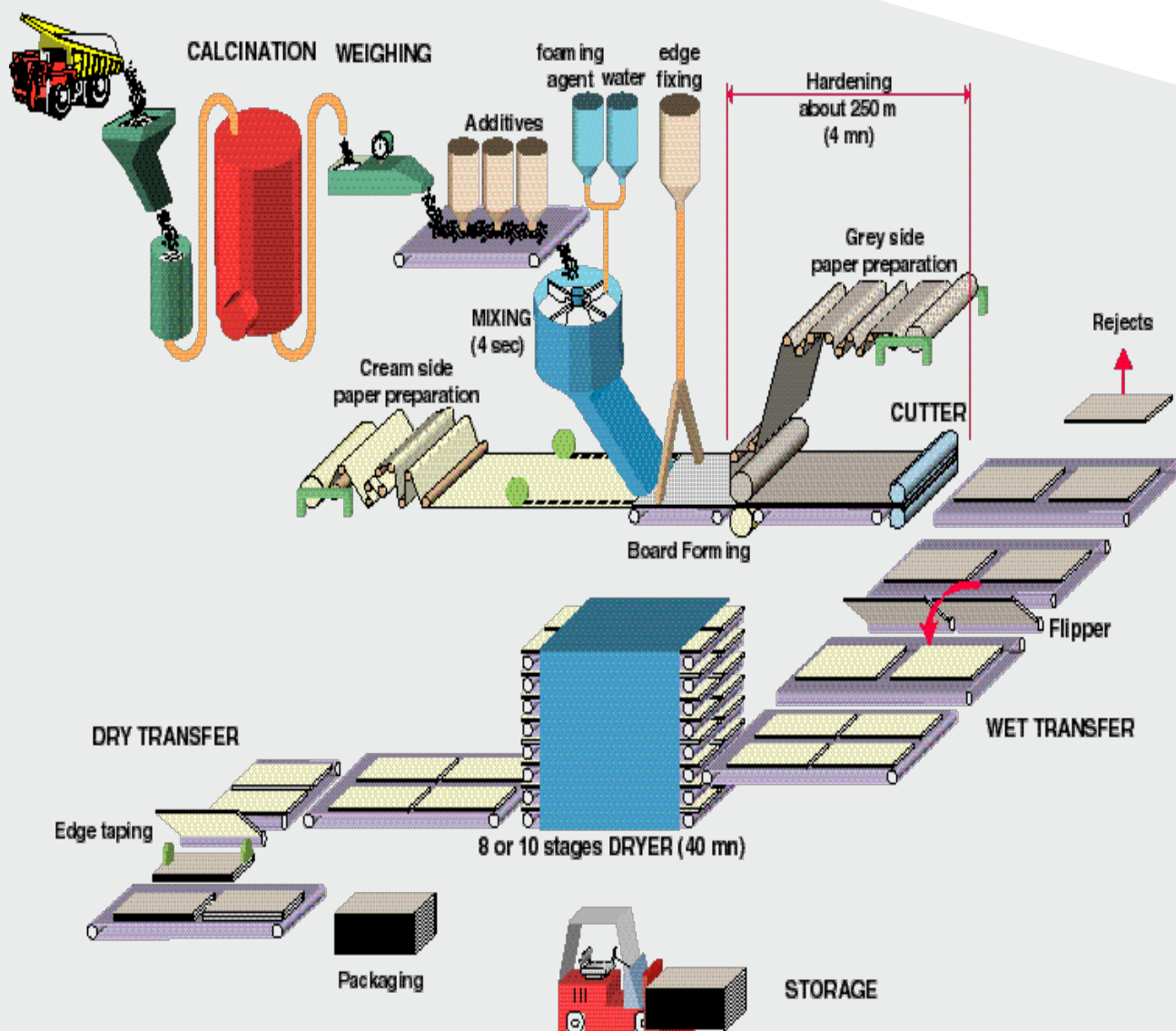


Fig. 2. A scheme of manufacturing of the NIDA gypsum plasterboards by ETEX Building Performance S.A. in Turceni (Romania).

End of life scenarios

It is assumed that at the end of life 50% of the NIDA plasterboards is collected and forwarded to recycling plant (C3) located 200 km away from a demolition site. The remaining 50% of the plasterboards is collected in the form of mixed construction wastes and transported to landfill (C4) at the distance of 50 km. Transportation with < 16 t loaded lorry with 85% capacity utilization and fuel consumption of 25 L per 100 km was included in the calculations (C2). Module D describes recycling potential expressed as net impact.

Table 4. End of life scenario for the **NIDA gypsum plasterboards**

Material	Material recovery	Recycling	Landfilling
NIDA gypsum plasterboards	100 %	50 %	50 %

Data collection period

The data for manufacture of the declared products refer to period between 01.01.2018 - 31.12.2018 (1 year). The life cycle assessments were prepared for Romania as reference area.

Data quality

The values determined to calculate the LCA originate from verified ETEX Building Performance S.A. inventory data.

Assumptions and estimates

The impacts of the representative the NIDA gypsum plasterboards were aggregated using weighted average. Impacts were inventoried and calculated for all products of the NIDA gypsum plasterboards.

Calculation rules

LCA was done in accordance with ITB PCR A document.

Databases

The data for the processes come from the following databases: Ecoinvent v.3.6, specific EPDs, ELCD, ÖKOBAUDAT, Ullmann's, ITB-Data. Specific data quality analysis was a part of external ISO 14001 audit. Characterization factors are CML ver. 4.2 based on EN 15804.

LIFE CYCLE ASSESSMENT (LCA) - RESULTS

Declared unit

The declaration refers to declared unit (DU) - 1 m² of the NIDA gypsum plasterboards manufactured by ETEX Building Performance S.A.

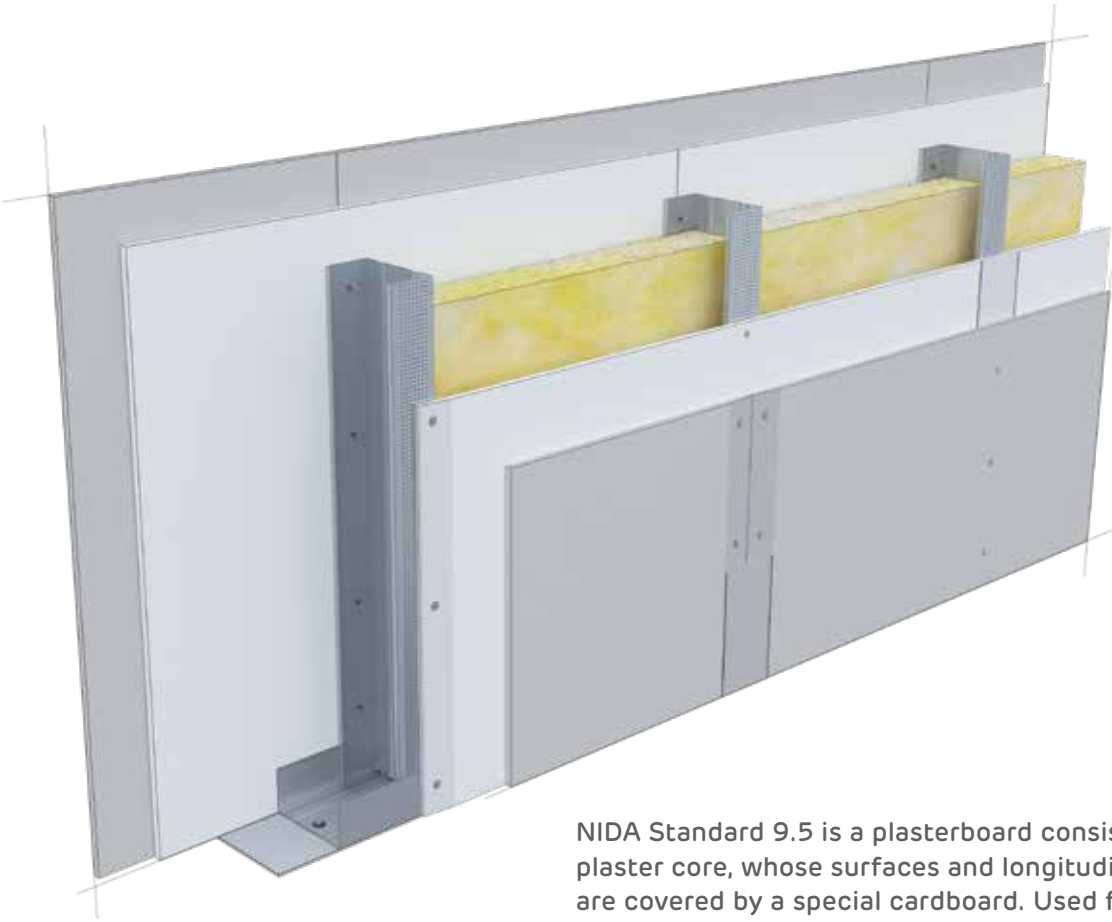
Table 5. System boundaries for the environmental characteristic of the **NIDA gypsum plasterboards** manufactured by ETEX Building Performance S.A.

Environmental assessment information (MA - Module assessed, MNA - Module not assessed, INA - Indicator Not Assessed)																
Product stage			Construction process		Use stage							End of life				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
MA	MA	MA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MND	MA	MA	MA	MA



NIDA Standard 9,5
Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.37E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	9.08E-06	1.09E-06	-1.43E-06
Non-hazardous waste disposed	kg	1.25E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	9.83E+00	3.16E+00	-3.10E+00
Radioactive waste disposed	kg	5.98E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.22E-05	4.05E-06	-5.50E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



NIDA Standard 9.5 is a plasterboard consisting of a plaster core, whose surfaces and longitudinal edges are covered by a special cardboard. Used for columns, curved walls or arches with a minimum radius of 1m; additional cladding of existing walls or ceilings; corrections to existing systems; drywall systems without special requirements for fire or moisture resistance.



NIDA Standard 12,5 Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.56E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.06E-05	1.27E-06	-1.64E-06
Non-hazardous waste disposed	kg	1.26E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.15E+01	3.70E+00	-3.56E+00
Radioactive waste disposed	kg	9.14E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.60E-05	4.74E-06	-6.30E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



NIDA Standard 12.5 is a plasterboard made with fiberglass reinforced plaster core, whose surfaces and longitudinal edges are covered by a special cardboard. The upper face is white. Used in partitioning systems, existing wall cladding, ceilings, systems without special requirements located in spaces with maximum 60% humidity.



NIDA Smart 12,5
Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.35E-05	1.61E-06	-2.10E-06
Non-hazardous waste disposed	kg	1.26E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.46E+01	4.69E+00	-4.54E+00
Radioactive waste disposed	kg	9.82E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	3.29E-05	6.00E-06	-8.04E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



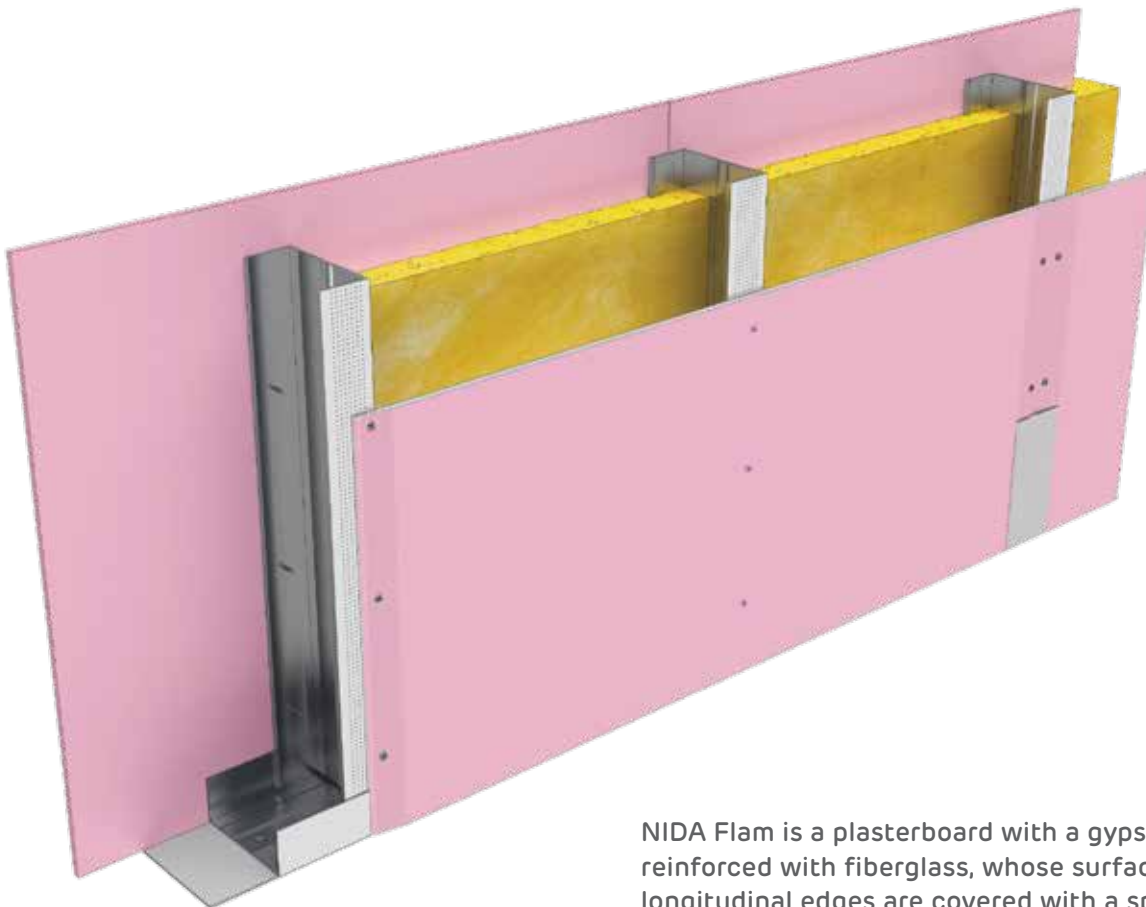
NIDA Smart 9.5 mm is a lightweight gypsum board with additive, which ensures superior maneuverability and increased execution speed. The longitudinal surfaces and edges are covered with a special cardboard



NIDA Flam 12,5

Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.93E-06	-2.53E-06	3.73E-04
Non-hazardous waste disposed	kg	1.23E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	5.62E+00	-5.48E+00	7.42E-02
Radioactive waste disposed	kg	1.30E-05	-	-	-	-	-	-	-	-	-	-	0.00E+00	7.20E-06	-9.71E-06	3.44E-05
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	3.43E-07
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



NIDA Flam is a plasterboard with a gypsum core reinforced with fiberglass, whose surfaces and longitudinal edges are covered with a special multilayer cardboard. The core of the board is enhanced to withstand high temperatures.



NIDA Flam 15

Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.90E-05	2.27E-06	-2.99E-06
Non-hazardous waste disposed	kg	1.24E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	2.06E+01	6.62E+00	-6.48E+00
Radioactive waste disposed	kg	3.44E-05	-	-	-	-	-	-	-	-	-	-	0.00E+00	4.64E-05	8.48E-06	-1.15E-05
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA

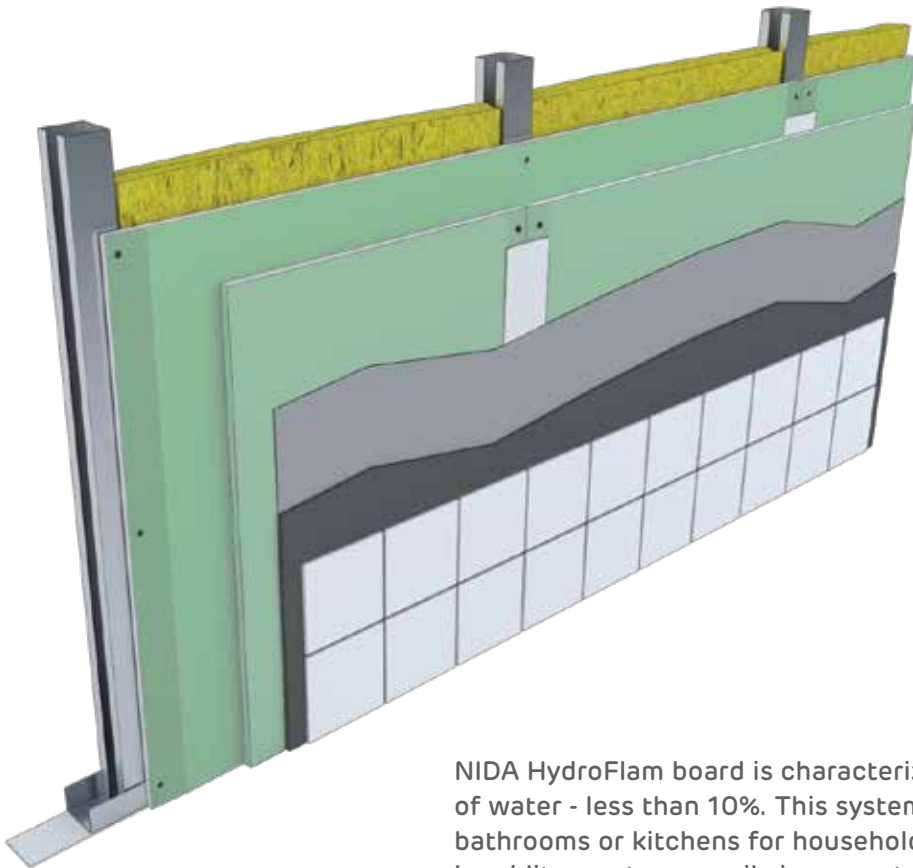


NIDA Flam 15 mm is a plasterboard with a gypsum core reinforced with fiberglass, whose surfaces and longitudinal edges are covered with a special multilayer cardboard. The core of the board is enhanced to withstand high temperatures. The color of the upper face is pink. NIDA Flam boards are part of NIDA System (EI30-EI180) plasterboard systems with high fire resistance, and are used in spaces with fire-protection requirements (walls, claddings, ceilings).



NIDA Hydroflam 12,5
Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.61E-05	1.93E-06	-2.53E-06
Non-hazardous waste disposed	kg	1.26E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.75E+01	5.62E+00	-5.48E+00
Radioactive waste disposed	kg	1.88E-04	-	-	-	-	-	-	-	-	-	-	0.00E+00	3.94E-05	7.20E-06	-9.70E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA

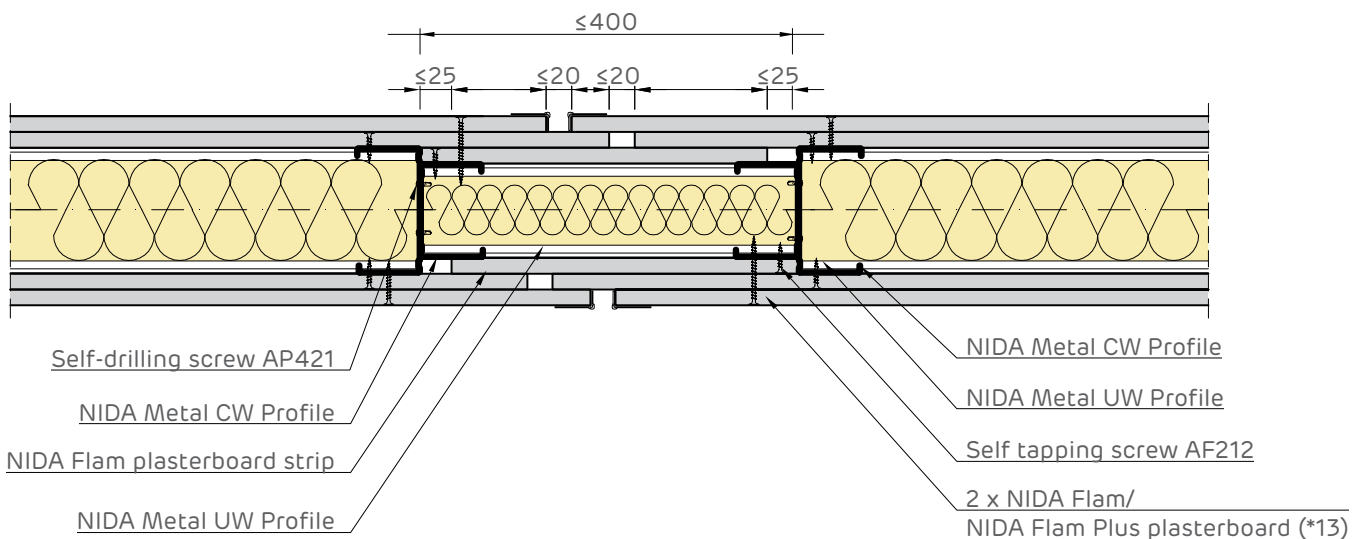


NIDA HydroFlam board is characterized by low absorption of water - less than 10%. This system can be used in bathrooms or kitchens for household use, where the humidity can temporarily increase to 80% (up to 10 hours), in case of fire resistance requirements. NIDA HydroFlam board have increased resistance to high temperatures.



NIDA Flam Plus 12,5 Environmental aspects on resource use

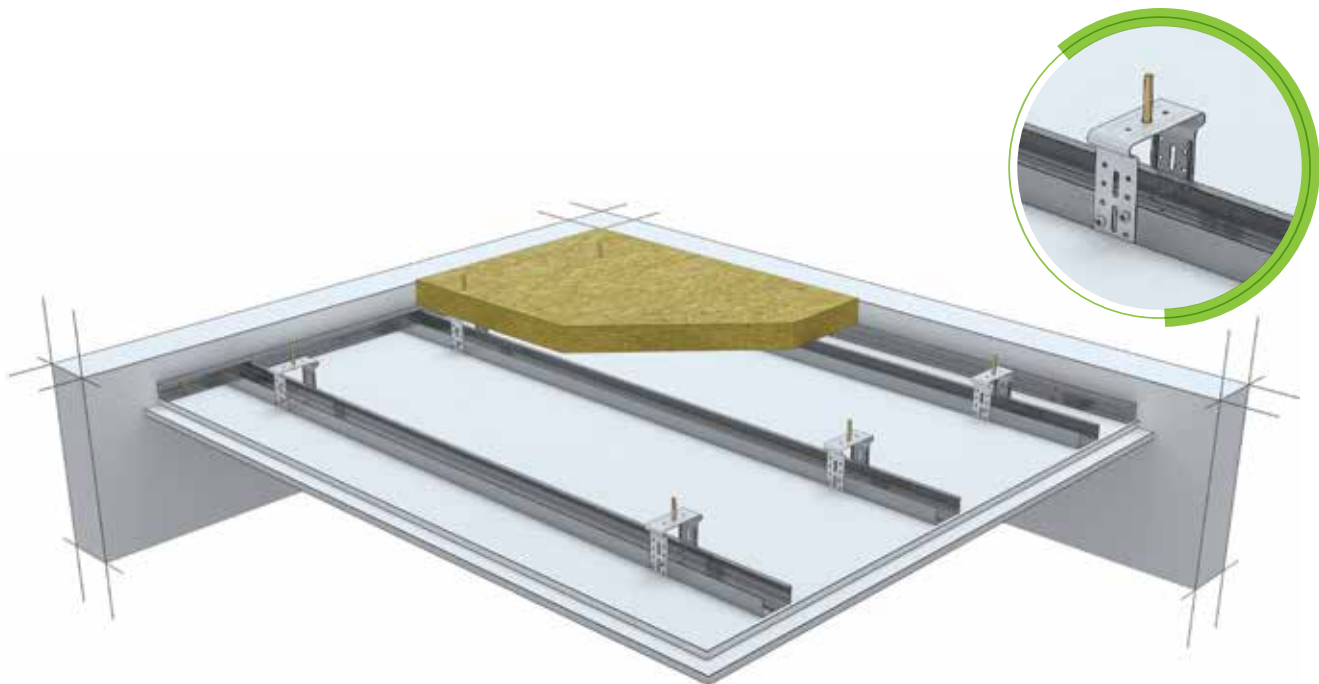
		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.51E-05	1.81E-06	-2.36E-06
Non-hazardous waste disposed	kg	1.22E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.64E+01	5.27E+00	-5.12E+00
Radioactive waste disposed	kg	1.64E-05	-	-	-	-	-	-	-	-	-	-	0.00E+00	3.70E-05	6.75E-06	-9.07E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA





NIDA Acoustic 12,5 Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.57E-05	1.88E-06	-2.46E-06
Non-hazardous waste disposed	kg	1.21E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.70E+01	5.47E+00	-5.32E+00
Radioactive waste disposed	kg	9.37E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	3.84E-05	7.00E-06	-9.43E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



NIDA Acoustic 12,5 mm is a plasterboard with a high density gypsum core, reinforced with fiberglass, whose surfaces and longitudinal edges are covered with a special multilayer cardboard.

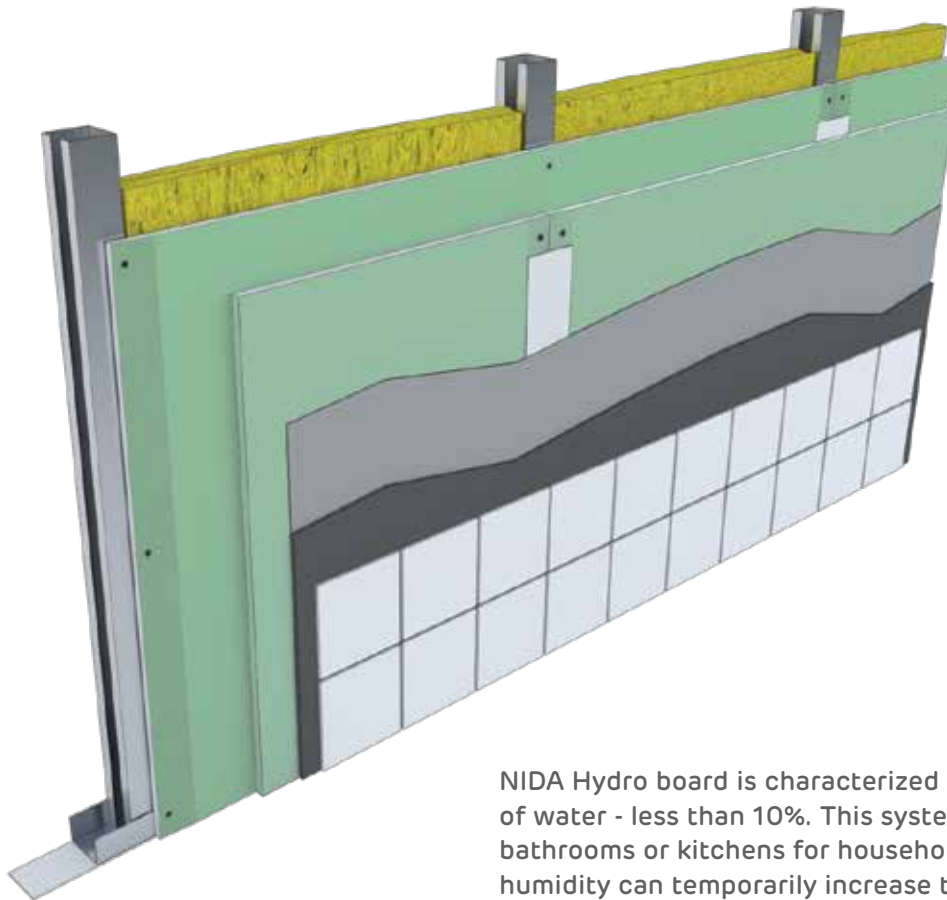
NIDA Acoustic 12,5 mm is mainly intended for partitioning systems with high acoustic performance requirements, and is recommended for the following uses:

- walls, ceilings, lining of existing walls
- in residential constructions: ideal for the creation of quiet and healthy living spaces
- in the commercial sector: ideal for constructions with strict insulation and soundproofing requirements: hospitals, hotels, offices, cinema halls etc;
- in renovation works: ideal for improving the acoustic performance of existing walls.



NIDA Hydro 9,5
Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.56E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.01E-05	1.20E-06	-1.55E-06
Non-hazardous waste disposed	kg	1.29E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.09E+01	3.50E+00	-3.36E+00
Radioactive waste disposed	kg	1.84E-04	-	-	-	-	-	-	-	-	-	-	0.00E+00	2.46E-05	4.49E-06	-5.95E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA

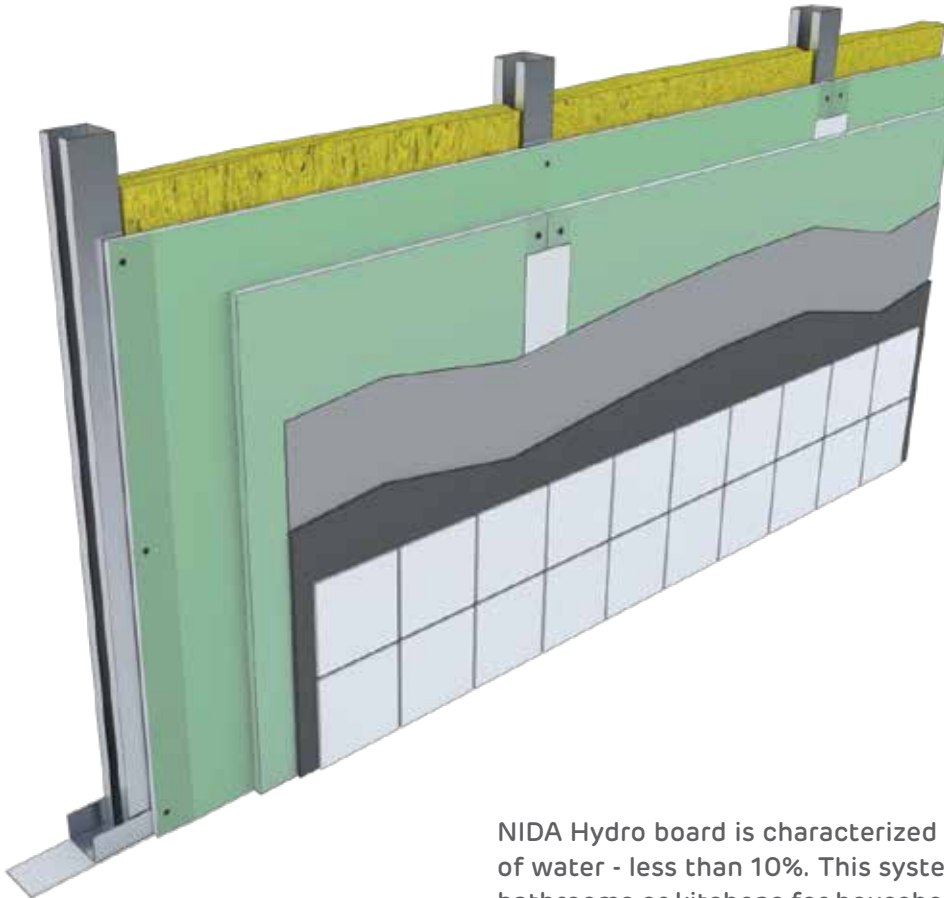


NIDA Hydro board is characterized by low absorption of water - less than 10%. This system can be used in bathrooms or kitchens for household use, where the humidity can temporarily increase to 80% (up to 10 hours).



NIDA Hydro 12,5
Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.58E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	1.25E-05	1.50E-06	-1.94E-06
Non-hazardous waste disposed	kg	1.29E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	1.36E+01	4.36E+00	-4.21E+00
Radioactive waste disposed	kg	1.66E-04	-	-	-	-	-	-	-	-	-	-	0.00E+00	3.06E-05	5.59E-06	-7.46E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



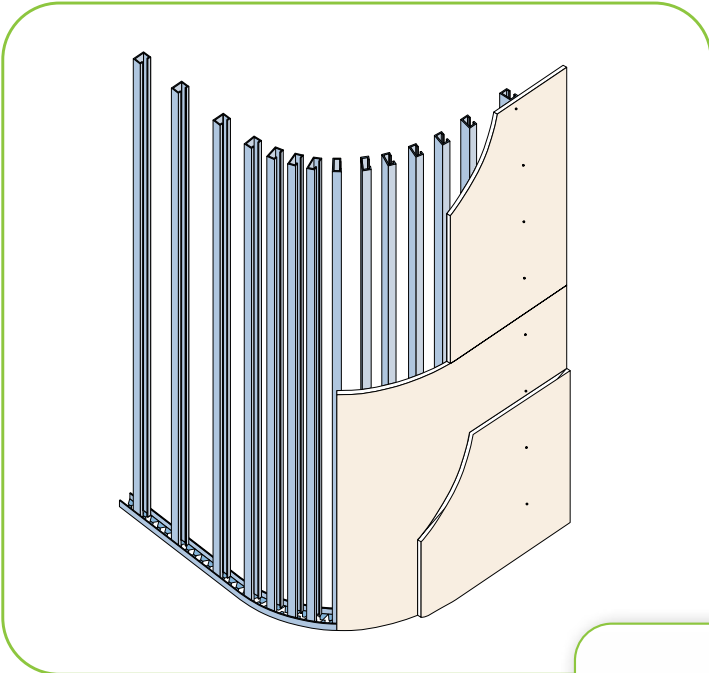
NIDA Hydro board is characterized by low absorption of water - less than 10%. This system can be used in bathrooms or kitchens for household use, where the humidity can temporarily increase to 80% (up to 10 hours).



NIDA Flex 6,5

Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.56E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	7.82E-06	9.36E-07	-1.19E-06
Non-hazardous waste disposed	kg	1.20E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	8.47E+00	2.73E+00	-2.58E+00
Radioactive waste disposed	kg	8.78E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.91E-05	3.49E-06	-4.56E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA



- NIDA Flex 6.5 mm is intended for:
- making columns, curved walls, arches, domes with a minimum radius of 30 cm
 - additional cladding of existing walls or ceilings
 - corrections to existing systems
 - plasterboard systems without special fire resistance requirements in place
 - in spaces with a maximum of 60% intermittent relative humidity.





NIDA LaDura 12,5
Environmental aspects on resource use

		Raw material supply, Transport, Manufacturing	Transport to construction site	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse -recovery + recycling potential
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.56E-03	-	-	-	-	-	-	-	-	-	-	3.62E-08	7.82E-06	9.36E-07	-1.19E-06
Non-hazardous waste disposed	kg	1.20E+00	-	-	-	-	-	-	-	-	-	-	3.36E-05	8.47E+00	2.73E+00	-2.58E+00
Radioactive waste disposed	kg	8.78E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	1.91E-05	3.49E-06	-4.56E-06
Components for re-use	kg	5.15E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.95E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recover	kg	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ per energy carrier	-	-	-	-	-	-	-	-	-	-	-	INA	INA	INA	INA

Developed especially for applications with intense and extreme stress, the board LaDura high density meets the most demanding technical requirements: fire protection; high acoustic level; resistance to moisture; shear strength; tear resistance; impact resistance



Disclaimer

The data and parameters contained by the present leaflet are only referring to products manufactured by Etex Building Performance SA and they are in line with the Romanian legal requirements and product characteristics at the date of its issuance 24.02.2020. Please be informed that the information above is not applicable to any similar products. Furthermore Etex Building Performance SA cannot be held liable for any inadvertencies due to subsequent changes in legislation, product's requirements or environmental impact being identified.

