

COBERLAN
N50 B50

DOP 20 DOP 22

MW - EN 13162 - T5 - WS

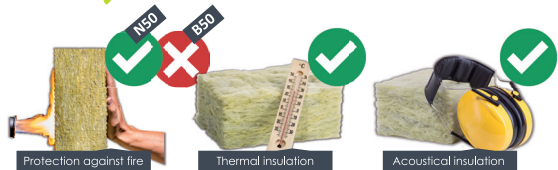
**RI
SE**

Research Institutes
of Sweden



TERMOLAN

ISOLAMENTOS TERMO-ACÚSTICOS, S.A.



DEFINITION:

Rigid and high density slabs of uniform thickness made of stone wool crimped fibres bonded with synthetic binder, without facing (COBERLAN N50) or impregnated with bitumen (COBERLAN B50).

APPLICATIONS:

Thermal and acoustic insulation solutions recommended for inaccessible flat roofs (steel decking and concrete) specially designed to function as a waterproofing support. Product not recommended for application of solar panel systems.

BENEFITS:

- Easy and quick application;
- High insulation performances;
- Excellent mechanical behaviour:
 - High compressive traction strength resistance;
 - Very good perpendicular traction strength behaviour;
 - High resistance to rupture (excellent support for steel profiles with big gaps);
- Fire safety;
- Excellent water behaviour;
- Inert product respecting the environment (CFC and HCFC free).

PRESENTATION:

Slabs. Options:

THICKNESS (mm) [NP EN 823]	DIMENSIONS (mm) [NP EN 822]
40 to 140	1200×1000

Tolerances:

THICKNESS (CLASS T5): -1 % OR -1 mm ^{a)} TO +3 mm

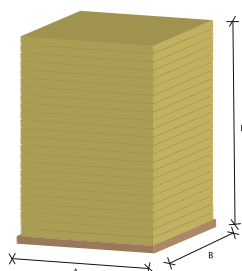
LENGTH: ±2 %

WIDTH: ±1.5 %

^{a)} Is valid the greatest numerical tolerance

PACKAGING:

Slabs over pallets packed with retractile plastic. Geometry (A×B×H):



PHYSICAL PROPERTIES OF MATERIALS

NOMINAL DENSITY

≈ 150 kg/m³

THERMAL RESISTANCE, R_D

EN 12667
EN 12939

THICKNESS (mm)	40	50	60	70	80	90	100
R_D (m ² .K/W)	1.05	1.35	1.55	1.80	2.10	2.35	2.60
THICKNESS (mm)	110	120	130	140			
R_D (m ² .K/W)	2.85	3.15	3.40	3.65			

THERMAL CONDUCTIVITY, λ_D

EN 12667
EN 12939

Declared value: $\lambda_D = 0.037$ W/m.K (for thickness between 40 mm and 50 mm)

Declared value: $\lambda_D = 0.038$ W/m.K (for thickness between 60 mm and 140 mm)

FIRE REACTION

EN 13501-1
ISO 1182

COBERLAN N50 Incombustible - **EUROCLASS A1**

COBERLAN B50 Not determined - **NPD**

WATER ABSORPTION

NP EN 1609

$WS \leq 1.00$ kg/m²



PHYSICAL PROPERTIES OF MATERIALS

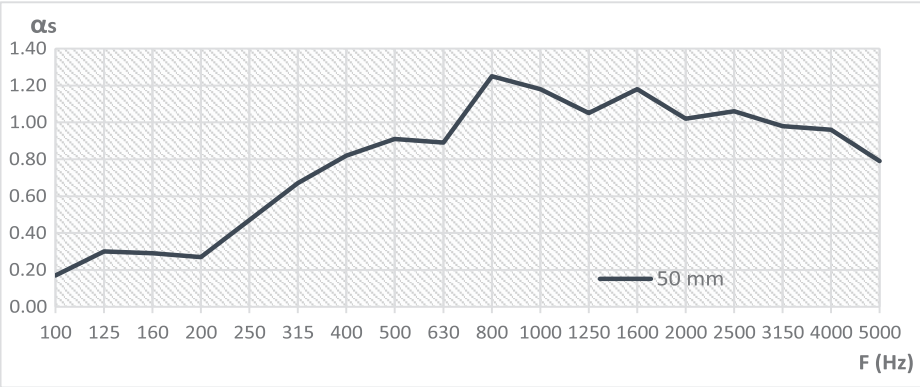
WATER VAPOUR DIFFUSION FACTOR

EN 12086

$\mu = 1$

ACOUSTICAL ABSORPTION COEFFICIENT, α_s

THICKNESS 50 mm	F (Hz)	100	125	160	200	250	315	400	500	630
	α_s	0.17	0.30	0.29	0.27	0.47	0.67	0.82	0.91	0.89
	F (Hz)	800	1000	1250	1600	2000	2500	3150	4000	5000
	α_s	1.25	1.18	1.05	1.18	1.02	1.06	0.98	0.96	0.79



EQUIVALENT ABSORPTION COEFFICIENT, α_w

EN ISO 11654

$\alpha_w = 0.75$ (MH) CLASS C

OTHER PROPERTIES

SQUARENESS [NP EN 824]	Deviation length / width < 5 mm/m
FLATNESS [NP EN 825]	Deviation ≤ 6 mm
DIMENSIONAL STABILITY, $\Delta\epsilon$ [NP EN 1604]	23 °C / 90% HR: the relative deviation (length and width) doesn't exceed 0.0%
TENSILE STRENGTH PERPENDICULAR TO FACES [NP EN 1607]	≥ 7.5 kPa
COMPRESSIVE STRENGTH, σ_{10} [NP EN 826]	≥ 50 kPa
POINT LOAD [EN 12430]	≥ 450 N

