ARCCEN
MINERAL BUILDING SYSTEMS

ARCONLITE
+ I-FOAM

SYSTEM OVERVIEW

Integrated mineral building systems for precast construction

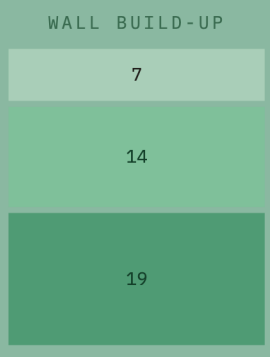
Arconlite structural lightweight concrete and i-Foam mineral insulation combine to make concrete elements lighter, thinner, fire-safe and easier to specify as a complete system.

30–50%

LOWER WEIGHT POTENTIAL

Integrated mineral wall and floor systems for precast, modular and off-site construction.

CLC + I-FOAM PRODUCTS



THE SYSTEM

Lighter, thinner mineral precast assemblies

Arccen's strongest proposition is not a single material. It is a concrete-based wall and floor system where structural concrete and insulation work together.

I-FOAM + ARCONLITE DOUBLE WALL

INTEGRATED MINERAL WALL SYSTEM

Arconlite facing	7 cm
i-Foam insulation core	14 cm
Arconlite load-bearing	19 cm

OUTSIDE — **30 cm total** — INSIDE

30 cm
WALL DEPTH
vs 35 cm traditional

230 kg/m²
WALL WEIGHT
vs ~500 kg/m²

95%
RECYCLABLE
mineral material base

A1
MINERAL FIRE STORY
i-Foam vs EPS / PIR / PUR

POSITIONING PRINCIPLE

The conversation should start with the building element: lower dead load, mineral insulation, thinner wall build-up and simpler system performance.

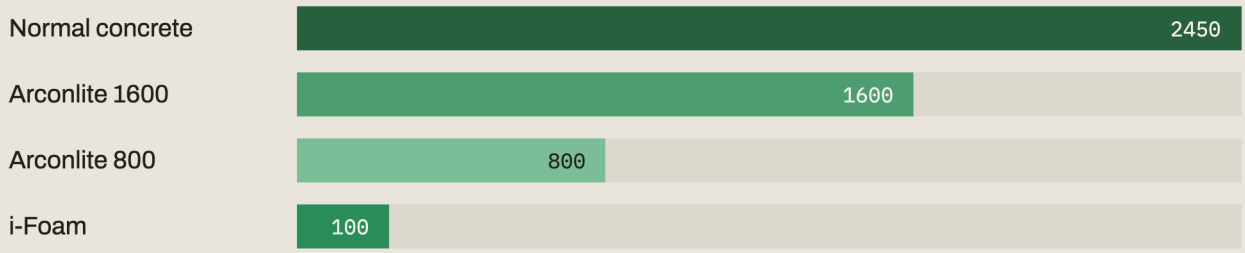
ARCONLITE + I-FOAM WALL

ARCONLITE

Structural lightweight concrete with familiar design logic

Arconlite replaces the non-load-bearing outer leaf with a lower-density concrete, reducing weight while keeping design logic familiar and making the building envelope more efficient.

DENSITY COMPARISON · KG/M³



DESIGN LOGIC

Same strength target
designed to normal concrete strength

↓

Lower density
less permanent action

↓

Lower demand
moments, shear, foundations

WHAT LOWER DEAD LOAD CAN UNLOCK

Transport	lighter elements can reduce haulage and lifting burden
Cranes	lower lifting loads widen the range of install options
Rebar	examples show reinforcement reductions in walls and floors
Foundations	lower permanent actions can reduce foundation demand
Multi-storey	cumulative dead-load savings improve structural economics

I-FOAM

Cementitious mineral insulation that pours and sets

i-Foam gives the system its non-combustible insulation core, replacing oil-based insulation layers with a mineral alternative.

CERTIFIED ETA TESTING · ETA-25/1074

I-FOAM AS AN INSULATION CORE

THE RESULTS CONFIRM

0.040	A1	5.36	0.86
W/MK LAMBDA mean at 100 kg/m³	NON-COMBUSTIBLE under EN 13501-1	M VALUE vapour-open diffusion	KG/M² UPTAKE short-term water absorption

WHERE IT FITS

Precast inserts
factory-poured insulation inside walls, panels and modular elements

Cavity filling
mineral fill where fire and vapour behaviour matter

Acoustic layers
sound-absorbing filler or acoustic layer in suitable assemblies

Retrofit pumping
portable foaming equipment creates a later retrofit opportunity

PRECAST VALUE

The knock-on economics are the story

A lighter concrete element is not only a material substitution. It can change handling, transport, lifting, structural frame loads and site installation.

ARCONLITE VS NORMAL CONCRETE — COST INSIGHTS (TRANSPORT / WALL)

ARCCEN MINERAL SYSTEM Arconlite + i-Foam		TRADITIONAL SANDWICH WALL concrete + board insulation	
Wall depth	30 cm	Wall depth	35 cm
Weight	230 kg/m²	Weight	500 kg/m²
Grey energy	0.4 GJ/m²	Grey energy	0.8 GJ/m²
Recyclable	95%	Recyclable	50%
CO_2 / m²	40–50 kg	CO_2 / m²	55–65 kg

Transport	lighter panels reduce haulage pressure and expand delivery options	**Lifting**	lower weights reduce crane capacity pressure during installation
Foundations	lower cumulative dead load can improve structural economics	**Internal area**	thinner wall build-ups preserve more usable space

WHY IT WINS

Lighter, thinner, fire-safe. Arconlite + i-Foam cut wall weight by roughly half and trim the build-up to 30 cm — freeing usable floor area while easing transport, lifting and foundation loads. The mineral, **A1 non-combustible** core replaces oil-based insulation, and the whole system drops straight into familiar precast production.

I-FOAM WITH PLANT MACHINE + FOAM GENERATOR

PRODUCTION ROUTE

Dry mortar mix, low-capex adoption path

Adaptation of Arconlite and i-Foam involves only the installation of a regular plant mixing machine and a foam generator. It fits directly into standard mixing logic.

SIMPLE PRODUCTION ROUTE

01	02	03	04	05
Dry mix compound / cement	**Add water** standard mixing	**Foam** generator where required	**Pour** factory or retrofit	**Set** mineral element

COMMERCIAL ROUTE TO MARKET

Precasters factory trials	**Housebuilders** project pull	**Architects** specification	**Producers** licensing

LOW-FRICTION ADOPTION STORY

Arconlite is positioned as an additive-led lightweight concrete route. i-Foam is mixed with water and foaming equipment, giving Arccen a practical story for factories and making trials and implementation easy.

CERTIFICATION APPENDIX

Arconlite evidence summary

Technical references supporting buyer confidence in the Arconlite lightweight concrete route.

I-FOAM BUILDING UNDER CONSTRUCTION · MUNICH 2026

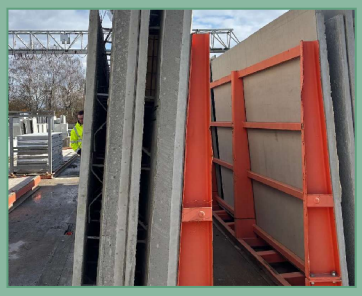
25/1033	150001 -00-0301	42.5 MPa
ETA REFERENCE	EAD · ASSESSMENT ROUTE	28-DAY REFERENCE

PRODUCT	ARCONLITE Compound
MANUFACTURER	ARCCEN LTD
USE DESCRIBED	Manufacturing of lightweight concrete or foam concrete
STRENGTH REFERENCES	Early strength 35.34 MPa; 28-day standard strength ≥ 42.5 MPa
KEY STANDARDS IN PACK	DIN EN 934-1, DIN EN 196-1, EN 197-1, EN 12617-4

CERTIFICATION APPENDIX

i-Foam evidence summary

Technical references for insulation, fire and moisture performance.



PRECAST WALL ARCONLITE + I-FOAM · GERMANY 2026

25/1074	A1	0.040 W/mK
ETA REFERENCE	NON-COMBUSTIBLE	LAMBDA

PRODUCT	i-Foam
EAD REFERENCE	EAD 041559-00-1201
REACTION TO FIRE	EN 13501-1 Class A1
DENSITY CONTROL RANGE	80–200 kg/m³ (certification-control extract)
THERMAL PERFORMANCE	Lambda mean 0.040 W/mK at 100 kg/m³ (Kiwa summary)
MOISTURE BEHAVIOUR	μ = 5.36; short-term water absorption mean 0.86 kg/m²