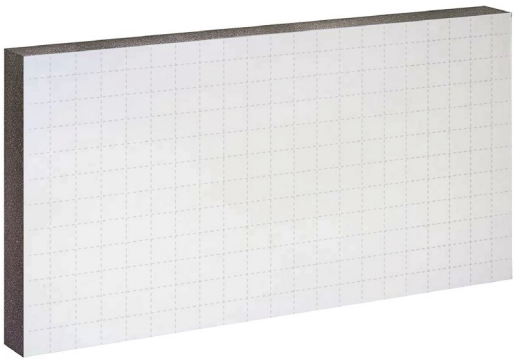
Product Data Sheet

HYTHERM® CG ADHERED
Insulation

Hytherm CG (Cellular Glass) Adhered Insulation

Hytherm CG Adhered consists of Hytherm CG Baselayer slabs bonded together with bitumen and covered white glass fleece liner on both sides. The lower side of the board is lined with a white glass fleece. The lining allows adhering a second Hytherm CG layer or membrane with cold PU adhesive. This provides long-lasting thermal performance in a flame free (self adhesive or adhered) warm roof waterproofing system.

Hytherm CG insulation is made of recycled glass[1)] and natural raw materials which are available in abundant supply (sand, dolomite, lime, etc.). The insulation is inorganic, contains no ozone depleting propellants, flame resistant additives, binders, Volatile Organic Compounds (VOC's) or other volatile substances.



The inherent characteristics of this robust material ensure that Hytherm CG Adhered insulation provides secure, long-lasting performance without degradation together with design flexibility on the most aesthetically and technically demanding of projects.

Key benefits

- Fire Classification Euroclass E (core material Euroclass A)
- High compressive strength due to cell structure. Long-term compressive loads can be applied without movement of deformation.
- Waterproof due to hermetically sealed closed cell glass structure. Does not absorb water or swell.
- Vapour and gas resistant; provides constant thermal performance for the lifetime of a building.
- Dimensionally stable; no warping, creep, swelling or shrinkage.
- Resistant to acids and organic solvents; not damaged by aggressive environments.
- Rot- and vermin-proof due to being inorganic; no risk of nesting or seed germination.
- User-friendly; easy to cut with simple tools and to install.
- Ecological; contains recycled glass and can be safely recycled after use.
- Environmental credentials: Inert and non-toxic
  Manufactured to ISO 14001.
  GWP (Global Warming Potential) = <1.5
  ODP (Ozone Depletion Potential) = zero

Performance

Hytherm CG Adhered has a hermetically sealed, closed glass cell structure. It is non-toxic, does not combust or support fire nor does it produce fumes. Its structure also prevents water penetration or tracking by capillary action. If fully bonded (including the board edges) the insulation and its adhesive are vapour tight, fulfilling both insulating and air and vapour control properties in one material. Please contact Axter for more details.

Use

Hytherm CG Adhered is designed for use as flat board or tapered* insulation in a flame free, self-adhesive/heat activated warm roof bitumen, PVC or TPO waterproofing system on concrete, timber or metal decks.

It can be used as a single or multi-layer insulation system where it is mechanically fixed or bonded using an Axter approved adhesive.

Due to its low coefficient of thermal movement, Hytherm CG is simply bonded onto the deck with adhesive, avoiding thermal bridging and corrosion of mechanical fixings. It is ideal as part of waterproofing design for heavy traffic roofs due to it having one of the highest compressive strengths, including at edges, of any insulating material.

Adhesives

The following Axter adhesives are recommended for use with Hytherm CG Adhered insulation:

- Hyrastik Evo, PU adhesive.
- Starcoat R, cold applied bitumen adhesive.

Please refer to Axter's Product / Technical Data Sheets for information on these products.

Dimensions Length x Width (mm)	1200 x 600				
Thickness (mm)	50	60	80	100	120
(R_D) - m²K/W	1.35	1.65	2.20	2.75	3.30

Dimensions Length x Width (mm)	1200 x 600			
Thickness (mm)	140	150	160	180
(R_D) - m²K/W	3.85	4.15	4.40	5.00

Other dimensions and thicknesses are available on request

Product characteristics to EN 13167			
	Measure unit	**Value**	**Standard**
Reaction to fire		Euroclass E Core material complies with Euroclass A1, non combustible, no toxic fumes	EN 13501-1
Density (±15%)	kg/m^3	95	EN 1602
Thickness ±2mm	mm	from 50 to 180mm	EN 823
Length ±5mm	mm	1200	EN 822
Width ±2mm	mm	600	EN 822
Thermal Conductivity	W/m.K	$\lambda D \leq 0.036$	EN ISO 10456
Point load	mm	≤ 1.5	EN 12430
Compressive strength	kPa	≥ 500	EN 826 Annex A
Bending strength	kPa	≥ 400	EN 12089
Tensile strength	kPa	≥ 150	EN1607
Compressive creep		(1.5/1/50) 225	EN 1606

Environmental Product Declaration: EPD-PCE-20150042-IBA1-DE (ISO 14025 and EN 15804).

General Characteristics			
	Measure unit	**Value**	**Standard**
Water vapour resistance	μ	∞	EN ISO 10456
Hygroscopicity		zero	
Capillarity		zero	
Thermal expansion coefficient	K^{-1}	9 x 10^{-6}	EN 13471
Specific Heat	J/(kg.K)	1000	EN ISO 10456

Technical Guidelines

Application

Application of Hytherm CG Adhered should preferably take place when the ambient air temperature and temperature of the deck/roof slab are above 5°C.

All expansion and movement joints should be continued through the structure.

Decks

Metal

Thickness	Minimum 0.7mm
Trough width	Maximum 60% of total surface
Minimum insulation thickness	In function of the trough width (l1)
	0mm < L1 ≤ 80mm = thickness 50mm (minimum)
	80mm < L1 ≤ 110mm = thickness 60mm
	110mm < L1 ≤ 140mm = thickness 70mm
	140mm < L1 ≤ 180mm = thickness 80mm
Maximum deflection	**1/240** of the span if the height of the corrugations is less than 90mm
	1/300 of the span if the height of the corrugations is equal to or more than 90mm

Metal sheets to be fastened following manufacturer's guidelines.

On top of the galvanized metal sheet a spirit-based primer (cutback) coating should be applied (consumption +/- 150gm/m^2). On pre-coated sheets it is not necessary to apply a primer.

Continuous supports

The deck must be clean, dry and free of any irregularities. Irregularities of the deck must not exceed 3mm over 600mm or 5mm over 2m.

In the case of a concrete roof slab and if required an appropriate levelling screed shall be applied.

If composed of pre-cast concrete beams, irregularities must not exceed 3mm between each section.

*Information on Hytherm CG Torched and Tapered insulation is available in separate Axter Product Data Sheets. Please contact Axter for further details or technical assistance.

Notes:

1) More than 50% recycled content based on a weighted average of the total mass of similar products produced in Europe.