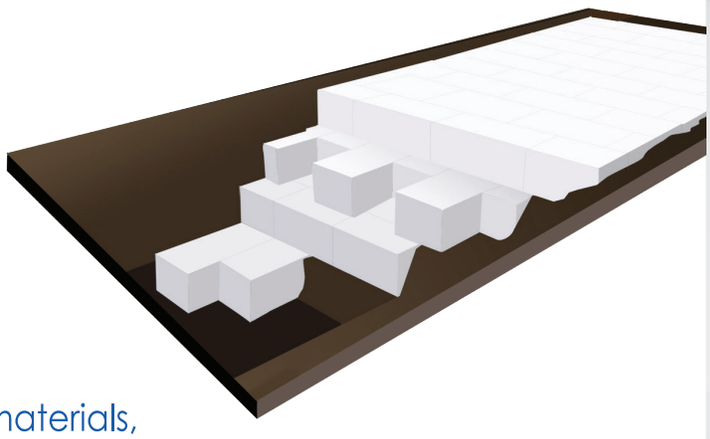
CHEMA FOAM
BUILD YOUR DREAM

CHEMA GEO FOAM

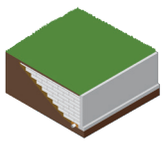


GEO FOAM is high-density Expanded Polystyrene (EPS) blocks, specifically engineered for structural applications and lightweight fill for ground. Featuring a unit weight of only 1% of traditional fill materials, it significantly reduces vertical and lateral loads on structures.

APPLICATIONS



Raising road levels



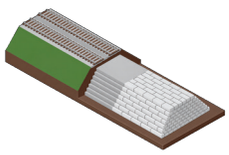
Bond walls



Landscapes



Bridges



Rail Embankment

KEY FEATURES

- Light-weight
- Easy to Install
- Anti Termite
- Flexible in Design
- High Compressive Strength
- Fast Construction
- Cost Effective
- Saving materials

DESIGN LOADS

- For long-term performance, combined (Live + Dead) loads must not exceed compressive resistance at 1% deformation (Linear Elastic Range).

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ENVIRONMENTAL FACTORS

- Water/Moisture: Unaffected by moisture; zero swelling (No Swelling).
- Temperature: Maximum service temperature is 74°C (165°F).
- Fire Safety: Contains flame retardants; however, it remains combustible and must be covered by a thermal barrier.
- Termite Resistance : The product can be treated to resist termite infestations, preventing them from nesting within the foam blocks.

SITE HANDLING & STORAGE

- **UV Exposure:** Cover with opaque film if stored outdoors for less than 7 days to prevent surface yellowing/embrittlement.
- **Ballast:** Secure blocks immediately against wind displacement and buoyancy forces (uplift) in high water conditions.

MECHANICAL PROPERTIES

Property	Test Standard	GF15	GF20	GF25	GF30	GF35	Unit
Compressive Strength @%1 strain	ASTM D6817	>25	>45	>70	>100	>150	kPa
Compressive Strength @%10 strain	ASTM D1621	>90	>130	>170	>210	>250	kPa
Elastic Modulus	ASTM D6817	2500	4200	6000	8000	9800	kPa
Flexural Strength	ASTM C203	≤195	≤280	≤340	≤400	≤550	kPa
Tensile Strength	ASTM D1623	≥100	≥120	≥150	≥180	≥200	kPa

THERMAL PROPERTIES

Property	Test Standard	GF15	GF20	GF25	GF30	GF35	Unit
Thermal Conductivity	ASTM C518	≤0.039	≤0.037	≤0.035	≤0.034	≤0.033	W/m·K
Thermal Resistance (50 mm thickness)	ASTM C518	1.28	1.35	1.42	1.47	1.52	m^2·K/W
Specific Heat Capacity	ASTM C351	1450	1450	1450	1450	1450	J/kg·K

PHYSICAL & DURABILITY PROPERTIES

Property	Test Standard	GF15	GF20	GF25	GF30	GF35	Unit
Dimensional Stability	ASTM D2126	≤2	≤2	≤2	≤2	≤2	%
Water Absorption	ASTM C272	≤1	≤0.85	≤0.7	≤0.65	≤0.55	%