



GeoFoamX[®]

A SUPERIOR GEOTECHNICAL
VOID FILLER SOLUTION
FOR BUILDING AND
CONSTRUCTION

ANOTHER ENGINEERED SOLUTION FROM:

FOAMEX[®]
EST-1982



THE AUSTRALIAN MADE VOID FILLER REVOLUTIONISING THE INDUSTRY

Lightweight, durable, and manufactured from high quality, Australian made expanded polystyrene (EPS), GeoFoamX by Foamex is a high performing, cost-effective void filler designed for civil engineers, civil contractors, landscape contractors, and landscape designers.

Expanded polystyrene (EPS) is a proven and reliable geotechnical building material for the Australian construction industry. It has been extensively researched and rigorously tested to meet and exceed industry standards. It also has numerous sustainability credentials compared to traditional fill materials. Furthermore, the ease and speed of installation of GeoFoamX assists in maintaining tight construction schedules to ensure projects are completed on time.

If your construction project requires a proven solution from an industry leader that will enable you to reduce the compressive loads on adjacent and underlying soils and structures, while also reducing the reliance on less stabilised and labour intensive traditional fill material, then GeoFoamX is the perfect solution. An environmentally friendly, economical, and dependable solution designed to last, GeoFoamX is inherently multi-functional, which makes it effective for use in a wide variety of applications.



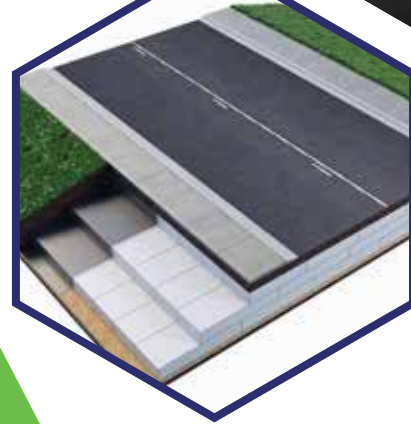


Industry leading geofoam solutions

Foamex is Australia's longest standing manufacturer of premium EPS void filler. Through years of investment in R&D and a relentless pursuit of innovation, Foamex has designed an industry leading geofoam solution that offers everything that traditional fill products don't. GeoFoamX by Foamex enables you to replace labour intensive and unreliable traditional fill products such as waste tyres, wood chips and soil – all of which have higher densities, are more difficult to handle, and are weather sensitive – with a proven, sustainable and environmentally friendly alternative.

GeoFoamX is an inert, long-lasting, and water-resistant EPS block that is non-toxic, odourless and non-irritating to the skin or eyes. It contains no HCFCs and is safe for the environment. It will not settle or rot, offers no nutritional value for insects or rodents, and will last for the life of the structure.

Engineered to give you the greatest possible control over your project, GeoFoamX has become the material of choice across a variety of civil engineering and landscaping applications, including bridge abutments, lightweight roads, plaza decks, stadium seating, building fill and more. Inherently multi-functional, GeoFoamX can be cut to size, laid in any weather, and does not require specific earthmoving machinery to install, allowing construction to continue without hold ups.



GeoFoamX by Foamex is supplied in the following block dimensions, and is fully customisable to suit your project

- Any width up to 1.2m
- Any length up to 5.0m
- Any thickness up to 0.6m

20-year product warranty

Foamex is renowned as the leading Australian manufacturer of polystyrene solutions for the building industry. Foamex has a time tested quality standard, and confidently offer a 20-year product warranty on GeoFoamX products.



GEOFOAMX APPLICATIONS

Road construction and widening

GeoFoamX provides the ideal solution for road construction on soft soils, or where existing utilities or wetlands may be present, as it can be used to replace compressible soils or in place of heavy fill materials. GeoFoamX's high compressive stress resistance makes it the perfect solution for new road construction or the widening of existing roads, as it sufficiently supports high traffic loadings. Well known projects such as The Peninsula Link in Melbourne and the WestConnex M5 upgrade in Sydney have used geofoam void filler as a building solution.

Airport and railway construction

GeoFoamX can also be used in airport and railway construction to replace unsuitable ground cover without overloading the underlying subgrade materials.

The use of GeoFoamX assists in controlling settlements on highly compressible and saturated soils, in order to prevent differential settlements at the intersection of new and existing pavements. This principle can also be applied to foundation construction of rail road lines. Again, GeoFoamX greatly reduces the likelihood of settlement and supports the inherent loads of the rail lines and trains that travel on them.

Bridge abutments

The high compressive resistance of GeoFoamX safely supports the combined live and dead loadings associated with bridge abutments without over-stressing the underlying ground cover. Compared to traditional fill materials, GeoFoamX serves to reduce the lateral force on the abutment walls, foundations and other retaining structures.

This reduced lateral force is due to the fact that the transmitted lateral force is directly proportional to the weight of the backfill used in abutment construction. Furthermore, since EPS is significantly lighter than other backfill material (approximately 100 times lighter than soil), it naturally results in construction savings since traditional fill material is no longer required to resist large horizontal static and dynamic forces.

Landscaping

GeoFoamX can be used to create a variety of landscape designs without adding significant loads to the underlying structures. From golf courses to parks and stadiums, GeoFoamX can be cut into any profile either on site, or it can be pre-cut and delivered. The blocks are simply stacked to create the desired profile. GeoFoamX is particularly effective when used to form tiered seating in locations such as auditoriums, movie theatres, gymnasiums and churches. The high compressive resistance and light weight of GeoFoamX makes it well suited to both new construction and renovation projects. Our premium void filler was in the landscape design in the Adelaide Convention Centre in South Australia.

Slope stabilisation

To improve slope stability and structural integrity, GeoFoamX can be used to remediate either man made or naturally occurring unstable slopes by removing a portion of the existing loose and unstable soil and replacing it directly with GeoFoamX. This significantly improves the safety against future soil de-stabilisation which in turn can lead to land slides. Since 2009, GeoFoamX has been used as part of geotechnical stabilisation works along The Great Ocean Road in Victoria.



GEOFOAMX: FEATURES & BENEFITS



Lightweight and easy to handle

GeoFoamX is easy to move around a building site, often without the need for special equipment. It can be trimmed on site using a hot wire cutter, saw or chainsaw. EPS is not only easy to handle, but also much more cost-effective to transport, as it is approximately 1% the weight of soil and less than 10% the weight of other lightweight fill alternatives.



Strong and durable

While light and easy to handle, GeoFoamX is extremely strong and durable, and is impervious to all weather conditions, making it perfect for extended use over long periods. Available in a range of compressive resistances, with exceptional strength and flexibility, GeoFoamX offers innovative solutions to a wide range of problems, including slope stabilisation, noise and vibration dampening, to name a few.



Weather-resistant with low water absorption

Given EPS is a semi-closed cell structure and isn't affected by water and moisture, GeoFoamX consistently retains its strength and structural integrity over the entire life of its use in your project. Additionally, adverse weather conditions typically do not affect placement rates of GeoFoamX, which keeps construction schedules on track.



Long-term retained R-values

GeoFoamX offers long-term retained superior R-values for your project, which helps increase the Energy Efficiency Rating (EER) of your project. And while the insulative properties offered by EPS is not usually one of the principal reasons for its selection in civil applications, in situations such as green roofs and in specific road construction applications where permafrost can be an issue, its insulative capacity becomes a very important consideration for material selection.



Dimensionally stable

GeoFoamX maintains its original dimensions when subjected to atmospheric changes in temperature and humidity, meaning it will continue to perform under all circumstances it faces. GeoFoamX also provides noise and vibration dampening. This is particularly important in urban areas that require increased sound shielding from road traffic on highways and freeways, and a reduction of ground borne vibrations from railway lines.



Reduced construction time and costs

Due its unique composition, GeoFoamX is quick and easy to install. The lightweight nature of the EPS blocks means there is no heavy lifting or heavy machinery required. Most importantly once GeoFoamX is laid, it can be built upon immediately, without the need to wait for compaction and settling time that would normally be required when using most traditional fill materials.



Recyclable and sustainable

GeoFoamX is 100% recyclable and sustainably manufactured, offering a truly environmentally friendly alternative to traditional void filler materials. Offcuts can be picked up from building sites and taken to the Foamex recycling plant, where they are processed and put back into sustainable building products.



Complies with Australian Building Codes & Standards

As with all Foamex products, GeoFoamX is 100% Australian owned and made and complies with all relevant Australian Building Codes & Standards.

GEOFOAMX: TECHNICAL SPECIFICATIONS

PHYSICAL PROPERTIES	UNIT	CLASS									TEST METHOD
		L	SL	S	M	H	VH	VVH32	VVH36	VVH38	
Compressive stress at 10% deformation, min.	kPa	50	70	85	105	135	165	250	300	350	AS-2498.3
Cross breaking strength, min.	kPa	95	135	165	200	260	320	500	550	600	AS-2498.4
Rate of vapour transmission, max. measured parallel to rise at 23°C	µg/m ² .s	710	630	580	520	450	400	340	280	220	AS-2498.5
Max. dimensional stability of length, width and thickness, 7 days at 70°C	%	1	1	1	1	1	1	1	1	1	AS-2498.6
Min. thermal resistance (50mm sample), at a mean temperature of 25°C	m ² K/W R(50/90)	1	1.20	1.22	1.25	1.40	1.41	1.43	1.45	1.5	AS/NZS 4859.1-2018

FLAME PROPOGATION CHARACTERISTICS	UNIT	CLASS									TEST METHOD
		L	SL	S	M	H	VH	VVH32	VVH36	VVH38	
Median flame duration max.	SD	2	2	2	2	2	2	2	2	2	AS-2122.1
Eighth value max.	SD	3	3	3	3	3	3	3	3	3	AS-2122.1
Median volume retained	%	15	18	22	30	40	50	60	60	70	AS-2122.1
Eighth value min.	%	12	15	19	27	37	47	57	57	68	AS-2122.1

OTHER PROPERTIES	UNIT	CLASS									TEST METHOD
		L	SL	S	M	H	VH	VVH32	VVH36	VVH38	
Density - nominal	kg/m ³	11	13.5	16	19	24	28	32	36	38	n/a
Compressive strength at 1% deformation, max.	kPa	14	23	31	42	58	60	63	65	70	ASTM D1621
Compressive strength at 5% deformation, max.	kPa	33	59	68	95	134	164	230	290	340	ASTM D1621
Flexural strength, min.	kPa	60	150	178	218	304	337	362	385	413	ASTM C203
Elastic modulus, min.	kPa	1450	2200	3100	4250	5850	7250	8650	9850	10950	n/a
Water absorption by total immersion, max.	Vol. %	4	4	4	3	3	2	2	1	1	ASTM C272
Buoyancy force	kg/m ³	989	986.5	984	981	976	972	968	965	963	n/a
Coefficient of thermal expansion	m/m deg K	6.3 x 10 ⁻⁵	6.3 x 10 ⁻⁵	6.3 x 10 ⁻⁵	6.3 x 10 ⁻⁵	6.3 x 10 ⁻⁵	6.3 x 10 ⁻⁵	6.3 x 10 ⁻⁶	6.3 x 10 ⁻⁷	6.3 x 10 ⁻⁸	ASTM D696

Australian Standard 1366, Part-3 1992 Physical Properties of Rigid Cellular Polystyrene sets out the minimum required properties for six classes of EPS. The Standard defines the industry specifications and manufacturing methods for compliance.

The table above details the physical properties of EPS that are mandated for satisfying AS 1366, Part-3 1992. Foamex Styroboard EPS is stringently manufactured to meet all requirements defined in Australian Standard 1366, Part-3 1992.

VVH32, VVH36 & VVH38 are additional grades developed by Foamex that sit outside this standard to meet the demand for customised requirements.

LEADING THE WAY IN ALTERNATE BUILDING AND INSULATION PRODUCTS

Foamex is one of Australia's largest manufacturers of high-quality building and insulation products, supplying a range of expanded polystyrene, extruded polystyrene, and specialty foam products for various residential and commercial building applications, civil engineering applications, packaging applications, as well as for retail and creative purposes.

A nationally recognised leader in sustainable building and insulation solutions, Foamex is proudly Australian-owned and operated. All of our polystyrene products are manufactured in-house to strict Australian quality control standards.



GeoFoamX is available to order direct from your local Foamex sales office.

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