1st March, 2020

Unipoly®
Technical Data

Unipoly® is a cellular plastic material that is strong, but has very low density.

Quality Assurance

Unipoly® meets the Australian Standard AS 1366.3 and in cases where there is no relevant Australian Standard meet the International Standard ASTM D6817, “Standard Specification for Rigid Cellular Polystyrene Geofoam”.

Size and Shape

Unipoly® is produced in block form and is easily installed. Standard sizes:

- 1.2 m widths
- 2.5 m up to 6 m lengths
- 25 mm to 1200 mm thickness

Custom sizes and fabrications can be provided by Unipod®

Additional Information

For most applications, long-term design loads should not exceed the linear elastic range of Unipoly®. Combined live and dead load stresses should not exceed the compressive stress at 1% compression.

unipod® Engineered performance

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Physical Properties of EPS (Rigid Cellular Polystyrene–Moulded)

as per Australian Standard AS 1366.3, 1992

Physical Property	Unit of measure	Class of EPS						Test Method
		SL	S	M	H	VH	X32	
Compressive Stress at 10% deformation (min.)	kPa	70	85	105	135	165	190	AS 2498.3
Cross-break Strength (min.)	kPa	135	165	200	260	320	360	AS 2498.4
Rate of water vapour transmission (max.) parallel to rise at 23°C	µg/m2s	630	580	520	460	400	400	AS2498.5
Dimensional stability of length, width, thickness (max.) at70°C, dry condition seven days	Percent	1	1	1	1	1	1	AS 2498.6
Thermal resistance (50 mm sample) at a mean temperature of 25°C	M^2K/W	1.13	1.17	1.20	1.25	1.28	1.32	AS 2464.5 or AS 2464.6
Flame propagation characteristics:								AS 2122.1
– Median flame duration (max.)	s	2	2	2	2	2	2	
– Eight value (max.)	s	3	3	3	3	3	2	
– Median volume retained (min.)	Percent	18	22	30	40	50	50	
– Eight value (min.)	Percent	15	19	27	37	47	47	

Other Properties of EPS

as per the International Standard ASTM D6817

Physical Property	Unit of measure	Class of EPS						Test Method
		SL	S	M	H	VH	X32	
Nominal density	Kg/m^3	13.5	16	19	24	28	32	
Compressive Stress at 1% deformation (min.)	kPa	22	31	42	58	72	75	ASTM D6817
Elastic Modulus (min.)	kPa	2200	3150	4200	5800	7250	7550	ASTM D6817
Buoyancy Force	Kg/m^3	980	980	980	970	970	970	ASTM D6817

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