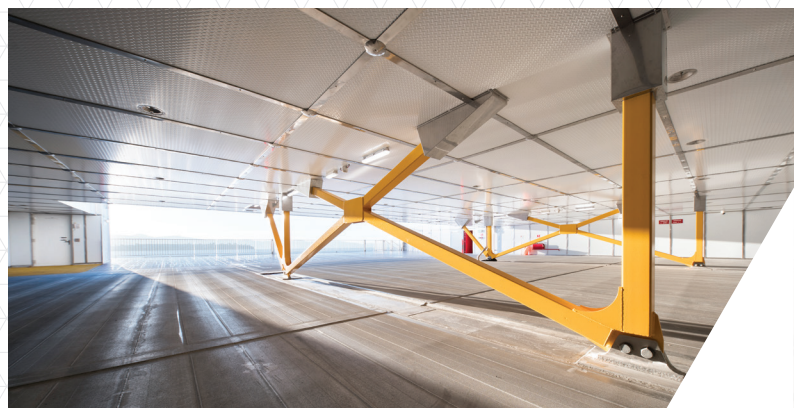
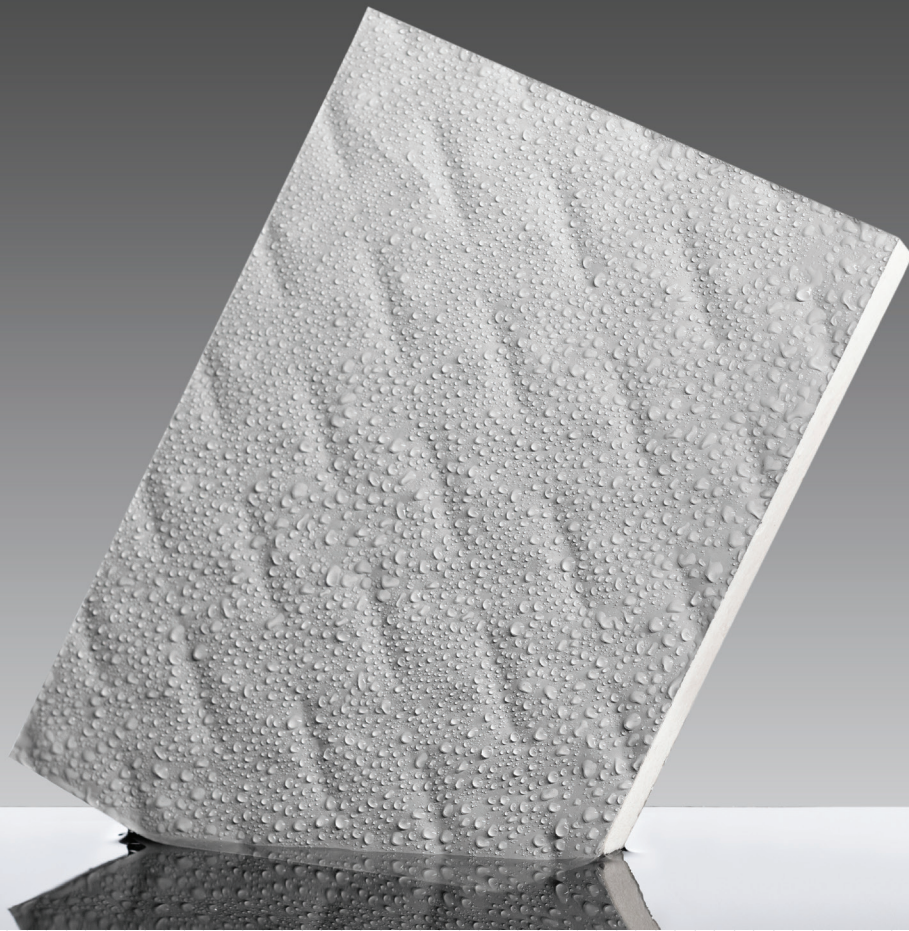




MARINE SYSTEMS

RAC^{PLUS} RAPID ACCESS SYSTEMS

THE LIGHTEST A-60 PANELISED STRUCTURAL FIRE PROTECTION SYSTEM IN THE WORLD

RAC^{PLUS} is our A-60 Class Fire Division for installation on deckheads and bulkheads. Unlike conventional insulation, RAC^{PLUS} is a panelised system that provides exceptional aesthetic appeal while maintaining protection of the vessel's structural integrity in the unlikely event of a fire.

- ▶ **Lightweight:** The installed panel system weighs just 4.5 kg/m² —up to 70% lighter than traditional metal-clad fire protection. This reduces fuel use, lowers CO₂ emissions, and increases payload capacity, helping owners and operators save costs and enhance earning potential
- ▶ **Reversible panel:** Due to its symmetric design, the panel can be manufactured double sided, allowing operators to easily flip the panel if one side becomes discoloured or damaged, preserving its aesthetics
- ▶ **Fast Installation:** The system's grid support structure significantly reduces installation time compared to traditional methods, with a typical installation rate of 1.5 man-hours per m². The ability to install the support structure in-situ and close up panels later in the vessel build process offers substantial advantages to shipbuilders.



CBGSystems

TECHNICAL SPECIFICATIONS

Fire resistance	A60 Class Aluminium	MEDB00004TY MEDB00004TZ MEDB00006Z3 MEDB000074W MEDB0000ARU MEDB0000ARV Certificates available upon request
	A60 Class Steel	MEDB000082X MEDB000082Y Certificates available upon request
Fire Reaction	Low-flame spread & Low toxicity facing/adhesive	MED441524CS MED322222CS-001/002/003 MED240423CS-001/002 MED089620CS
	Non-combustible substrate	Report #427749
Weight	Minimum of 4.5 kg/m ²	Minimum weight subject to arrangement

Maximum size	2400 x 1200 grid
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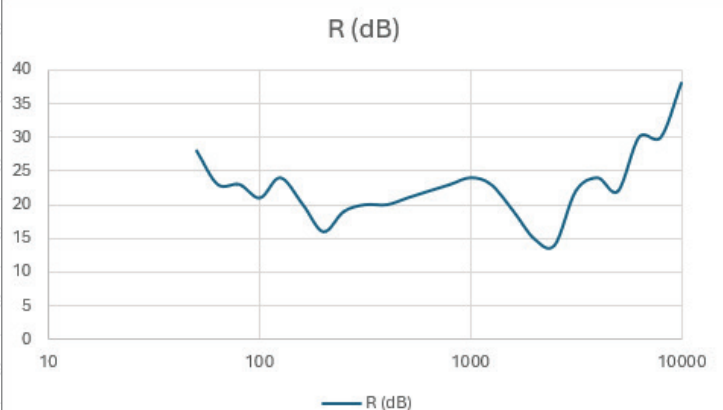
Facings	Lightweight facing
	Mediumweight - High durability facing

Airgap	Bulkhead minimum - 150 mm
	Deckhead minimum - 0 mm (directly mounted on stiffener)

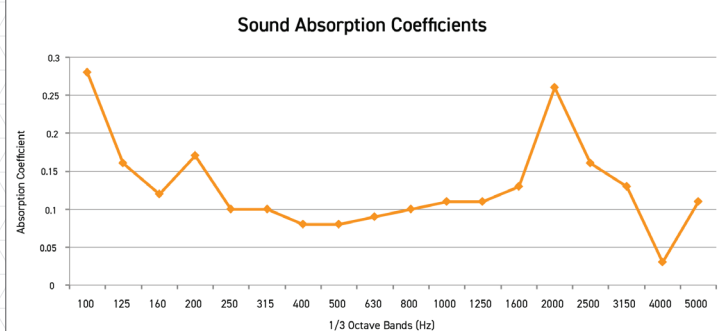
Corrosion resistance	Aluminium and 316 stainless steel supporting structure	Heat lot certificate available upon request
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Acoustic sound reduction index	Sound Reduction Rw = 21 dB	ISO-10140-2 Report ESP032006.2.A (Available upon request)
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Band (Hz)	α_s	α_p
100	0.28	
125	0.16	0.2
160	0.12	
200	0.17	
250	0.1	0.1
315	0.1	
400	0.08	
500	0.08	0.1
630	0.09	
800	0.1	
1000	0.11	0.1
1250	0.11	
1600	0.13	
2000	0.26	0.2
2500	0.16	
3150	0.13	
4000	0.03	0.1
5000	0.11	



Acoustic sound absorption	Weighted Sound absorption coefficient $\alpha = 0.1$	ISO-354 Report #ESP032006.1.A (Available upon request)
Band (Hz)	R (dB)	ISO717 Contour (approx)
50	28	0
63	23	4
80	23	8
100	21	10
125	24	13
160	20	16
200	16	19
250	19	20
315	20	20
400	20	21
500	21	22
630	22	22
800	23	23
1000	24	24
1250	23	25
1600	19	25
2000	15	25
2500	14	25
3150	22	25
4000	24	25
5000	22	25
6300	30	25
8000	30	25
10000	38	25



Thermal	Thermal conductivity 0.0437 W/m.K	ASTM C518-17 Report #ESP032006P.1R0 (Available upon request)
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Property	Value	Condition	Value
Thickness (cm)	2.1892	Temp Gradient (K/m)	1285.79
Thickness (in)	0.862	Temp Gradient (°F/in)	58.79
Density (kg/m ³)	258.45	Mean Temp (°C)	23.24
Density (pcf)	16.13	Mean Temp (°F)	73.83
Mass Initial (g)	503.33	Temp Δ (°C)	28.15
Mass Prior Conditioning (g)	500.43	Temp Δ (°F)	50.67
% Mass change Conditioning	-0.58	Result	Value
Mass Prior Testing (g)	500.43	Heat Flux (W/m ²)	56
Mass After Testing (g)	500.75	Thermal Conductivity (W/m.K)	0.04368
% Mass change Testing	0.06	Thermal Conductance (W/m ² .K)	1.995
		Thermal Resistivity (m.K/W)	22.9
		Thermal Resistance (m ² .K/W)	0.5

Biosolubility	Long fibre fraction - 7 days WHO fibre fraction - 17 days	Frauenhofer IA study no.: 02G97008 (Available upon request)
Quality management	ISO9001:2025 MED-D & USCG approval	277367-2018-AQ-AUS-JAS-ANZ MEDD00000ED Certificates available upon request



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