

AIC Topside Thermal Insulation and PFP Product Comparison Chart



Document Ref:	Topside Product Chart
Issue No:	3
Date:	23.01.2012
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Approved by:	

Criteria	ContraFlame® Fully Bonded	ContraFlame® Pre-Cast Shells	ContraFlex® Flexible Jackets
1. Overview	Fully bonded integral thermal insulation & jet fire protection to J120, Blast overpressure 4.2 bar	Pre Cast Removable integral thermal insulation & jet fire protection to J120, Blast overpressure 4.2 bar	Flexible and Removable integral thermal insulation & jet fire protection to J120, blast 2.57 bar
2. Material	A multifunctional composite systems based on unique phenolic syntactic foam and phenolic glass reinforced laminate	A multifunctional composite systems based on unique phenolic syntactic foam and phenolic glass reinforced laminate	Combination of conventional mechanically bound glass fibre batts and novel microporous fabric technologies, outer weatherproof cover is made of high quality silicone rubber coated glass fibre fabric
3. Typical Applications	<ul style="list-style-type: none"> • Hot risers • Hot three phase separators • Hot slug catchers • Top deck/Under decks, insulation/protection • Flare stacks • Steel structures that are subject to thermal shock, e.g. LNG plants • Process pipework and equipment 	<ul style="list-style-type: none"> • Flare Stacks • Risers • Insulated Pipe works size 1" - 36" • Pipe work which requires regular inspection • Pipe work requiring heat conservation / personal protection 	<ul style="list-style-type: none"> • Valves and actuators • Manways • Cable trays, conduits and instrument lines • Junction boxes and circuitry • Air receivers • Process vessels • Hot equipment exhausts • Bulkhead and localised protection
4. Construction	Tie coat applied directly on top of the corrosion protection, phenolic syntactic foam applied to the required thickness, typical at 31mm (J120) and 4mm phenolic glass reinforced laminate.	Pre cast half / tri shell sections with overall thickness of 50mm, comprising of 46mm C50 phenolic foam and 4mm of glass reinforced laminate. Typically supplied in 1 metre lengths	Pre formed flexible jackets assembly, 61mm thick fasten with Stainless steel perforate straps

Criteria	ContraFlame® Fully bonded	ContraFlame® Pre cast Shells	ContraFlex® Flexible Jackets
5. Typical Thickness	35mm (J120, blast 4.2 bar) Range of application 14-90 mm	50mm (J120)	61mm (J120, blast 2.57 bar)
6. Recommended in- service Temperature	-196°C to +185°C (can be modified to higher temp)	-196°C to +185°C	-60°C to +400°C (can be modified to higher temp)
7. Thermal Conductivity (at 25°C)	0.05 Wm ⁻¹ K ⁻¹	0.05 Wm ⁻¹ K ⁻¹	0.02 Wm ⁻¹ K ⁻¹
8. Max. Back face temp. During jet fire	+320°C (J120) +309°C (J90) +256°C (J60) +97.7°C (J30) +24.44°C (J15)	+198°C (J120) +103°C (J90) +18.5°C (J60) +3.8°C (J30) +0.7°C (J15)	+122°C (J120) +39°C (J60)

9. U Values /Thickness/Weight	4.55 w/m ² .k/ 14mm / 8.2 kg/m ² 1.61 w/m ² .k/ 34mm / 14.2 kg/m ² 1.06 w/m ² .k/ 50mm / 19 kg/m ² 0.57 w/m ² .k/ 90mm / 31 kg/m ²	n/a	On request
10. Density / Weight sqm	270 – 330 kg/m ⁻³ 13.3-15 kg/m ⁻² (@34mm)	19 kg/m ⁻²	14 kg/m ⁻² (@ 61mm)
11. Certification	Lloyds (LR) ABS	Lloyds (LR)	Lloyds (LR) ABS
12. Material Cure Time	24-36 hr cure time	n/a	n/a
13. Pre-application requirement	Corrosion protection system (typical 2 pack epoxy)	Corrosion protection system (typical 2 pack epoxy)	Corrosion protection system (typical 2 pack epoxy)
14. Design life	25 years (and above)	25 years (and above)	Pending application 4-5 years typical

15. Testing	ISO 22899 -1 UL1709 OTI 95634 ASTM C177 BS476 part 7 BS EN ISO 4589 NES 711 – smoke NES 713 Toxicity Norsok 501 - 5	ISO 22899 -1 OTI 95634	ISO 22899 -1 UL1709
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