Ark Profiles Ltd: Product Data Sheet

Arkzip 50.430.9.Aluminium: 14-a-Ark-Prod-04_2015



Profile depth	50mm	Profile width	430mm
Weight: kg/m2	0.9mm AL = 3.36kg/m^2	Non Fragility to ACR[M]001:2014	Class B
Material	0.9mm stucco aluminium BSEN485: AW3005H24 +0.05-0.02mm 0.9mm aluminium BSEN485: AW3105 H44 +0.05-0.02mm: ARS and PVdF finishes on enquiry		

Durability

Paint finish	Life expectancy years		Agrement references
	inland	coastal	
Plain stucco	40	40	
ARS	40	40	1964ps3, 2922ps3
PVdF	40	40	1964ps2, 2922ps2

A paint finish may retain a good appearance for a shorter period in severe or coastal locations than those indicated in the table, refer to the Agrement certification for detail.

CE references: Ark.DoP.019, 020, 021: BS EN 14782

Section properties

Thickness	Weight	Rib in compression		Pan in compression		Reaction	Detachment
t_N mm	kg/m^2	$M_{c,Rk,F}$ (kNm/m)	I_{eff} (cm^4/m)	$M_{c,Rk,F}$ (kNm/m)	I_{eff} (cm^4/m)	$R_{w,Rk,B}$ (kN/m)	(kN/m)
0.9 AL	3.36	1.263	31.19	0.71	9.463	11.837	6.872

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Structural: positive/gravity loads: variable loads factor 1.5, deflection L/200. Multi spans	Span	1.0m	1.1m	1.2m	1.3m	1.4m	1.5m	1.6m	1.7m	1.8m	1.9m	2.0m
	Load: kN/m^2	3.56	3.06	2.65	2.32	2.05	1.83	1.64	1.47	1.34	1.22	1.11
Structural: negative/uplift loads: variable loads factor 1.5, attachment load factor 2.0, deflection L/90. Multi spans.	Span	1.0m	1.1m	1.2m	1.3m	1.4m	1.5m	1.6m	1.7m	1.8m	1.9m	2.0m
	Load: kN/m^2	3.16	2.87	2.64	2.44	2.26	2.12	1.98	1.87	1.77	1.68	1.59

Fire properties	Reaction to fire: EN14782:06:5.1.2: Class A1 External fire performance: EN14782:06:5.1.2: Class Broof (t1), Class Broof (t2) Class Broof (t3) and Class Broof (t4)	
Curve options	Natural curve to 40m minimum radius. Crimp curve to 1m minimum radius	
Gauging	Straight sheets: 430mm, factory curved sheets: 430mm, site curved sheets: 435mm	
Fastener types	Primary: 140mm halter with 2No A2 stainless steel 5.5mm ∅ fasteners. End distances 100mm-300mm (sheet end to halter centre line).	
Fastener frequency	Halters at every rib, every spacer/purlin. Side laps, mechanically seamed, no sealant Fixed point at one position within sheet length.	
Installation key requirements	Refer to Arkzip installation guidelines- datasheet 31 and 32 Halter brackets have 2No 304 grade stainless steel fasteners plus an isolating EPDM seal. Isolate aluminium from galvanised steel Arkzip requires a single fixed point per sheet, normally at the ridge or crown of a curved roof. Zip sheets as laid. Increase halter gauge by 5mm for natural curve sheets. Note impact of AZ50/435 module Vs liner if rooflights to be installed Set zipping tool to 20mm rib top diameter Use stainless steel tooling for stucco, nylon for painted finishes. Close ribs by hand pliers at each sheet end before zipping. Protect pre-painted sheet finishes with a rib cloth Walk on Arkzip ribs Use Arkzip ridge/ eaves and verge detailing and components. Allow 1.2xLmm, min 20mm gap at eaves stiffener angle. Turn sheets down at eaves at pitches < 10°	
Reference/ Standards	Structural performance – Oxford Brookes University assessment 2015.	BS EN 508-2:2000 BS EN 14782 BS EN 485 BS 5427:96

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