Ark Profiles Ltd: Profile Data Sheet

Arkzip 50.460.9.Steel: 10-a-Ark-Prod-03/2015



Profile depth	50mm	Profile width	460mm
Weight: kg/m2	0.65mm Steel = 8.33kg/m^2	Non Fragility to ACR[M]001:2014	Class B
Material	0.65mm steel in Tata Colorcoat HPS200 Ultra®/ Tata Colorcoat® LG. Colours as Tata standard range.		

Durability

Paint finish	Life expectancy years (roofing)		Agrement references
	inland	coastal	
Tata Colorcoat HPS200 Ultra®	30 - 40	25 – 30 (1km)	2717PS8i1a
Tata Colorcoat® LG	15 - 25	10 - 20 (2km)	2717ps3i1a
Refer to http://www.colorcoat-- ‐ online.com for more detail.			

CE references: Ark.DoP.017, 018: 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)
0.65 Steel AL	8.33	1.743	16.22	0.838	9.312	10.71	3.882

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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
	Load: kN/m^2	3.75	3.24	2.82	2.49	2.21	1.97	1.77	1.60	1.46
Structural: negative/uplift loads: variable loads factor 1.5, attachment load factor 2.0, deflection L/150. Multi spans.	Span	1.0m	1.1m	1.2m	1.3m	1.4m	1.5m	1.6m	1.7m	1.8m
	Load: kN/m^2	1.76	1.60	1.47	1.36	1.26	1.18	1.10	1.04	0.98

Fire properties	Reaction to fire: HPS200 Ultra: EN14782:06:5.1.2:C-S2,d0, LG: C-S3,d0 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 60m minimum radius. Crimp curve to 1m minimum radius	
Gauging	Straight sheets: 460mm, factory curved sheets: 460mm, site curved sheets: 465mm	
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 on AZ50/460 module Vs liner if rooflights to be installed Set zipping tool to 20mm rib top diameter Close ribs by hand pliers at each sheet end before zipping. Protect paint 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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