

ARKzip 50.460.7.Steel: 10-c-ARK-Prod-05/2016

p 1 of 2



| | | | | | | | | |
|---------------------------|---|---------------------------------|---------------------------------|---------------------------------------|-----------------------------|---------------------------------------|----------------------------|------------|
| Profile depth | 50mm | | Profile width | 460mm | | | | |
| Weight: kg/m ² | 0.65mm = 7.64kg/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) | | Agreement 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 | 7.64 | 1.743 | 16.22 | 0.838 | 9.312 | 10.71 | 2.83 |

| ARKzip 50.460.7.Steel: 10-c-ARK-Prod-05/2016 p 2 of 2 | | | | | | | | | | |
|--|--|------|------|------|------|--|------|------|------|------|
| 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, deflection L/90. 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 | 1.71 | 1.56 | 1.43 | 1.32 | 1.22 | 1.14 | 1.07 | 1.01 | 0.95 |
| 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 Ø 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 1993.1.3.2006 | | | | | BS EN 508-2:2000 BS EN 14782 BS EN 485 BS 5427:96 | | | | |