Technical Data Sheet

Product Characteristics	Abodo® Vaaro® Fire
Grade	Select (refer Abodo Appearance Grade rules)
Dimensions	Refer to market specific literature for availability
Typical Lengths	3.6m to 5.4m in 600mm increments (specific lengths are subject to availability)
Species	Radiata Pine
Treatment	Thermally modified 230°C degrees schedule and vacuum- pressure impregnated with Vaaro® thermosetting polymeric fire-retardant resin system (KDAT – Kiln dried after treatment)
Origin	North Island, New Zealand
Sustainability	FSC® certified – mixed, CoC No.: SGS-COC-004944
Average Dry Density	~650 kg/m^3
Equilibrium Moisture Content (EMC) (Indicative)	(20°C, 65%RH) 7.5%
Durability	Class 1 (EN350-1 EN 350:2016, EN 113-2:2020 + water leaching procedure, EN 84:2020)
Durability Warranty	40 years fungal attack (Subject to terms and conditions)
Construction (LVG only)	Laminated with vertical grain orientation
Adhesive (LVG only)	Polyurethane Exterior Type 1 (AS/NZS4364). Approved for Service Class 3 (exposed exterior applications). D4 (EN204)
Expected Dimensional Change in Structure	Width expansion approx 3%, length expansion approx 0.25%, thickness expansion approx 5% (from 8%MC to fibre saturation – variation will occur between boards)
Anti Swell Efficiency (Tangential)	21.4% (DIN 52184)
Anti Swell Efficiency (Radial)	17.1% (DIN 52184)
Thermal performance (indicative)	0.12 W/(mK)
pH (Indicative)	5.5
Compatibility	Can be placed in contact with most materials including plastic, aluminium, galvanised and stainless steel; however, acidity of the timber may require separation from zinc. In exterior applications, high quality hot dipped galvanised or stainless-steel fasteners must be used according to the exposure zone. Stainless steel fasteners must be used in appearance applications where the fastener head is exposed eg: face-fixed cladding and/or in sea spray zones in all cases. Regular hardware and fixings may be used in interior applications.
Gluing	Cross-link PVA, PU, MUF glues and RF resins can be used. Unique properties of the timber including dryness may affect glue bond performance, always check with adhesive manufacturer and conduct testing prior to use
Formaldehyde Emissions	0.2 mg/L JIS A1460 – Super E0/F****, E1 (EN717-1)
VOC Emissions	TVOC – <0.5 mg/m^3 – PASS (CDPH-IAQ V1.1 2010, CDPH-IAQ V1.2 2017 and ISO 10580:2010)
Impact Bending Strength	7.6 kJ/m^2 (DIN 52189-1)
Modulus of Rupture (MOR)	51.9 N/mm^2 (DIN 52186, EN 408)
Modulus of Elasticity (MOE)	14.831 N/mm^2 (DIN 52186, EN 408)
Brinell Hardness	25.0 N/mm^2 (EN 153)
Weathering	Will lighten in colour (eventually to gun metal-grey with slight purple undertones) with exposure to weather
Workability	Excellent machinability - machining is subject to conditions to meet fire compliance requirements (refer to Vaaro Machining Guide). Timber exhibits reduced splitting strength; therefore, care should be taken to use sharp tools and pre-drill fixings. Fine dust is created from machining, so good extraction is required. Increased brittleness so careful handling and robust protective packaging of profiled product required (Limitations -refer Vaaro Machining Guide)
Coating	May be installed uncoated. Fire compliance testing has been done with Abodo Protector coating only; other coatings must be tested individually to relevant local requirements. Takes many oil and water-borne coatings well. Smooth-dressed timber must be sanded prior to coating. Always test coatings prior to use and follow coating manufacturer's instructions for application
Fire	UK/EU B-s2-d0 (LVG) / B-s1-d0 (Flatsawn) (EN13501-1:2018) DRF EXT, INT1, INT2 (EN16755:2017) USA Class A (ASTM E84 and E2768-11:2018 extended to 30min, after standard rain test ASTMD 2898-10 Method A) NZ Group 1-S (AS/NZS 3837:1998), Type A Cladding (NZBC C/AS2 Table C1.3) AU Group 1 (AS 5637.1:2015), BAL29 (AS 3959:2018) Fire classifications may be subject to specific profile dimensions and installation requirements in accordance with DOP's, test reports and/or local building regulations, please check with Abodo or local distributor prior to specification

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