

TECH UPDATE

Marshfield DoorSystems Duty Level Performance Standards (WDMA I.S.1A-04)

All Marshfield DoorSystems' doors can meet the "Extra Heavy Duty" level. Particleboard, Staved Lumber and Structural Composite Lumber (SCL) Core meet this level without blocking. Fire-resistant composite (Mineral Core) doors require blocking for screw attached hardware to meet this level (See bottom table for their associated ratings).

Performance Values Table - WDMA I.S. 1-A (04)			
Performance Attribute	Duty Level		
	Extra Heavy Duty	Heavy Duty	Standard Duty
Adhesive Bond Durability: WDMA TM-6, 2008	Type II	Type II	Type II
Cycle Slam: WDMA TM-7, 2008	1,000,000 cycles	500,000 cycles	250,000 cycles
Hinge Loading: WDMA TM-8, 2008	550 lbs. (2440 N)	475 lbs. (2110 N)	400 lbs. (1780 N)
Door Finishes: Various ASTM test methods	TR-6/OP-6 or equal ¹	TR-4/OP-4 or equal ¹	TR-2/OP-2 or equal ¹
Screwholding: WDMA TM-10, 2008			
Door Face Unblocked	550 lbs. (2440 N)	475 lbs. (2110 N)	400 lbs. (1780 N) ²
Door Face (with optional blocking) ³	700 lbs. (3110 N)	700 lbs. (3110 N)	700 lbs. (3110 N)
Vertical Door Edge	550 lbs. (2440 N)	475 lbs. (2110 N)	400 lbs. (1780 N)
Horizontal Door Edge (applies when hardware attached)	300 lbs. (1330 N)	240 lbs. (1060 N)	180 lbs. (810 N)
Telegraph: WDMA T-1	Maximum 0.010 in. per 3 in. (0.25 mm per 76 mm) span		
Warp Tolerance: WDMA T-2	Maximum 0.25 in. per 3'-6" x 7'-0" (6.35 mm per 1050 mm x 2100 mm) door section		
Squareness: WDMA T-3	Diagonal variance 0.125 in. (3.17 mm)		

*Chart can be found on page 23 of WDMA I.S.1A-04

⁽¹⁾ Other formulations may exhibit similar performance characteristics, but must meet or exceed the performance levels for the systems specified to be considered equal

⁽²⁾ If screwholding power is less than 400 lbs. (1780 N) blocking or thru-bolts are recommended for operable hardware

⁽³⁾ Blocking may be specified for certain hardware applications that a specifier deems that the frequency and severity of use dictate. Blocking is a material used for improved screwholding for hardware attachment points (not required in core types such as Particleboard [EHD Models], Structural Composite Lumber [SCL] or Staved Lumber). Refer to Sections C-10 through C-14 for blocking options.

All of our doors are constructed, trimmed, and where required, finished to comply with the Adhesive Bond, Door Finishes, Telegraph, Warp, and Squareness requirements. The table below shows the duty level for the physical properties of the associated door types.

Door Type	Particleboard		Stave Core	Composite Lumber Core (LSL or SCL)	Mineral Core
Screw Withdrawal	Hinge Stile	Extra Heavy Duty		Extra Heavy Duty	Extra Heavy Duty
	Top Rail	Extra Heavy Duty		Extra Heavy Duty	Extra Heavy Duty
	Core	EHD Model: Extra Heavy Duty	Standard Particleboard: Heavy Duty	Extra Heavy Duty	Below Standard
	Blocking	NA	NA	NA	Extra Heavy Duty
Hinge Load	Extra Heavy Duty		Extra Heavy Duty	Extra Heavy Duty	Extra Heavy Duty
Cycle Slam	Extra Heavy Duty		Extra Heavy Duty	Extra Heavy Duty	Extra Heavy Duty
Duty Level Summary	Standard Particleboard core doors meet "Heavy Duty" requirements as EHD models meet Extra Heavy Duty without blocking		Staved Lumber meets "Extra Heavy Duty" requirements and requires no blocking for screw attached surface hardware.	Structural Composite Lumber core meets "Extra Heavy Duty" requirements and requires no blocking for screw attached surface hardware.	Fire-resistant composite (mineral core) doors meet "Extra Heavy Duty" requirements when blocked for screw-attached surface hardware. Without blocking the core screw withdrawal is below "Standard Duty" requirements.

Note: Marshfield DoorSystems doors are manufactured per the standards listed on this page. Specifications are subject to change without notice.