

Multifamily, Commercial, Single Family, Renovation

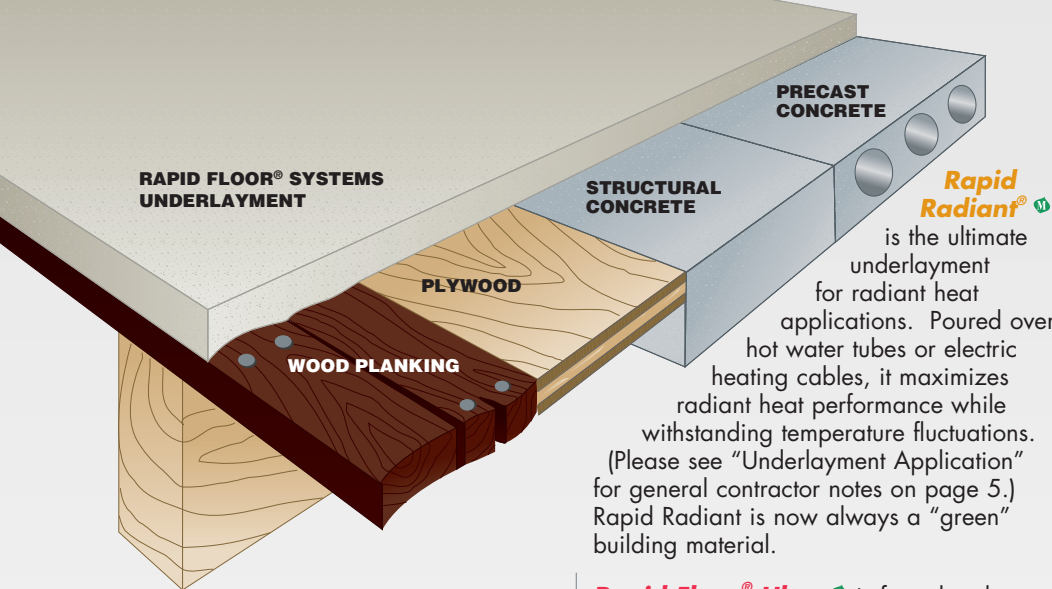


Rapid Floor[®]
Systems

FLOOR UNDERLAYMENTS

A Reputation You Can Stand On[®]

POUR ON THE ADVANTAGES WITH RAPID FLOOR® SYSTEMS.



Rapid Floor® Systems floor underlayments offer solutions for practically any flooring challenge — from new construction to renovation, commercial to single family applications. In addition to fast installation and a new, smooth surface, they also bring significant sound control and fire resistance properties to every project.

TAILOR-MADE SOLUTIONS FOR EVERY FLOOR CHALLENGE

New construction and renovation projects present their own special challenges. But Rapid Floor Systems offers specific solutions, so you can customize installation for each project.

Rapid Floor® offers the advantage of a smooth, joint-free surface and is an excellent alternative to double wood floor construction in new, multifamily residential projects.

Rapid Floor® Plus provides the extra muscle required when the job calls for a tougher, more durable surface. Its flexible compressive strength can be formulated up to 3200 psi (22 MPa), for the increased surface hardness that's critical in renovation, single family and commercial projects. Rapid Floor Plus is approved for installation before the drywall, saving time and money. (Please see "Underlayment Application" for general contractor notes on page 5.) Rapid Floor Plus is now always a "green" building material.

Rapid Radiant® is the ultimate underlayment for radiant heat applications. Poured over hot water tubes or electric heating cables, it maximizes radiant heat performance while withstanding temperature fluctuations. (Please see "Underlayment Application" for general contractor notes on page 5.) Rapid Radiant is now always a "green" building material.

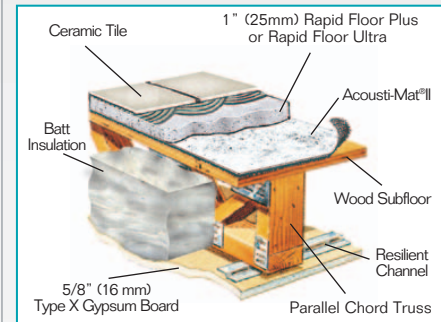
Rapid Floor® Ultra is formulated to provide compressive strengths ranging from 2500 to 4000 psi (17.2-27.4 MPa), and offers an economical alternative to many concrete floor underlayment applications in commercial and renovation projects. (Please see "Underlayment Application" for general contractor notes on page 5.) Rapid Floor Ultra is now always a "green" building material.

Commercial Topping® is fast drying and achieves compressive strengths up to 4500 psi (31 MPa). It's the ideal underlayment

to meet ASTM F 710 "Preparing Concrete to Receive Resilient Flooring". Plus it pours over VAT, VCT, terrazzo or ceramic, with no shotblasting required. (Please see "Underlayment Application" for general contractor notes on page 5.) Commercial Topping is now always a "green" building material.

ACOUSTI-MAT® SOUND DEADENING SYSTEMS

Acousti-Mat® provides the superior sound control that's fast becoming a standard amenity in today's residential and commercial properties. Ideal for new construction or renovation, Acousti-Mat is now available in seven levels of sound control. For more information on Acousti-Mat, see the Acousti-Mat Sound Control Brochure or visit www.rapidfloor.com.



With a nylon core of fused entangled filaments attached to a non-woven fabric, Acousti-Mat creates a void area between the sub-floor and the Rapid Floor Plus or Ultra. This system isolates sound waves, reducing airborne and impact noise.

PRODUCT SELECTION GUIDE

	Rapid Floor®	Rapid Floor® Plus	Rapid Radiant®	Rapid Floor® Ultra	Commercial Topping®
Building Type					
Single Family		■	■		
Multifamily	■	■			
Light Commercial		■			
Commercial				■	■
Renovation		■		■	■
Sub-Floor Type					
Wood Panels	■	■		●	●
Old Wood Renovations		■		●	●
Concrete	●	●		■	■
Radiant Heating System			■		
Steel Deck				■	■

■ Primary Product Selection

● Secondary Product Selection; consult your Rapid Floor Systems applicator.

This chart is only for reference. Consult your Rapid Floor Systems applicator for detailed product specifications.

How Rapid Floor Underlayments Build a Better Floor.

KEEPING NOISE IN ITS PLACE

- Control sound transmission between rooms and between floors
- Fill cracks in the subfloor and seal perimeter joints, significantly reducing sound leaks
- Stiffen the floor, virtually eliminating squeaky floors and nail pops
- Independent sound test results on a wide range of floor and ceiling assemblies are listed in the Sound Ratings chart on www.rapidfloor.com

ENHANCING FIRE SAFETY

- Create a flame barrier between wood and other flammable materials

A SMOOTH, NEW SURFACE

— FAST!

- Transform rough, uneven and warped surfaces into smooth, flat floors ready for any specified floor goods
- High-volume application equipment that can pump 1000 to 40,000 square feet (93 m²–3716 m²) in one workday
- Set fast, so other subtrades can stay on schedule
- A nationwide network of authorized applicators

FIRE RATINGS

UL Design

G524	K906	L507	L526	L546	L583
G560	L004	L508	L527	L547	L585
G561	L005	L509	L528	L549	L588
G563	L006	L510	L529	L551	L589
G566	L201	L511	L530	L552	L592
G574	L202	L512	L532	L555	L593
G576	L206	L513	L533	L556	L594
J917	L208	L514	L534	L557	L599
J919	L209	L515	L535	L558	M500
J920	L210	L516	L536	L560	M503
J924	L211	L517	L537	L562	M504
J927	L212	L518	L538	L563	M505
J931	L501	L519	L539	L564	M508
J957	L502	L520	L540	L573	
J958	L503	L522	L541	L574	
J966	L504	L523	L542	L575	
J991	L505	L524	L543	L579	
J994	L506	L525	L545	L581	

SAMPLE USGBC LEED CREDIT AREAS IMPACTED BY "GREEN" RAPID FLOOR UNDERLAYMENTS*

Project	Credit	Category	How Requirement is Fulfilled
Indoor Environmental Quality	IEQ 3.2	Air Quality Before Occupancy	GREENGUARD Certified (Testing MUST be performed before claiming credit)
	IEQ 4.3	Low Emitting Materials: Floor System	GREENGUARD Children & Schools™ Certified
Materials & Resources	MR 2	Construction Waste Management	Recyclable packaging and shipping materials
	MR 4	Recycled Content	Fly Ash
	MR 5	Local/Regional Materials	Manufactured in Blue Rapids, KS 66411; Las Vegas, NV 89036; Camden, NJ 08103; Job Site Manufactured with Local Sand & Water
Innovation & Design	ID 1	Sound Control	Enhanced living environment

*Credits may vary depending on project type and Rapid Floor Systems products used. Contact Maxxon Corporation for complete details.

UNDERLAYMENTS TECHNICAL DATA

	Rapid Floor®	Rapid Floor® Plus	Rapid Radiant®	Rapid Floor® Ultra	Commercial Topping®
Compressive Strength Range	up to 2000 psi (14 MPa)	up to 3200 psi (22 MPa)	2000–3000 psi (14–21 MPa)	2500–4000 psi (14–21 MPa)	4000–4500 psi (27.6–31 MPa)
Installed Weight	3/4" (19 mm) = 6.9 lb/ft ² (31.8 kg/m ²)	3/4" (19 mm) = 6.9 lb/ft ² (31.8 kg/m ²)	1 1/4" (32 mm) = 12.7 lb/ft ² (58.7 kg/m ²)	3/8" (10 mm) = 3.5 lb/ft ² (15.9 kg/m ²) 1" (25 mm) = 9.2 lb/ft ² (42.4 kg/m ²)	1/2" (12.7 mm) = 5.3 lb/ft ² (25.9 kg/m ²)
Dry Density	110 lbs./ft ³ (1760 kg/m ³)	115 lbs./ft ³ (1840 kg/m ³)	115 lbs./ft ³ (1840 kg/m ³)	115–120 lbs./ft ³ (1840–1900 kg/m ³)	125 lbs./ft ³ (2000 kg/m ³)
K-Factor	4.3 Btu-inch/hour-°F-ft ² (.68 W/[m•°C])	4.3 Btu-inch/hour-°F-ft ² (.68 W/[m•°C])	4.96 Btu-inch/hour-°F-ft ² (.7142 W/[m•°C])	5.2 Btu-inch/hour-°F-ft ² (.74 W/[m•°C])	
Specific Heat	0.25 Btu/lb-°F (.94 kJ/[kg•°C])	0.25 Btu/lb-°F (.94 kJ/[kg•°C])	4.96 Btu-inch/hour-°F-ft ² (.9385 kJ/[kg•°C])	0.25 Btu/lb-°F (.94 kJ/[kg•°C])	
Surface Burning Characteristics	Flame spread: 0 Fuel contributed: 0 Smoke Density: 0	Flame spread: 0 Fuel contributed: 0 Smoke Density: 0	Flame spread: 0 Fuel contributed: 0 Smoke Density: 0	Flame spread: 0 Fuel contributed: 0 Smoke Density: 0	Flame spread: 0 Fuel contributed: 0 Smoke Density: 0
Point Loading	Minimum loading of 550 lbs. (250 kg) on a 1" (25.4 mm) dia. disk	Typical loading of up to 2500 lbs. (1134 kg) on a 1" (25.4 mm) dia. disk	Typical loading of up to 2500 lbs. (1134 kg) on a 1" (25.4 mm) dia. disk	Typical loading of up to 3500 lbs. (1590 kg) on a 1" (25.4 mm) dia. disk	Typical loading of up to 3500 lbs. (1590 kg) on a 1" (25.4 mm) dia. disk

UNDERLAYMENT SOUND RATINGS

Floor System	Underlayment	Insulation	Ceiling Suspended on Channel	Ceiling Drywall	Floor Covering	Rating*	Test Numbers
Truss Plate Institute w/ 3/4" (19 mm) T&G plywood subfloor	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Vinyl	57 F-STC	98.67280.10
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Vinyl	50 F-IIC	98.67280.1
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Ceramic	46 F-IIC	98.67280.12
Metal Joist 9½" (247 mm) w/ 3/4" (19 mm) T&G OSB subfloor	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Vinyl	49 F-IIC	94-2278
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Carpet & Pad	51 F-STC	94-2168.1
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Carpet & Pad	73 F-IIC	94-2168.2
SpaceJoist® Metal Web Truss 16" deep w/ 3/4" (19 mm) T&G OSB subfloor	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Vinyl	51 F-IIC	51210-4
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Mannington 3/8" laminate floating floor over Quietwalk	54 F-IIC	51210-5
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Carpet & Pad	70 F-IIC	51210-3
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Carpet & Tile	52 F-STC	51210-1
Wood Joist w/ 5/8" (16 mm) plywood subfloor	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Hi-Grade Residential Carpet & Cushion	53 STC / 78 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Lo-Grade Residential Carpet & Cushion	52 STC / 81 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Hi-Grade Residential Carpet & Cushion	52 STC / 71 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Med-Grade Residential Carpet & Cushion	50 STC / 70 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Bare Floors, No Carpet & Cushion	50 STC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Sheet Vinyl	50 STC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Vinyl Tile	52 STC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Wood Parquet Floor	51 STC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Ceramic Tile	51 STC	
Wood Joist w/ 5/8" (16 mm) plywood subfloor	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Lo-Grade Residential Carpet & Cushion	54 STC / 76 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Hi-Grade Residential Carpet & Cushion	54 STC / 80 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Med-Grade Residential Carpet & Cushion	54 STC / 82 IIC	
	3/4" (19 mm)	Yes	Yes	5/8" (16 mm)	Bare Floors, No Carpet & Cushion	53 STC	

*NOTE: FSTC — Field Sound Transmission Class in accordance with ANSI/ASTM E336 and E413.

STC — Sound Transmission Class in accordance with ASTM E90 and E413.

IIC — Impact Insulation Class in accordance with ASTM E492.

FIIC — Field Impact Insulation Class in accordance with ASTM E1007 and E989.

All acoustical testing was done by Riverbank Testing Laboratories; Intest, Inc.; Twin City Testing Corporation, D.L. Adams Associates, L.T.D., AV Group, JGL Acoustics or NGC Testing Services. For type of floor covering used, channel spacing and other information, contact Maxxon for test reports by number. For good acoustical performance, the selection of a floor/ceiling system attaining a minimum 60 STC and IIC is recommended. Systems attaining ratings less than 55 STC and IIC provide only marginal acoustical performance. The Rapid Floor Systems underlayments and Acousti-Mat® are but single components of an effective sound control system. No sound control system is better than its weakest component. Care must be taken in the installation of all components of construction to ensure the ultimate designed acoustical performance.

Product Thickness Over Wood Subfloors

Subfloor thickness	Truss, beam or joist spacing	Minimum thickness of underlayment
19/32" (15 mm) [5/8"]	16–19.2" o.c. (406 – 487 mm)	3/4" (19 mm)
19/32" (15 mm) [5/8"]	19.2–24" o.c. (487 – 610 mm)	1" (25 mm)
23/32" (18 mm) [3/4"]	16–24" o.c. (406 – 610 mm)	3/4" (19 mm)

Warranties Rapid Floor® Systems underlayments are warranted to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the underlayment ingredients or from the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of any underlayment. Because Maxxon® Corporation does not install the underlayment, it cannot be held responsible for the results of the application. Maxxon Corporation specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques. This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of purpose and of all other obligations or liabilities on Maxxon Corporation's part. Maxxon Corporation neither assumes, nor authorizes any person to assume for Maxxon Corporation, any liability with the sale and installation of any of its floor underlayments.

ACOUSTI-MAT® SYSTEMS UNDERLAYMENT SOUND RATINGS

	Floor System	Topping	Insulation	Resilient Channel	Ceiling Drywall	Floor Coverings	Rating	Test Numbers
Acousti-Mat® LPR 5/32" (3.9 mm)	Parallel Chord Truss 18" Deep	3/4" (19 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Vinyl	56 F-STC	09-02462-9
		3/4" (19 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Vinyl	54 F-IIC	09-02462-3
	8" Concrete (203 mm)	1/2" (12.7 mm) Maxxon WearTop	No	No	No	None	55 F-IIC, 61 F-STC	F07-656, F07-567
	Bare Floor , No AM LPR (ctrl)	None	No	No	No	None	34 F-IIC	F07-568
	Steel Frame with 9/16" Corrugated Steel Decking	1 3/8" (39.7 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Tile	51 IIC	NGC 7008010
1 3/8" (39.7 mm) Maxxon*		Yes	Yes	5/8" (16 mm)	Tile	57 STC	NGC 7008019	
Acousti-Mat® II 1/4" (6.4 mm)	Parallel Chord Truss 2x4" (51x102 mm) w/ 3/4" (19 mm) OSB subfloor	1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Vinyl	61 F-STC, 55 F-IIC	98 67280.7 & 4
		1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Ceramic	56 F-IIC	98 67280.5
	Precast Concrete 6"x2" (152 mm x 61 cm)	1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Ceramic	59 STC	98-108
		1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Ceramic	57 IIC	98-12
	TJI® Joist w/ 3/4" (19 mm) T&G OSB subfloor	1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Vinyl	53 F-IIC	99 1736.3
		1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	None	56 F-STC	99 1736.7
		1" (25 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Ceramic	52 F-IIC	99 1736.4
		1 1/4" (31.75 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Ceramic	52 F-IIC	48-06-5
	8" Cast-in-place Concrete (203 mm)	1" (25 mm) Maxxon*	No	No	No	Armstrong Vinyl	62 F-STC	18-0-607.2
		1" (25 mm) Maxxon*	No	No	No	Armstrong Vinyl	64 F-IIC	18-0-607.5
		1" (25 mm) Maxxon*	No	No	No	Ceramic Tile	61 F-IIC	18-0-607.6
		1" (25 mm) Maxxon*	No	No	No	Bruce Hardwood	60 F-IIC	18-0-607.7
		2 1/2" (64 mm) Concrete	No	No	No	None	55 F-IIC	03-56381.4
Bare Floor , No AM (ctrl)	None	No	No	No	None	39 F-IIC	18-0-607.3	
Floor System 6" Concrete	1" (25 mm) Maxxon*	No	No	No	Tile	Delta IIC 21	NGC 7006037	
Enkasonic® 4" (10.2 mm)	Wood Joist w/ 5/8" (16 mm) plywood subfloor, 2x10" (51x254 mm) joists	1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Ceramic Tile	57 IIC	IN88-2
		7/16" (11.1 mm) Wonder-Board	Yes	Yes	5/8" (16 mm)	Tile	62 F-STC, 58 F-IIC	JN 8010
		1 1/4" (31.75 mm) Mortar Bed	Yes	Yes	5/8" (16 mm)	Tile	60 F-STC, 55 F-IIC	80-74, 80-1
	Parallel Chord Truss 2x4" (51x102 mm) 12" deep w/ 3/4" (19 mm) T&G OSB subfloor	1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	None	59 F-STC	87-729-13
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Carpet & Pad	83 F-IIC	87-729-7
	Parallel Chord Truss 18" deep, 24" oc plywood subfloor	1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Quarry Tile	59 IIC	7004073
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Quarry Tile	58 STC	5004024
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Vinyl	55 IIC	7004081
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Floating Wood	57 IIC	7004082
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Glue Down Wood	57 IIC	7004083
	4" Precast Concrete 4"x2" (102 mm x 61 cm)	7/16" (11.1 mm) Wonder-Board	No	No	None	Tile	55 F-STC, 52 F-IIC	90-155, 90-8
	8" Precast Concrete 8"x2" (203 mm x 61 cm)	7/16" (11.1 mm) Wonder-Board	No	No	None	Tile	59 F-STC, 52 F-IIC	83-17, 83-1
		1 1/4" (19 mm) Mortar Bed	Yes	Yes	5/8" (16 mm)	Tile	61 F-STC, 62 F-IIC	82-165, 82-11
		1 1/4" (19 mm) Mortar Bed	No	No	None	Tile	60 F-STC, 54 F-IIC	82-166, 82-12
		1 1/4" (19 mm) Mortar Bed	Yes	Yes	5/8" (16 mm)	Vinyl	61 F-STC, 67 F-IIC	82-141, 82-9
Hambro D-500 Composite Floor System	2 layers — 3/8" Plywood	Yes	Yes	5/8" (16 mm)	T&G Oak	60 F-STC, 61 F-IIC	82-98, 82-7	
	1 1/2" (38 mm) Maxxon*	No	Hat	1/2" (12.7 mm)	Vinyl	53 IIC	7004079	
	1 1/2" (38 mm) Maxxon*	No	Hat	1/2" (12.7 mm)	Quarry Tile	54 IIC	7004078	
	1 1/2" (38 mm) Maxxon*	No	Hat	1/2" (12.7 mm)	Floating Laminate	55 IIC	7004080	
	1 1/2" (38 mm) Maxxon*	No	Hat	1/2" (12.7 mm)	Quarry Tile	54 STC	5004027	
TJI® Joist w/ 3/4" (19 mm) T&G plywood subfloor	1 1/2" (38 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Ceramic	56 F-IIC	48-06-01	
	1 1/2" (38 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Ceramic	57 F-STC	48-06-02	
Acousti-Mat® 3 .8" (20.3 mm)	Open Beam**	1 1/2" (38 mm) Maxxon*	No	No	None	Vinyl	46 F-IIC	02 31573.3
		1 1/2" (38 mm) Maxxon*	No	No	None	Floating Wood	52 F-IIC	02 31573.4
		1 1/2" (38 mm) Maxxon*	No	No	None	None	47 F-STC	02 31573.6
	Bare Floor , Over Open Beam (ctrl)	None	No	No	None	None	30 F-STC	02 31573.7
	8" Cast-in-Place Concrete (203 mm)	2" (51 mm) Maxxon*	No	No	None	None	65 F-IIC	03 56381.6
		2" (51 mm) Concrete*	No	No	None	None	61 F-IIC	03 56381.5
	Bare Floor , No AM (ctrl)	None	No	No	None	None	36 F-IIC	03 56381.1
	Steel Joist 12" Deep (305 mm) w 3/4" (19 mm) T&G plywood subfloor	1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Ceramic	57 F-IIC	04-22-1
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Vinyl	57 F-IIC	04-22-2
		1 1/2" (38 mm) Maxxon*	Yes	Yes	5/8" (16 mm)	Wood	58 F-IIC	04-22-3
TJI® Joist w 3/4" (19 mm) T&G plywood subfloor	1 1/2" (38 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Ceramic	58 F-IIC	48-06-03	
	1 1/2" (38 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Ceramic	59 F-STC	48-06-04	
Parallel Chord Truss 20" deep, 24" OC	1 1/2" (38 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Tile	63 F-IIC	R05200	
	1 1/2" (38 mm) Maxxon*	Yes	Yes	2 layers of 5/8"	Wood	59 F-IIC	R05200	

* Approved Rapid Floor Systems Underlayment. ** The International Building Code and the ICC require a minimum of 48" for Field STC and Field IIC. F Field Impact Insulation Class sound tests were performed in accordance with ASTM E 1007 and E 388. STC Field Sound Transmission Class sound tests were performed in accordance with ASTM E 536 and E 413. Actual tests above, plus additional tests, are available upon request. Maxxon Underlayments and Acousti-Mat/Enkasonic are but single components of an effective sound control system. No sound control system is better than its weakest component. Care must be taken in the installation of components of construction to assure the ultimate designed acoustical performance.

Installing Rapid Floor Underlayments.

SUBFLOOR REQUIREMENTS

The wood or concrete subfloor shall be structurally sound, broom clean and free of mud, oil, grease or other contaminants prior to primer application. Structural floors shall have a design criteria adequate to withstand loads with a deflection limitation of L/360. Wood subfloors shall be inspected by Builder/Contractor for proper nailing and structural integrity. Any areas of wood subfloor that have weakened or delaminated during construction shall be replaced. Stud wall base plates in doorways and other openings shall be removed.

METHODS OF INSTALLATION

Wood Panel/Plank Construction

The minimum thickness varies with the type of floor system. Minimum wood frame construction is agency-approved 19/32" (15 mm), 40/20 veneer and non-veneer wood subfloors. Preferred wood frame construction is 3/4" (19 mm) of underlayment over 3/4" (19 mm) tongue-and-groove, agency-approved subfloor with truss, joist or beam spacings of 16" to 24" (406 mm – 609 mm) on-center. Minimum wood plank construction shall be 3/4" (19 mm) Rapid Floor® Plus over primed planking.

Precast Concrete Construction

Precast concrete plank construction shall be covered by a minimum 1/2" (13 mm) of Rapid Floor® or Rapid Floor Plus (or a minimum 3/8" [10 mm] of Rapid Floor Plus using a 1.4 mix design); or a minimum 3/8" (10 mm) thickness of Rapid Floor® Ultra or Commercial Topping® using a 1.4 to 1.8 mix design. Joints between precast units must be grouted by others prior to application.

Steel Deck

Over corrugated steel deck, Rapid Floor Ultra or Commercial Topping is poured at a minimum depth of 1 1/8" (39.7 mm) to the bottom of flutes. (9/16" to the top of the flutes, 1" over the flutes.)

Structural Concrete

Poured-in-place concrete slabs shall be covered with a minimum 3/8" (10 mm) of Rapid Floor Plus, Rapid Floor Ultra or Commercial Topping using a 1.4 mix design. The concrete slab must be 28 days or older and free of grease or other contaminants.

Radiant Heat Floor Systems

Rapid Radiant® can be used as a thermal mass over low temperature radiant heat floor tubes that do not exceed a maximum operating temperature of 150 °F (66 °C). Rapid Radiant is installed at a thickness of 3/4" (19 mm) over the outside diameter of the tubing.

UNDERLAYMENT APPLICATION

Pouring of Rapid Floor Systems underlayments can be scheduled after the installation of drywall depending on job conditions. For best results, installation after drywall is recommended to minimize damage to installed underlayment and to complete fire and sound seals.

Rapid Floor Plus, Rapid Radiant, Rapid Floor Ultra and Commercial Topping may be installed before drywall. Please refer to General Contractor notes below:

- For wood frame construction, the specifications outlined above are mandatory.
- Rapid Floor Plus, Rapid Radiant, Rapid Floor Ultra and Commercial Topping are subjected to more construction abuse when installed prior to drywall. You will find that the surface may get nicked, gouged, or slightly damaged in areas of heavy traffic. This does not denote a failure of the underlayment, but it may lead to some additional floor prep for the flooring contractor.

Install Rapid Floor Systems underlayments at specified minimum thicknesses spreading and screeding to a smooth surface. Place as continuously as possible until installation is complete so that no underlayment slurry is placed against slurry that has obtained its initial set, except at authorized joints.

DRYING CONDITIONS

Before, during and after installation of a Rapid Floor Systems underlayment, building interior shall be enclosed and maintained at a temperature above 50 °F (10 °C) until structure and subfloor temperatures are stabilized.

Rapid Floor Systems underlayments are inorganic and provide no source of nutrients to sustain mold growth. Prolonged contact of moisture with other construction materials, however, can result in mold growth. To avoid growth of mold on construction materials such as wallboard, drywall compound and even dust, it is vital to maintain a low relative humidity both before and after placement of Rapid Floor Systems underlayments.

The general contractor must provide and maintain correct environmental conditions to keep the building clean and dry, and protect against infestation of moisture from a variety of potential sources. Moisture can be introduced by other trades through spillage, tracked in mud and rain, plumbing leaks, etc. Often stored in damp conditions, building products may arrive on site laden with moisture that releases after installation. Outside sources such as rain, snow, wind, etc. can also increase moisture levels.

Controlling moisture levels in the building, through appropriate trade sequencing and prevention of potential damage by other trades, is the responsibility of the general contractor. The general contractor must supply mechanical ventilation and heat if necessary. These controls fall under the scope of work of the general contractor — not Maxxon Corporation or the Rapid Floor Systems underlayment installer.

TESTING

For gypsum underlayments, compressive strength testing must be performed in accordance with modified ASTM C472. Before independent sampling, contact the Maxxon Corporation quality control department to ensure that proper procedures are followed.

LIMITATIONS

During construction, general contractor must place temporary wood planking over underlayment wherever it will be subjected to heavy wheeled or concentrated loadings. Rapid Floor underlayments are not to be used on or below grade, except over well drained structural substrates. They should also not be used in areas that have prolonged contact with water. The typical maximum depth for gypsum underlayments is 3" (76 mm). For depths greater than 3" (76 mm), contact your Rapid Floor Systems applicator.

STRUCTURAL AND APPLICATION CONSIDERATIONS

1. Rapid Floor Systems underlayments are suitable for interior applications only and must be covered by a finished floor material. For detailed instructions on attaching finished floor materials, request the brochure "Procedures for Attaching Finished Floor Goods to Maxxon Underlayments." It is the responsibility of the floor goods installer to determine the compatibility of their product with a particular floor underlayment.
2. Rapid Floor Systems underlayments are not designed for use in the following situations:
 - a. On or below grade unless the floor slab and subground walls have been water-proofed
 - b. Continuous contact with water
 - c. Applied to a plastic vapor barrier
 - d. Under gymnasium floors, except Rapid Floor Ultra
3. Rapid Floor Systems underlayments cannot resist stresses caused by sudden structural movement.
4. The structural subfloor and floor joist must both comply with manufactures' maximum span criteria. Typically a deflection limitation of L/360 is adequate for Rapid Floor. Some floor coverings may require a stiffer floor system. Rapid Floor is non-structural and therefore cannot

be expected to reinforce structurally deficient subfloors. Necessary allowances should be made for expected live, concentrated, impact, and/or dead loads including the weight of finished floor goods and setting beds.

5. Expansion joints in all types of work shall be brought through the underlayment.
6. When applying wood flooring, glue only laminated wood or parquet to the new underlayment.
7. Maxxon underlayments are "breathable" and not a vapor barrier. The general contractor, architect, specifier, or building owner shall test slabs-on-ground or elevated slabs for MVER (ASTM F1869-09) or RH (ASTM F2170). If the MVER or RH of the concrete substrate exceeds the floor covering manufacturer's respective requirements for the finished flooring system, the concrete must be treated with a damp proof membrane, such as Maxxon DPM, before installation of a Maxxon underlayment.

CODE LISTINGS

Rapid Floor Systems products have undergone various reviews to ensure compliance with building codes. Refer to the following evaluation reports for specific code compliance.

ICC-ES Legacy	Report No.	ESR-2540
ICC-ES Legacy	Report No.	93-60

U.S. Dept. of Housing & Urban Development Materials
Release No. 1286c

City of Los Angeles RR 25186

For customized CSI specs for Rapid Floor Systems Underlayments, contact your Rapid Floor Systems applicator, or visit our website: www.rapidfloor.com

Rapid Floor® Systems

A Reputation You Can Stand On®

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The Maxxon Green Mark

Maxxon products with this symbol are LEED-compliant and may help contribute toward valuable points for LEED project certification.



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