INNOVATION & COLLABORATION

YOUR SOURCE FOR MASS TIMBER

MAXXON® & Boise Cascade® COMMERCIAL SOLUTIONS

BUILD BEAUTIFULLY. **BUILD CONFIDENTLY.**

Mass timber construction has revolutionized the construction industry and gained a stronghold due to its sustainability, decreased construction time and captivating beauty. Raw materials are left exposed to see the natural wood in the building. Mass timber growth continues to gain in popularity for new construction as well as renovation for trendy offices and multifamily environments.

MAXXON®

MASS TIMBER EXPERTS

Maxxon recognized mass timber as an exciting new construction method when it began as an emerging trend in the United States. Its growing impact on the industry has only increased Maxxon's commitment to providing fire and acoustical solutions to meet the unique demands for mass timber. As the innovator of Gyp-Crete® underlayment and Acousti-Mat® sound control, Maxxon's expertise provides innovative solutions and confidence.

Boise Cascade®
COMMERCIAL SOLUTIONS

LEADERS IN WOOD PRODUCTS

Boise Cascade® has advanced the building materials industry for more than 60 years as one of the largest manufacturers of plywood and engineered wood products. Recent advances in engineering and manufacturing, along with a demand for sustainable structures places mass timber construction at the forefront of feasible and environmentally responsible solutions. Boise Cascade's leadership and innovative VersaWorks™ VLT panels for mass timber offer a pragmatic, beautiful and superior alternative to concrete and steel multifamily and commercial buildings.

SYSTEM PERFORMANCE RATINGS*

Because acoustical privacy is almost always one of the first factors cited in occupant satisfaction, it should be one of the first considerations when designing commercial and multifamily residences. The bare VersaWorks 6-3/8" VLT panel is STC 40 / IIC 25 and in combination with Acousti-Mat and Gyp-Crete meets all contemporary occupant expectations.

ICC G2-2010 GUIDELINE FOR MULTIFAMILY RESIDENTIAL ACOUSTICS

	LABORATORY SOUND RATING	FIELD SOUND RATING†
COMMERCIAL*	45 STC/IIC	40 FSTC/FIIC
CODE MINIMUM	50 STC/IIC	45 FSTC/FIIC
ACCEPTABLE PERFORMANCE	55 STC/IIC	52 FSTC/FIIC
PREFERRED PERFORMANCE	60 STC/IIC	57 FSTC/FIIC

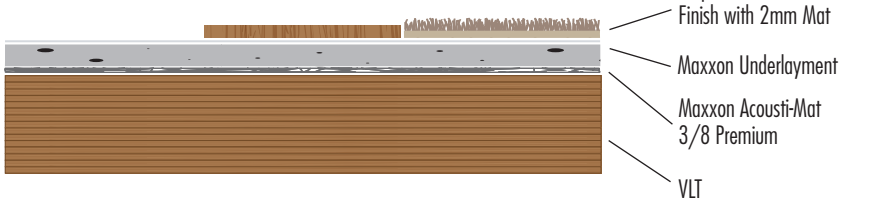
†The FSTC and FIIC terminology used by the ICC to refer to field testing has been superseded by the ASTC and AIIC in ASTM E336-19 and E1007-19.
*Commercial ratings are not regulated by code but are consistent with contemporary commercial construction performance.

COMMERCIAL

EXPECTED SYSTEM PERFORMANCE

SOUND CONTROL SYSTEM**	TOPICAL MAT	SOUND RATING
Acousti-Mat 3/8 Premium	None	STC 53 / IIC 45

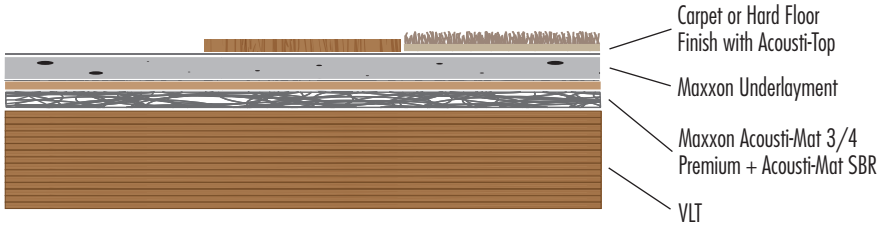
CODE MINIMUM



EXPECTED SYSTEM PERFORMANCE

SOUND CONTROL SYSTEM**	TOPICAL MAT	SOUND RATING
Acousti-Mat 3/8 Premium	2mm Mat	STC 53 / IIC 50

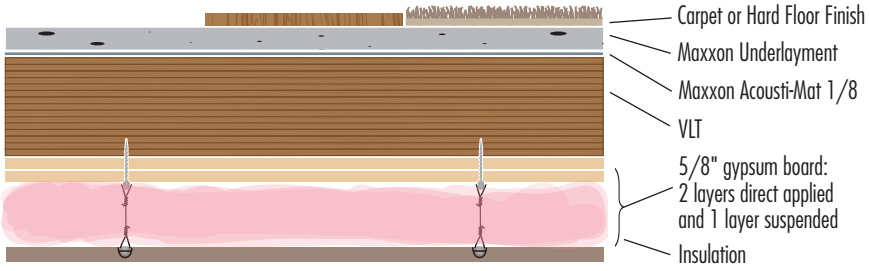
ACCEPTABLE



EXPECTED SYSTEM PERFORMANCE

SOUND CONTROL SYSTEM**	TOPICAL MAT	SOUND RATING
Maxxon Acousti-Mat 3/4 Premium + Acousti-Mat SBR	Maxxon Acousti-Top	STC 57 / IIC 54

PREFERRED



EXPECTED SYSTEM PERFORMANCE

SOUND CONTROL SYSTEM**	TOPICAL MAT	SOUND RATING
Maxxon Acousti-Mat 1/8 + insulated gypsum board ceiling	None	STC 60 / IIC 64

*Maxxon Underlayments and Acousti-Mats 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 selection and installation of all components of construction to ensure the ultimate designed acoustical performance. For more information, including type of floor covering used and additional system component information, contact Maxxon Corporation. All data presented on this page is backed by third party testing. For copies of relevant test reports, contact Maxxon Corporation.
**Maxxon Underlayments are selected based on the end use requirements. Considerations should at minimum include: end use sound code requirements, floor goods strength requirements, building frame type.

SOUND CONTROL BASICS

	IIC IMPACT SOUNDS 	**STC** AIRBORNE SOUNDS 
EXAMPLES	• Footsteps • Dropping/Falling Items • Chair Scrapes	• Television • Voices • Music
SOUND TRANSMISSION METHOD	Direct impact on a floor is transmitted through the building material and is radiated as sound.	Sound waves travel through the air and are transmitted through walls and floors.
HOW IT IS MEASURED	Impact sounds are measured using a tapping machine in which standard sized weights are dropped onto the floor in a constant rhythmic pattern. Sound levels in the room below are recorded at 16 frequency bands and calculated into one number identified as the IIC (Impact Insulation Class) Rating.	Airborne sounds are measured at 16 frequency bands through a floor/ceiling assembly. The resulting reduction in sound is calculated into a single rating identified as the STC (Sound Transmission Class) Rating.
MITIGATION FACTORS	ISOLATION BREAK — The basic principle behind impact noise reduction is decoupling: complete separation of building materials will reduce sound vibration transfer. The entangled mesh layer of an Acousti-Mat not only separates the mass timber floor panel and the underlayment, but also creates an air gap, improving the impact isolation performance even more.	MASS — Adding mass to a floor increases the amount of airborne sound that is blocked. Where the International Building Code requires encapsulation on the top of mass timber floors to meet fire requirements, a 1" gypsum topping is the minimum. Maxxon Underlayment minimum thickness is dictated by sound mat requirements.
ADDITIONAL CONSIDERATIONS	CEILING CAVITY — Adding a dropped ceiling assembly below a mass timber panel provides an air space proven to further reduce impact sounds, similar to traditional wood-frame construction. Mass timber assemblies with exposed wood ceiling or with gypsum board directly screwed for encapsulation need thicker sound mats and topping slabs to achieve similar isolation performance.	FLANKING PATHS — Rigid connections across isolation breaks, exposed ducts between separate spaces, continuous curtain walls, exposed, continuous columns and beams, or doors with undercuts for ventilation are often potential flanking paths. Flanking path noise is typically observed as high frequency sounds.

MAXXON®
Acousti-Mat®
SOUND MATS

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Boise Cascade®
COMMERCIAL SOLUTIONS

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