

TARAFLEX®

— SPORTS FLOORING —



Gerflor®

SELECT YOUR TARAFLEX®

SPORTS FLOORING FOR YOUR NEEDS

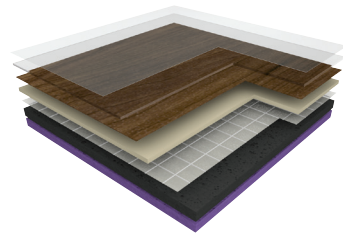
All Taraflex® cushion-backed sport floors meet the ASTM F2772 SHOCK ABSORPTION (SAFETY) REQUIREMENTS. Floors that meet ASTM F2772 standards are categorized into one of the five classes (C1/C2/C3/C4/C5) based on the level of shock absorption, which must be greater than 10%.

Triple Action ProtecSol® Surface Treatment on all Taraflex® Floors

MULTI-USE 6.2

DESIGNED FOR
MULTI-USE ACTIVITIES

- ▶ **ASTM F2772 Class 2:**
≥ 22% shock absorption
- ▶ Double-density CXP™ HD+ closed-cell foam backing
- ▶ Superior dimensional stability to rolling loads typically found in multi-purpose rooms



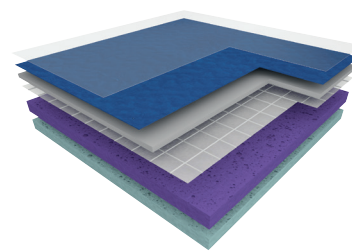
Thickness 6.2mm

SPORT M PLUS

FACILITIES REQUIRING
MULTI-SPORT & MULTI-PURPOSE

- ▶ **ASTM F2772 Class 3:**
≥ 34% shock absorption
- ▶ Dual-density foam
- ▶ Most popular choice for school districts throughout the US
- ▶ Available with:

GERFLOR
Dry-Tex
SYSTEM



Thickness 7.5mm

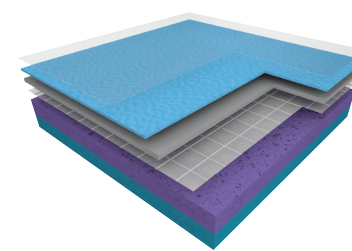
Triple Action ProtecSol® Surface Treatment on all Taraflex® Floors

SPORT M PERFORMANCE

HIGH PERFORMANCE
WITH IMPROVED SAFETY

- ▶ **ASTM F2772 Class 3:**
≥ 40% shock absorption
- ▶ Dual-density foam
- ▶ Provides optimal safety
- ▶ Ideal for sports competitions, multi-sport gymnasiums, and portable or permanent volleyball, pickleball and basketball courts
- ▶ Available with:

GERFLOR
Dry-Tex
SYSTEM

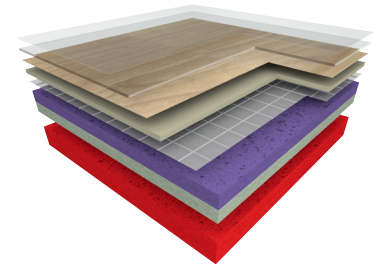


Thickness 9mm

SPORT M COMFORT

SUPERIOR INJURY
PREVENTION & COMFORT

- ▶ **ASTM F2772 Class 4:**
≥ 50% shock absorption
- ▶ Triple-density foam backing
- ▶ Offers the highest comfort and shock absorption to prevent long-term injuries and immediate injuries upon impact
- ▶ Ideal for intense training camps and repetitive jumping



Thickness 12.5mm

22%

34%

40%

46%

57%

LONG-TERM INJURY PREVENTION

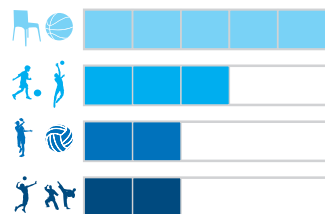
– SHOCK ABSORPTION LEVEL



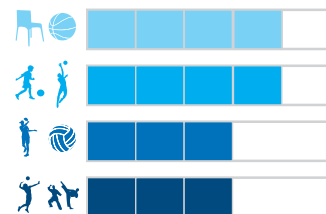
APPLICATIONS

Multi-Use
Multi-Sport
Gymnasiums
Colleges, Sports
Competitions & Clubs
Training Camps

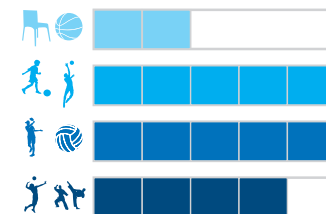
CLASS 2



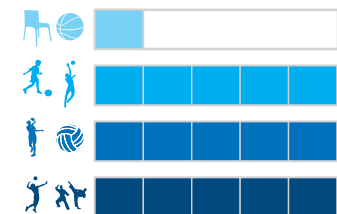
CLASS 3



CLASS 3

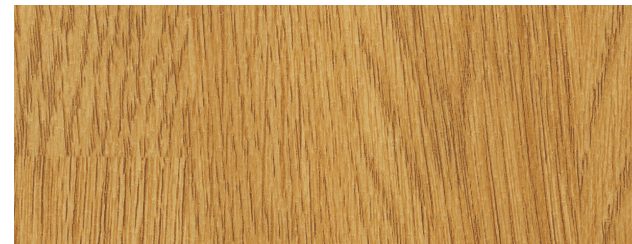


CLASS 4





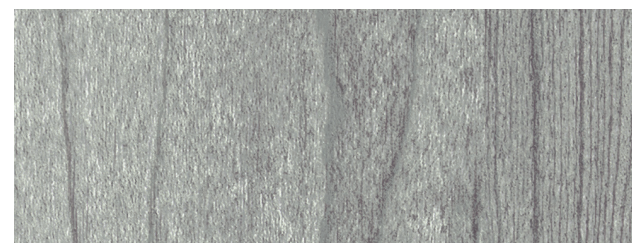
6350 Light Cherry



6375 Oak



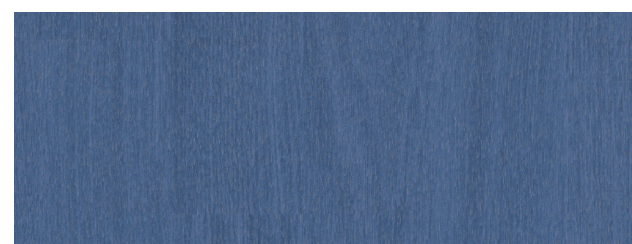
5763 Maple



6391 Wood Grey



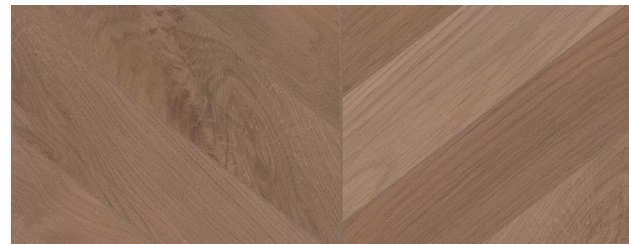
6390 Wood Red



4536 Wood Dark Blue



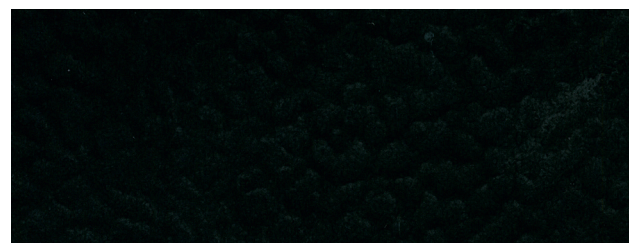
4535 Wood Forest Green



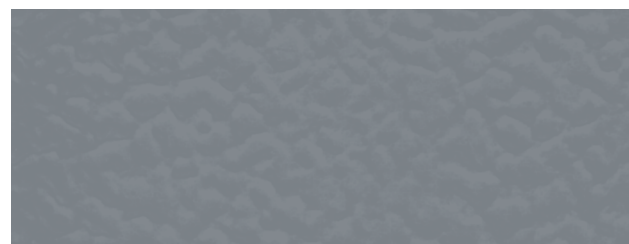
7020 Golden Herringbone



7019 Wood Crosscut



6830 Black



6873 Anthracite

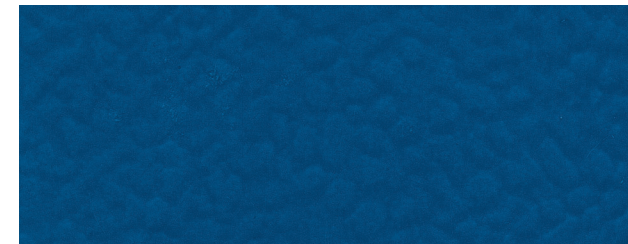


6758 Silver Gray

Sport M Plus & Sport M Comfort



6180 Red



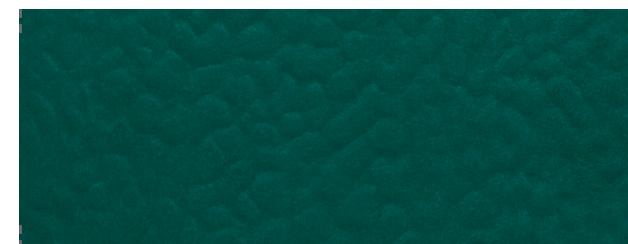
6430 Blue



0012 Navy Blue



6457 Blueberry



6557 Forest



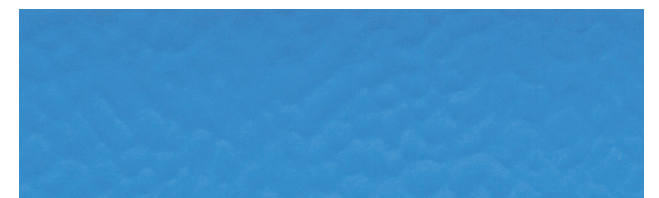
0006 Crimson



0003 Royal Blue



6211 Gold



6445 Lagoon



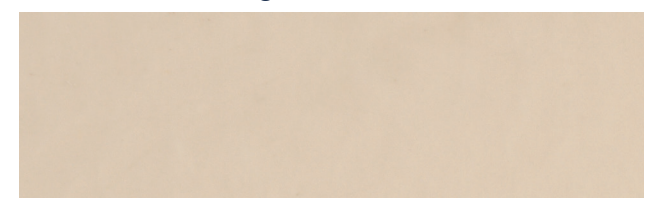
6570 Mint Green



6038 Terracotta



2404 London Light Blue



4345 Ecru



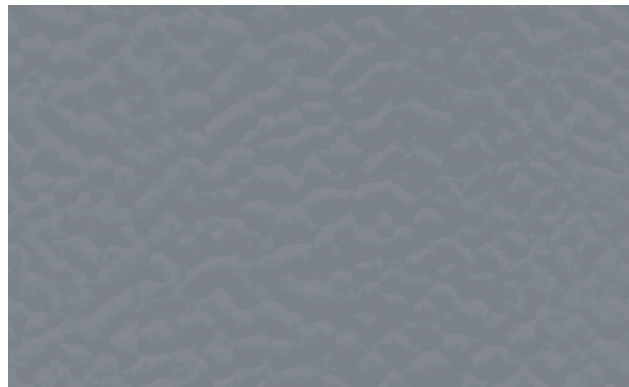
6375 Oak



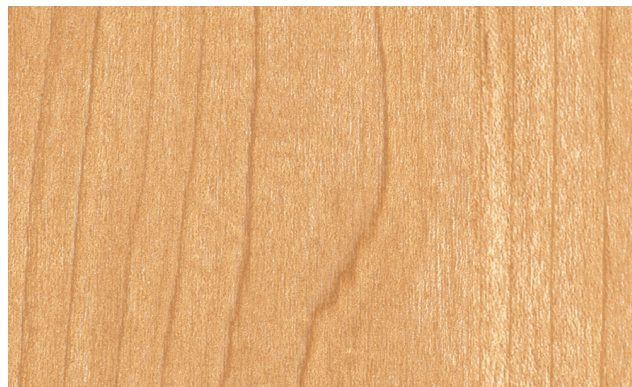
6211 Gold



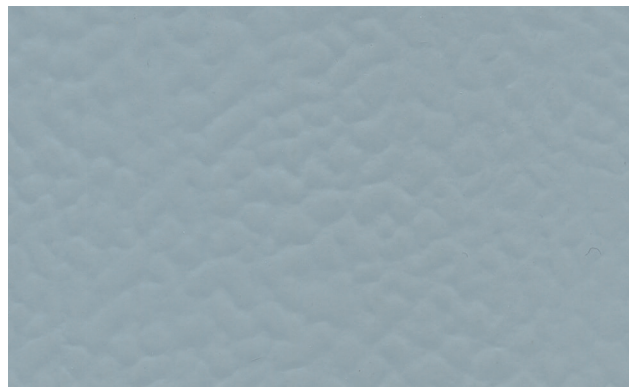
6350 Light Cherry



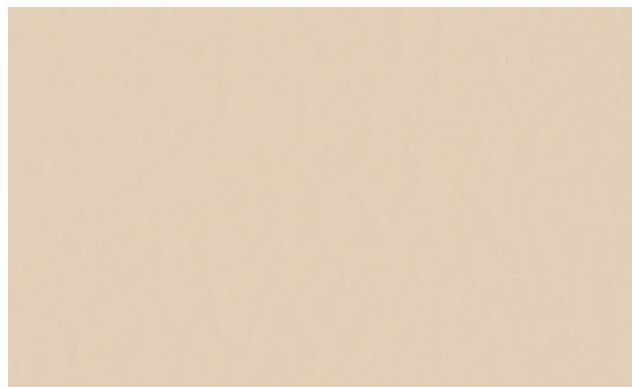
6873 Anthracite



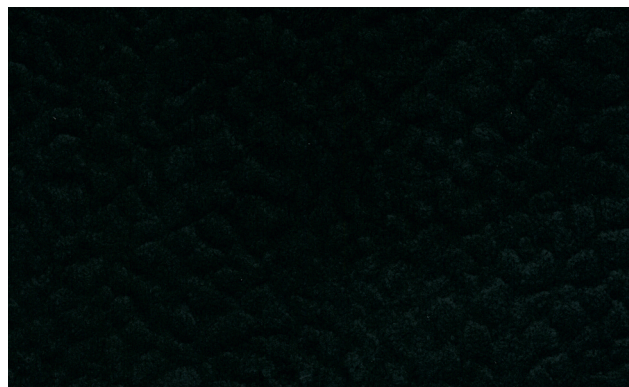
5763 Maple



6758 Silver Gray



4345 Ecru



6830 Black



6557 Forest



6570 Mint Green



6445 Lagoon



2404 London Light Blue



6038 Terracotta



6180 Red



0006 Crimson



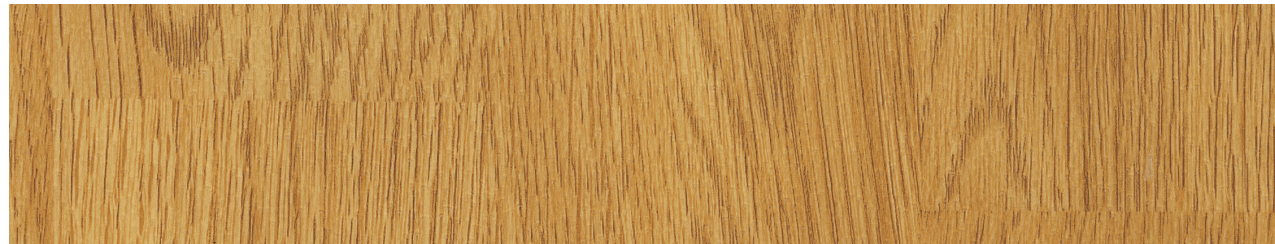
6430 Blue



0003 Royal Blue



6350 Light Cherry



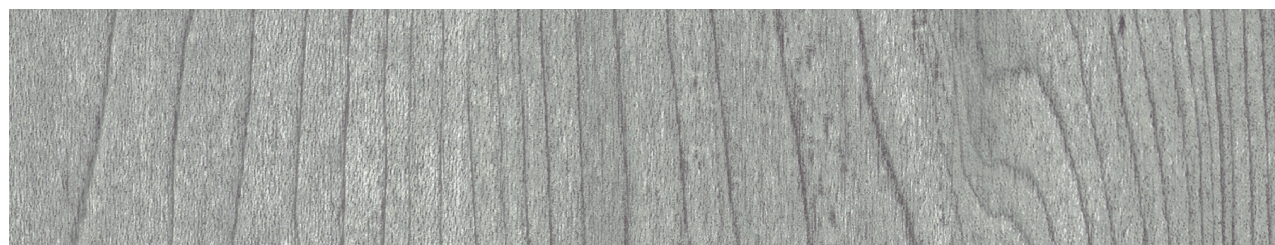
6375 Oak



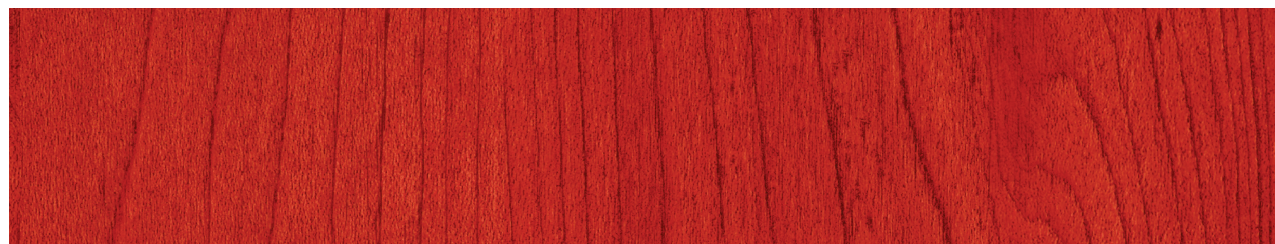
5763 Maple



6379 Wood Natural



6391 Wood Grey



6390 Wood Red



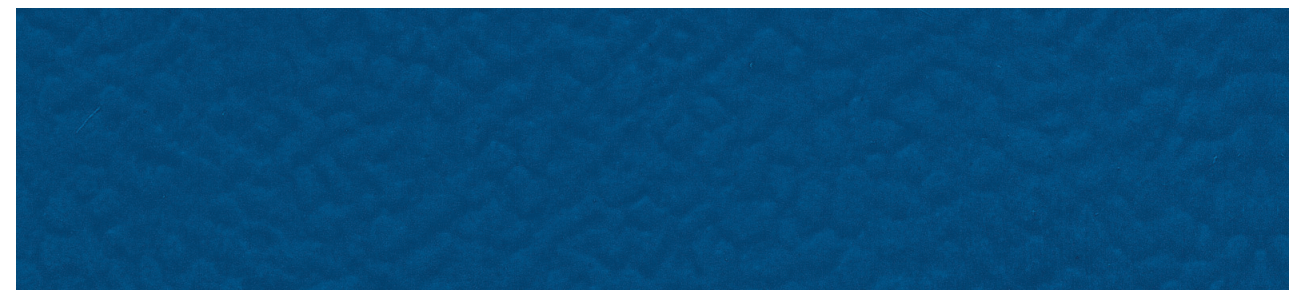
6392 Wood Chocolate



6844 Wood Black



6180 Red



6430 Blue



6758 Silver Gray



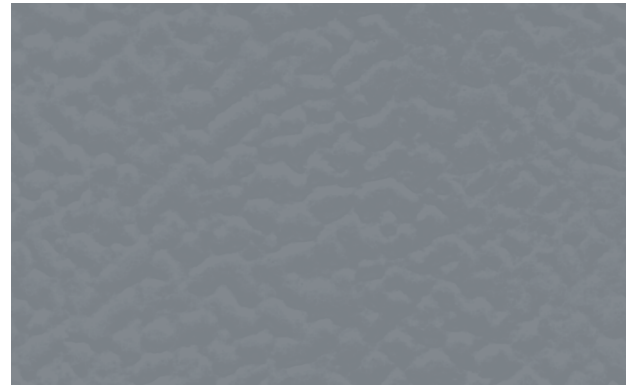
6375 Oak



4345 Ecu



6350 Light Cherry



6873 Anthracite



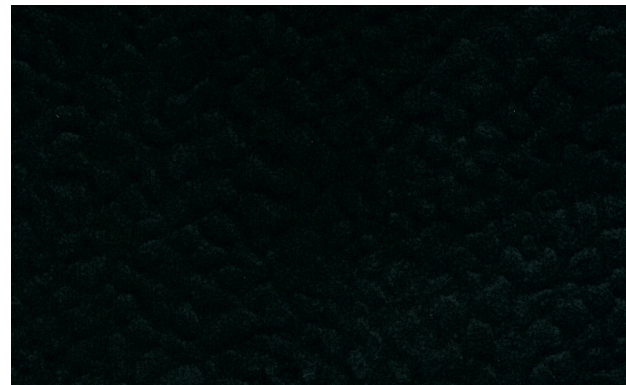
5763 Maple



6758 Silver Gray



6391 Wood Grey



6830 Black



6570 Mint Green



6430 Blue



6445 Lagoon



2404 London Light Blue



Designed to be used in combination
with BleacherBlok®



6211 Gold



6038 Terracotta



6180 Red

**CUSTOM DESIGNS USING
MY TARAFLEX® TECHNOLOGY**

Customizable capability offers limitless design possibilities, allowing you to choose from our exclusive custom designs or create your own. You can achieve seamless color matching, including custom colors to match school colors or your brand, and bring unique patterns to life. This results in one-of-a-kind spaces that reflect your vision and identity.

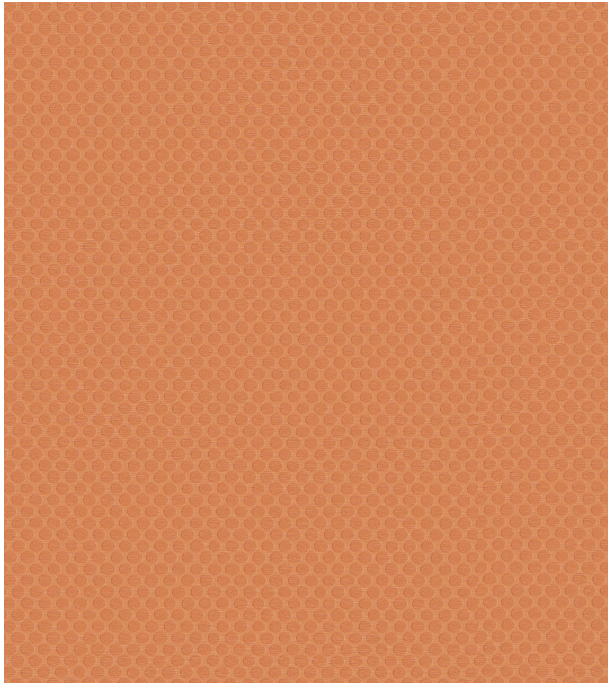
The designs below showcase custom designs and colors available across all Taraflex® product lines. Contact your local Gerflor sales representative for more information.



7019 Wood Crosscut



7020 Golden Herringbone



4537 Basketball Pattern



7755 Pure Concrete

UNLEASH YOUR CREATIVITY



7020 Golden Herringbone/7755 Pure Concrete



2018 & 2019 Men's NCAA National Volleyball Champions

WHY TARAFLEX® IS THE PREFERRED SPORTS SURFACE

1 SAFETY

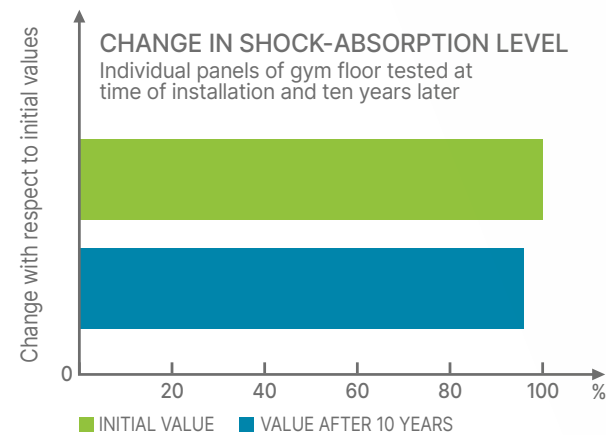
Shock absorption **minimizes the force** of impact on the body and reduces long-term injury risk.



All Taraflex® Sports Flooring meets ASTM F2772, the U.S. Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems. Request a certificate of compliance, and specify a safe sports floor today.

2 DURABILITY

Taraflex® technologies ensure long-lasting **HIGH PERFORMANCE**.



3 OUR SUSTAINABILITY COMMITMENT

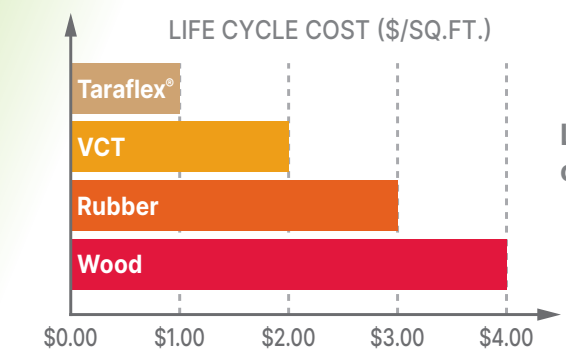
New eco-design sets the standard for sustainability, with an average of 58% **bio-based and recycled content**. Providing a foundation for growth without compromise, Taraflex® ensures that every athlete can reach their full potential.



Phthalate-free

4 RETURN ON INVESTMENT

Annual cost of a 10,000 sq. ft. gymnasium



Life Cycle Cost = Initial cost + (annual and special periodic maintenance x life expectancy) + size of floor + life expectancy

5 THE GLOBAL STANDARD

Exclusive partner of major sports events

Supplier of the Olympics since 1976 & Paralympics since 2012.



Gerflor is committed to increasing the use of sustainable materials across its product lines.



Now manufactured with an average of 58% bio-based and recycled content, including bio-based material made from non-food soy waste that would otherwise end up in landfills. Its 100% phthalate-free production process further supports environmental responsibility, delivering a more sustainable solution without compromising performance.

This unique combination sets Taraflex, powered by Gerflor, apart in the sports flooring industry. No other company in the industry offers the same benefits.

Taraflex®: Proven Protection for Safer Spaces

Taraflex® sports flooring with ProtecSol® treatment offers advanced protection you can rely on. Tested to meet industry-leading standards, Taraflex® delivers both antiviral and antibacterial performance:

- ▶ ISO 21702 – Inhibits growth of virus at 99.7% just after 2 hours
- ▶ ISO 22196 – Inhibits spread of infections at 99%

By combining superior hygiene performance with durable, high-performance sports flooring, Taraflex® helps create cleaner, healthier environments for schools, gyms, and healthcare facilities.

Protection you can count on. Performance you can trust.



Project: Oak Park Community Center
 Architecture Firm: Dahlin Group
 Photo Credit: Misha Bruk

The first LEED® Gold Certified building in Sacramento, CA



Grow into a champion.

From club-level play to the NCAA championships to Olympic competition, Taraflex® supports athletes at every step of their journey. Remarkably durable and engineered for superior impact protection, all Taraflex® sports flooring keeps players safe as they develop their skills. And, our new eco-design sets the standard for sustainability, with 58% bio-based and recycled content. Providing a foundation for growth without compromise, Taraflex® ensures that every athlete can reach their full potential.



"We wanted either Taraflex® or wood. We selected Taraflex® since it's accepted by FIBA (International Basketball Federation), and we've played on it before. It is the closest thing to a wood court. We don't leave anything to chance."

Don Ruedlinger,
President
Youth Basketball of America



The Largest Taraflex® Basketball Installation in the World
Project: Youth Basketball of America
25th Annual National Championship
Owner: Orange County Convention Center

Gerflor®

TARAFLEX®

PROTECTION & COMFORT



All Taraflex® Sports Flooring meets ASTM F2772 safety standards for indoor sports floors. These floors are classified into five categories (C1–C5) based on shock absorption, which must exceed 10%.

| | Non Compliant | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 |
|----------------------|---|-------------------------------------|---|--|--|-----------------------|
| Shock Absorption | Below 10% | ≥ 10% to ≤ 21% | ≥ 22% to ≤ 33% | ≥ 34% to ≤ 45% | ≥ 46% to ≤ 57% | ≥ 58% |
| Vertical Deformation | Synthetic sport floors: Max 3.5 mm in all categories. Wood sport floors: Max 5.0 mm in all categories | | | | | |
| Ball Bounce | Min 90% rebound height (ball bounce) compared to concrete required for all categories | | | | | |
| Sliding Effect | Sliding coefficient value: between 80-110 in all categories | | | | | |
| Type of Use | ▶ Hallways ▶ Entry areas | ▶ Classrooms ▶ 80% Multi-purpose | ▶ 50% Multi-purpose ▶ 50% Sport activities | ▶ Competitive sports ▶ 80% Sport activities | ▶ Aerobics ▶ High-impact training ▶ Kindergarten | ▶ Custom solutions |
| Flooring Solutions | ▶ VCT ▶ Carpet ▶ Linoleum | | ▶ REC 45 ▶ REC 60 ▶ MULTI-USE 6.2 | ▶ REC 85 ▶ SPORT M PLUS ▶ SPORTS M PERFORMANCE | ▶ SPORT M COMFORT | ▶ Specialty solutions |



PickleCon 2024, Kansas City, MO
Photo Credit: Brooke Cerny Magnolia Pine Studios

TARAFLEX® BUILT FOR SAFETY & DURABILITY

DESIGNED FOR SAFETY AND PERFORMANCE

- ▶ **Enhanced Protection:** Taraflex® adapts to movement, reducing injury risk with twice the deformation around the foot for better stability and rotation.
- ▶ **Superior Playability:** Engineered for optimal performance while ensuring maximum safety.
- ▶ **Hygienic & Durable:** Antiviral and antimicrobial properties help prevent infections (ISO 22196 & ISO 21702). Built to last and easy to maintain.

THE INNOVATION BEHIND TARAFLEX® SPORTS FLOORING

ProtecSol®

An intelligent surface with the unique and patented triple-action ProtecSol®.

D-Max™

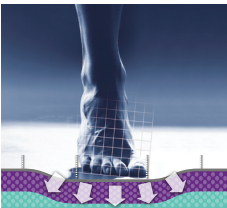
A unique complex made up of calendered PVC sheets reinforced with two layers of fiberglass.

CXP HD+

The high-density upper layer provides an outstanding compact foam. Double Density foam provides an extra layer of safety for all athletes.



SINGLE DENSITY FOAM



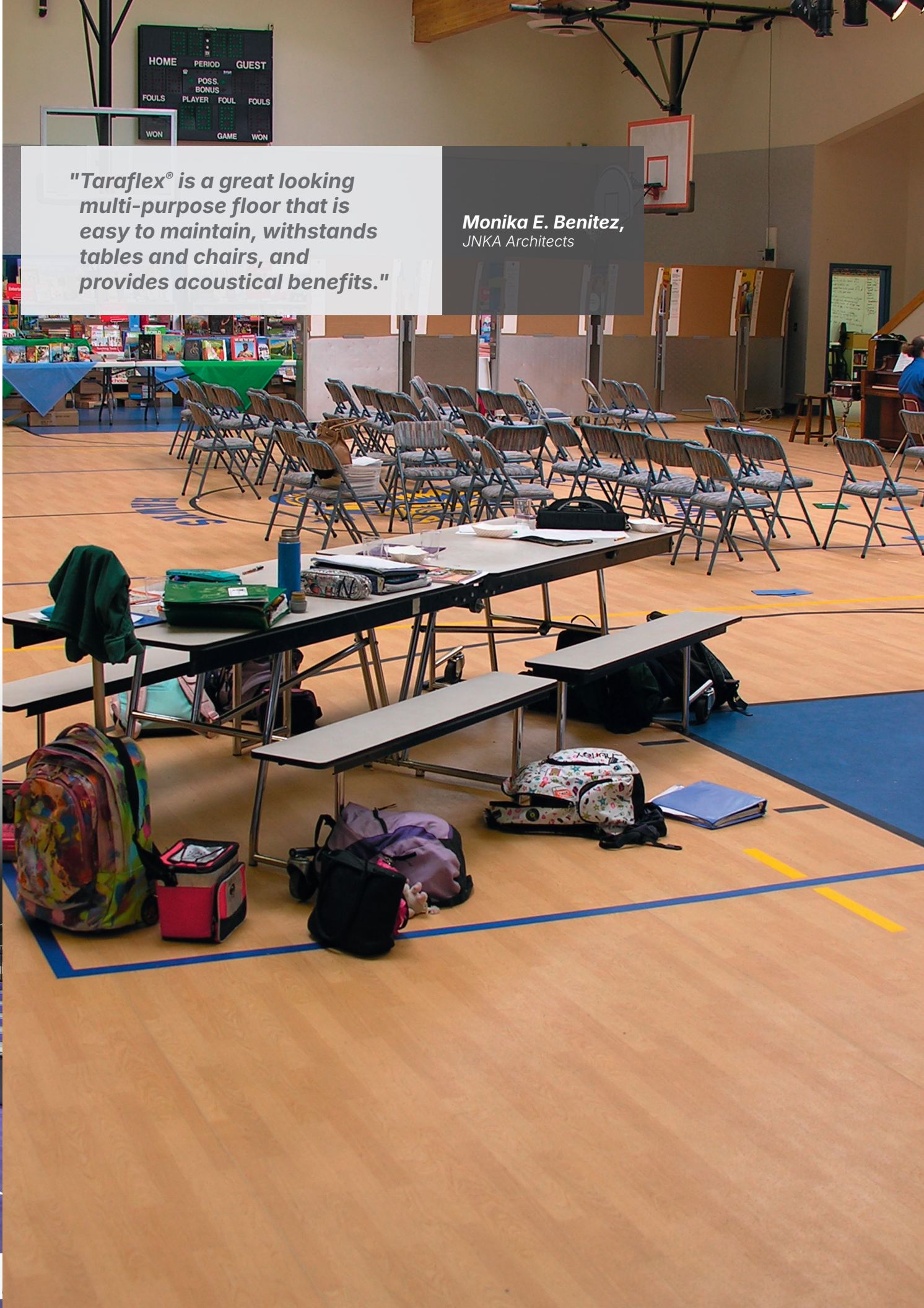
DOUBLE DENSITY FOAM

"Taraflex® is a great looking multi-purpose floor that is easy to maintain, withstands tables and chairs, and provides acoustical benefits."

Monika E. Benitez,
JNKA Architects



Kansas State University – Family Olympic Training Center,
Manhattan, KS



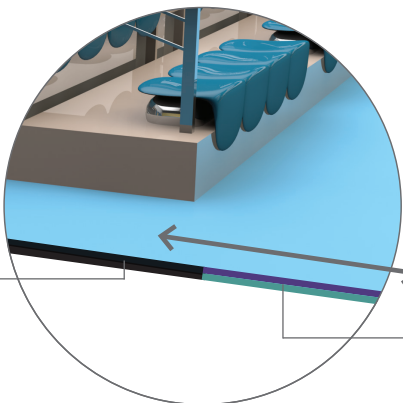
MULTI-SPORT

GYMNASIUM

Taraflex has a portfolio of solutions, each meeting the unique needs of a multi-sport environment.

BleacherBlok

The ideal solution for areas with large bleachers or other heavy equipment.



BleacherBlok: Compact, dense backing up to 750 PSI resistance

Surface looks continuous

Taraflex® Sport M Plus very high density (VHD) foam backing on the playing court

TARAFLEX® SPORT M PLUS
TARAFLEX® SPORT M PLUS WITH GERFLOR DRY-TEX SYSTEM
Ideal for areas for sports and other multi-purpose use.

GAMELINE PAINTS

Create a multi-sport floor with any configuration: basketball, volleyball, badminton, and more!

| | |
|--|--------|
| | Blue |
| | White |
| | Black |
| | Red |
| | Yellow |

TARAFLEX® SPORT M PERFORMANCE
TARAFLEX® SPORT M PERFORMANCE WITH GERFLOR DRY-TEX SYSTEM
Ideal for recreational tracks.

TARAFLEX® SPORT M COMFORT
For the best shock absorption.

MULTI-PURPOSE FUNCTION

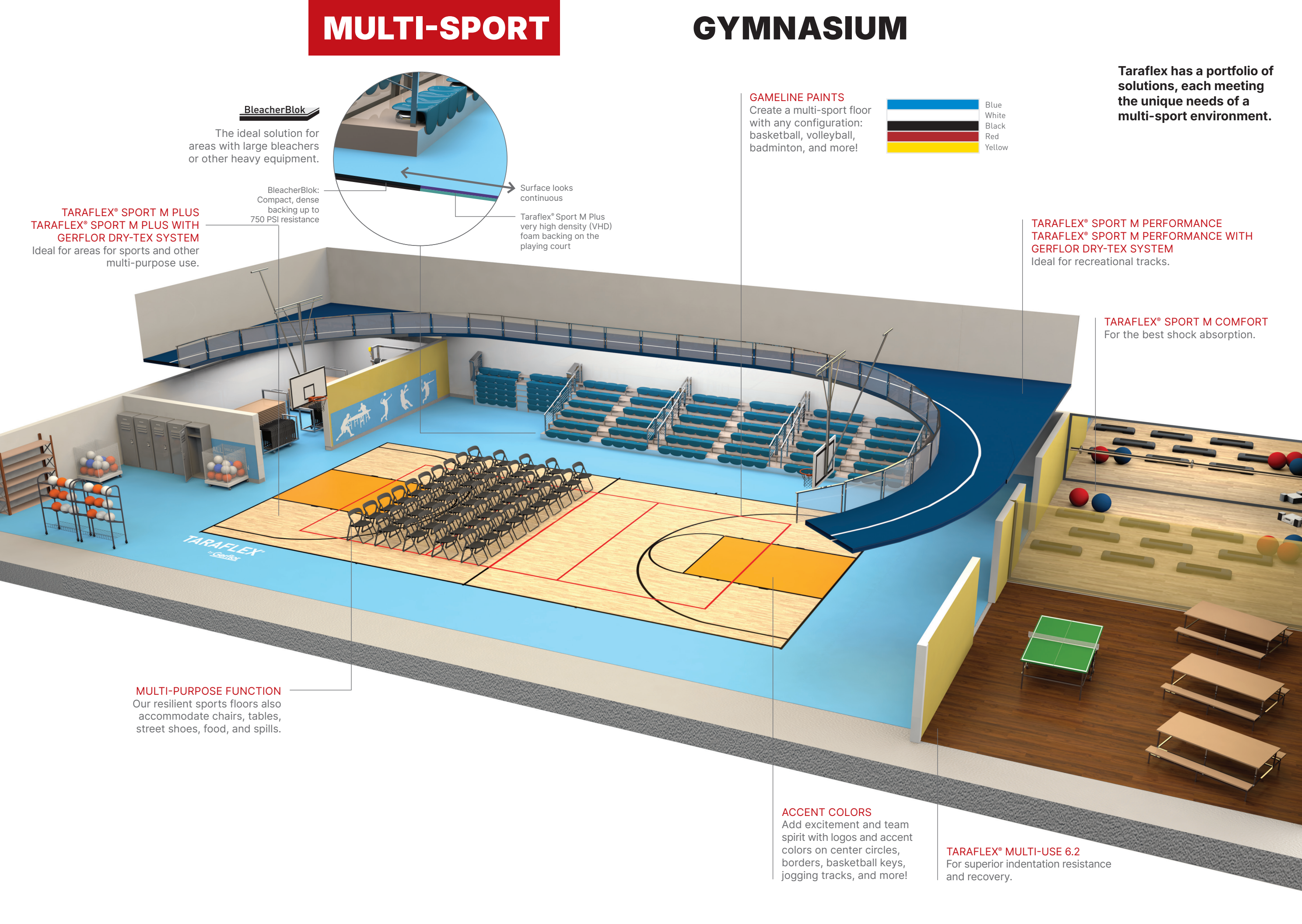
Our resilient sports floors also accommodate chairs, tables, street shoes, food, and spills.

ACCENT COLORS

Add excitement and team spirit with logos and accent colors on center circles, borders, basketball keys, jogging tracks, and more!

TARAFLEX® MULTI-USE 6.2

For superior indentation resistance and recovery.



TARAFLEX® VOLLEYBALL COURTS

The exclusive FIVB court for all volleyball competition

COURTS ARE TAILORED TO EACH FACILITY AND TEAM, DELIVERING THE PERFECT SURFACE FOR ELITE VOLLEYBALL PLAYERS.

Top sports flooring properties for players who pivot, slide, dive, and jump.

Why Taraflex®?

- ▶ **Reduces Friction Burns** – Protects players during dives and slides
- ▶ **Superior Shock Absorption** – Less strain on joints and muscles
- ▶ **Seamless Surface** – No gaps, ensuring consistent performance

Players are protected and always know how the floor will respond.



Project: Northwestern University

SET YOUR CLUB APART WITH A TARAFLEX® COURT!

Attract more players & gain more revenue

Provides the best impact protection for jumping, diving, and falls—keeping athletes safer than any other sports floor. Loved by players of all ages, it offers:

- ▶ A comfortable, burn-free surface
- ▶ Consistent performance across the entire court

PORTABLE AND SEMI-PERMANENT COURTS INSTALL OVER EXISTING HARDWOOD, OFFERING A FLEXIBLE SOLUTION FOR VOLLEYBALL TEAMS.

Recruit the best athletes & win more championships

- ▶ Safest Courts
- ▶ Fewer Injuries



Project: Houston Skyline Volleyball



"Taraflex® is the best volleyball surface in the world."



John Cook,
Former Head
Volleyball Coach,
University of Nebraska

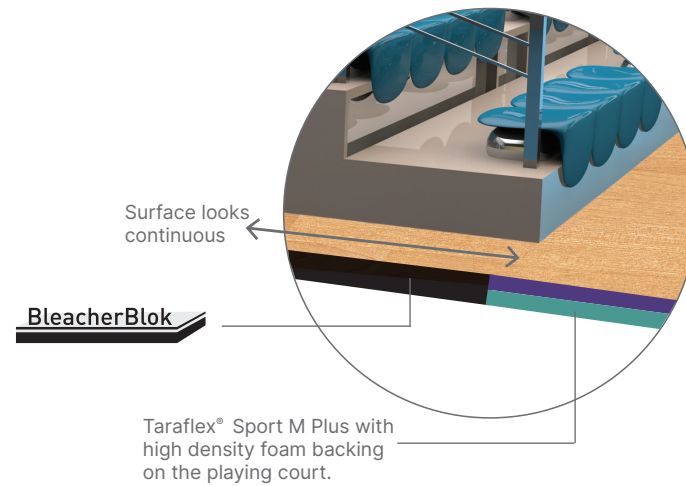


2024 Women's NCAA®
DI Championship Finals

TARAFLEX® ACCESSORIES

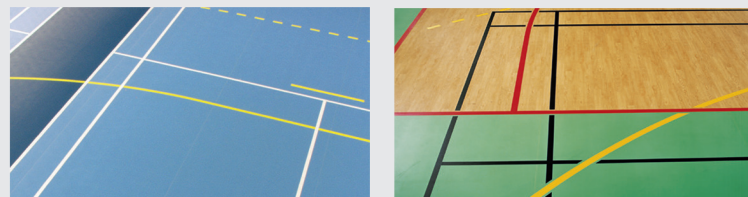
1. BLEACHERBLOK

- ▶ High-density solution to support the weight of bleachers
- ▶ Same wearlayer and surface colors create a continuous floor
- ▶ Tolerates rolling loads up to 750 PSI
- ▶ Compatible with Taraflex® Sport M Plus and Taraflex® Multi-Use 6.2
- ▶ Withstands up to 100% RH



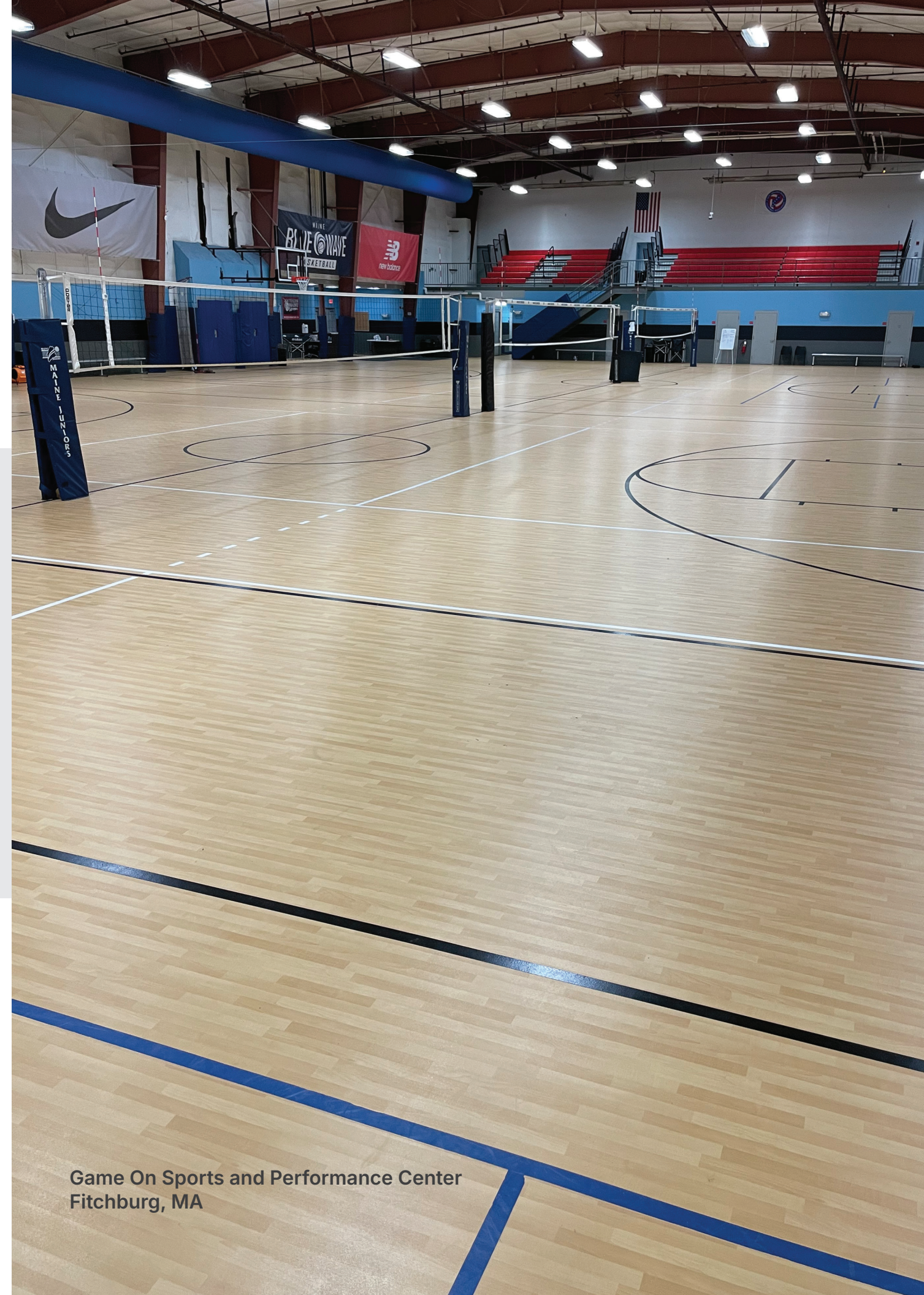
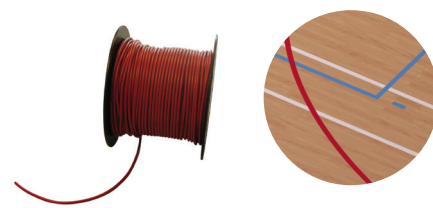
2. TARAFLEX® GAMELINE PAINTS

- ▶ Formulated to work with Taraflex® protective layer
- ▶ Custom colors available



3. OTHER ACCESSORIES

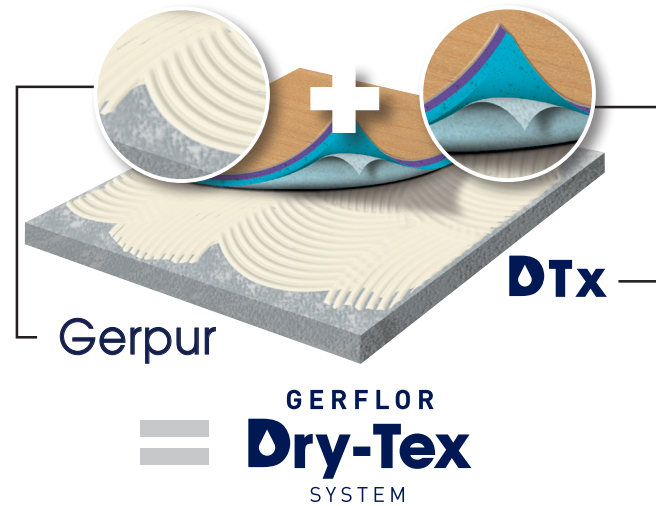
- ▶ Color Matched Welding Rods
- ▶ Adhesive Tape
- ▶ Adhesives
- ▶ Storage System



Game On Sports and Performance Center
Fitchburg, MA

FULL-SPREAD ADHESIVE INSTALLATION

A proven solution since 2009, designed to withstand up to 100% RH and 25 lbs Moisture Vapor Emissions Rate (MVER) of subfloor moisture.



HOW IT WORKS

- ▶ **The Gerflor Dry-Tex System** combines textile backing with CXP™ HD foam for a stronger adhesive bond to Taraflex® sports flooring.
- ▶ **GERPUR™** adhesive uses moisture-cured technology, allowing installation on new concrete just 28 days after pouring—no moisture or pH testing needed.

PRODUCT BENEFITS

- ▶ **Versatile** – Perfect for multi-purpose facilities
- ▶ **Cost-Saving** – No extra moisture barriers needed
- ▶ **Time-Saving** – No moisture or pH testing means faster installation
- ▶ **Durable & Reliable** – Strong adhesive bond resists heavy traffic
- ▶ **15-Year No Mold Guarantee** – Proven success in high-moisture areas

One Source | One System | One Solution



DRY-TEX SYSTEM

SAVE TIME & MONEY



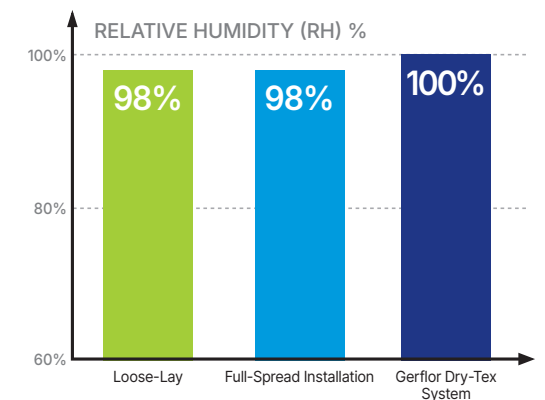
New Century Fieldhouse Johnson County Parks & Rec., Kansas

PLAN AHEAD & SPECIFY THE GERFLOR DRY-TEX SYSTEM

Avoid costly delays caused by high moisture in concrete slabs.

- ▶ The Gerflor Dry-Tex System, available on Taraflex® Sport M Plus and Taraflex® Sport M Performance, is the only sports flooring with built-in moisture mitigation.
- ▶ Its full-spread adhesive installation makes it ideal for multi-purpose gyms, handling tables, chairs, and rolling loads with ease.

HIGHEST MOISTURE TOLERANCE



INSTALL SOONER WITH FULL-SPREAD ADHESIVE

- ▶ Eliminates risk of trapping moisture, a major cause of mold development.
- ▶ Ideal in multi-use installation to avoid floor shifting and wrinkling under rolling loads.

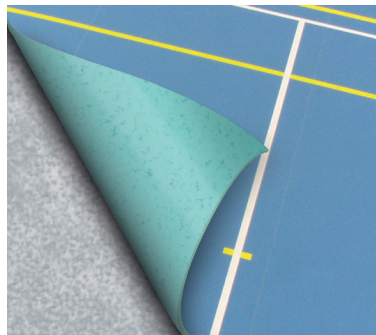
INSTALLATION METHODS



FULL-SPREAD INSTALLATION

For sport & multi-purpose application

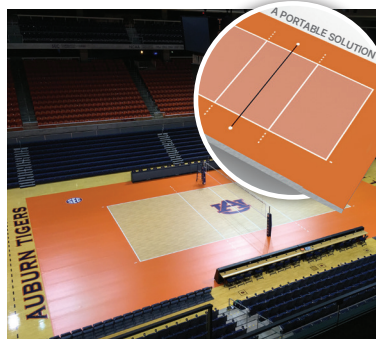
- ▶ Traditional full-spread adhesive up to 98% RH
- ▶ Full-spread adhesive up to 100% RH with Dry-Tex System
- ▶ Full-coverage spray up to 95% RH



LOOSE-LAY INSTALLATION

When gluing to the subfloor is not an option

- ▶ ISOLSPORT Slip Sheet System
- ▶ Renovations over existing flooring
- ▶ Moisture mitigation/tolerance up to 15 lb and 98% RH



PORTABLE INSTALLATION

For college arenas & tournaments

- ▶ Temporary courts for dedicated sports
- ▶ Accessories for easy set-up and storage

SCHOOL DISTRICT SAVES MONEY WITH DRY-TEX

"After extensively researching five sport floor manufacturers, we selected Taraflex® with the Gerflor Dry-Tex System to replace VCT in 10 gyms that had high moisture issues. It saved us over \$15,000 per school in additional mitigation costs—and the project was completed by the start of the school year. The district now has over 20 Taraflex® floors with the Gerflor Dry-Tex System."

Dennis Albanello,
Construction Supervisor
Rockwood School District



LOVB Atlanta First Serve 2025

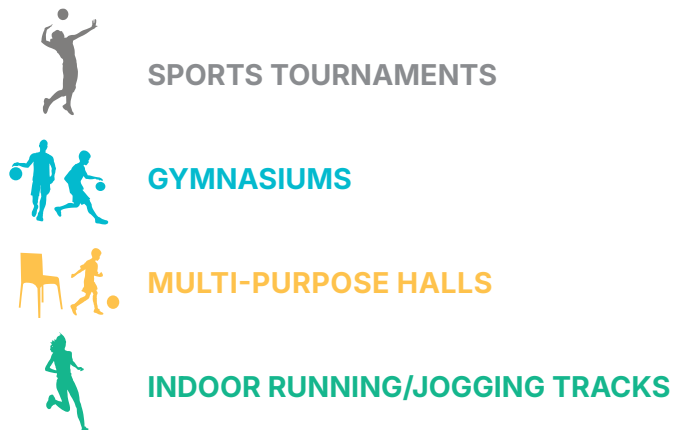
TARAFLEX® VERSATILITY

EASIEST SPORTS FLOOR TO MAINTAIN

- ▶ No wax FOR LIFE
- ▶ Wash it. Rinse it. DONE.
- ▶ Lowest total cost of ownership
- ▶ **Triple-Action ProtecSol® Surface Treatment:** proven for over 30 years

TABLES & CHAIRS: NO PROBLEM

- ▶ Maximizes gymnasium spaces during lunchtime, end-of-year exams, after-school programs, community gatherings, and local events
- ▶ Best wearlayer
- ▶ Superior indentation resistance and recovery
- ▶ Stain resistant and easy to maintain



TARAFLEX® TRUSTED PARTNERS

TARAFLEX® IS THE NO. 1 PREFERRED SPORTS FLOOR FOR MAJOR SPORTS EVENTS WORLDWIDE.

- ▶ Every day, 10 high-level matches are played on Taraflex® Sports Flooring.
- ▶ Taraflex®: The Official Championship Court of NCAA® DI Volleyball. Trusted by NCAA® Division 1 players and coaches, Taraflex® is the top choice for elite volleyball competition.
- ▶ Taraflex® is the world's leading sports surface, trusted for indoor events at the Olympic Games since Montreal 1976 and the Paralympic Games since 2012. It is the preferred choice for sports like handball, volleyball, badminton, and table tennis.



100 million ft² of Taraflex® installed in the USA for sports and multi-use activities.

200,000 gymnasiums have been fitted with Taraflex® Sports Flooring.

1 billion ft² have been installed worldwide. That's enough to cover 17,391 NFL football fields.

more than 3,500 top level matches are played on Taraflex® Sports Flooring every year.

over 150 NCAA DI volleyball teams call Taraflex® their home court.

| Description | | Standards | Requirements | TARAFLEX® Surface | TARAFLEX® Multi-Use 6.2 | TARAFLEX® Sport M Plus | TARAFLEX® Sport M Performance | TARAFLEX® Sport M Comfort |
|--|--------------|---|------------------|---|----------------------------|---------------------------|----------------------------------|------------------------------|
| Product Description | | | | | | | | |
| Surface Treatment | | – | – | ProtecSol® | | | | |
| Homogeneous Construction* | | – | – | – | D-Max™ | | | |
| Foam Backing | | – | – | – | Double Density CXP® HD+ | | | Triple Density CXP® HD |
| Total Thickness | | – | – | 0.08" (2.1 mm) | 0.244" (6.2 mm) | 0.30" (7.5 mm) | 0.35" (9 mm) | 0.47" (12 mm) |
| Wearlayer Thickness | | – | – | 0.08" (2.1 mm) | | | | |
| Weight | | – | – | 0.59 lb/ft² (2.9 kg/m²) | 0.86 lb/ft² (4.2 kg/m²) | 0.94 lb/ft² (4.6 kg/m²) | 1.1 lb/ft² (5.2 kg/m²) | 1 lb/ft² (5.1 kg/m²) |
| Roll Width | | – | – | 4' 11" (1.5 m) | | | | |
| Roll Length | Wood Designs | – | – | 86' 6" (26.4 m) | 67' 3" (20.5 m) | 86' 6" (26.4 m) | | |
| | Solid Colors | – | – | 67' 3" (20.5 m) | | | | |
| | My Taraflex® | – | – | 67' 3" (20.5 m) | | | | |
| Sport Properties | | | | | | | | |
| Shock Absorption (Safety) | | ASTM F2772 | Class 1 | – | Class 2 | Class 3 | Class 3 | Class 4 |
| Vertical Deformation | | ASTM F2772 | ≤ 0.12" (≤ 3 mm) | – | Pass | | | |
| Sliding Effect | | ASTM F2772 | 80 - 110 | Pass | | | | |
| Ball Rebound | | ASTM F2772 | ≥ 90% | ≥ 96% | | | | |
| Anti-Friction Burns | | – | – | ProtecSol® | | | | |
| Technical Characteristics | | | | | | | | |
| Resistance to a Rolling Load | | EN 1569 | ≥ 1500 N | Meets Requirements | | | | |
| Chemical & Stain Resistance | | ASTM F925 | – | | | | | |
| Fire Rating - Flame Spread | | ASTM E648 | Class 1 | | | | | |
| Fire Rating - Flaming | | ASTM E662 | 450 or less | | | | | |
| Fire Rating - Non-Flaming | | ASTM E662 | 450 or less | | | | | |
| Environment Health & Safety | | | | | | | | |
| Bacterio-Static** | | ISO 22196 | – | Inhibits spread of infections at 99% | | | | |
| Viro-Static** | | ISO 21702 | – | Inhibits growth of virus of 99.7% after 2 hours | | | | |
| Manufacturing Plant Certifications | | ISO 9001, 14001, 50001 | – | Quality, Environment, Energy | | | | |
| Environmental Product Declaration (EPD) | | LEED v4 M+R | – | Product-Specific Type III | | | | |
| Material Ingredients: Health Product Declaration (HPD) | | LEED v4 M+R | – | Self-Declared | | | | |
| No Harmful Chemicals | | European Chemicals Agency (ECHA) | – | 100% REACH Compliant | | | | |
| Sourcing of Raw Material: Recycled Content | | Average Pre-Consumer Content | – | 58% | 38% | 34% | 32% | 31% |
| Indoor Air Quality | | California Standard 01350 | – | FloorScore® Certified | | | | |
| Production Waste | | In-Plant Recycling | – | 100% Manufacturing Waste Recycled | | | | |
| TVOC after 28 days | | ISO 16000-6 | – | < 100µg/m² | | | | |
| Warranty | | 15-year limited manufacturer warranty when installed in accordance with Gerflor's installation instructions | | | | | | |

*Rubber leaves indelible stains on synthetic floorings. Do not use mats with rubber backing and replace tubular furniture feet with those made of PVC or polyamide. Place mats of sufficient length at entrances to reduce outside sources of dirt.

**The best defense against the spread of infections is the implementation of an effective cleaning method.

