

PRODUCTS

BROCHURE



Engineering quality surfaces to meet
the highest standards in the industry.



PERFORMANCE BY DESIGN



Mondo has been a family owned company since its humble beginnings in Gallo D'Alba, Italy in 1948. Two entrepreneurial brothers, both barely out of their teens, Elio and Feruccio Stroppiana started working in the basement of the family home, enamored with the prospect of building their own business and armed with the fascination of using rubber as their primary raw material.

Their first creation was a Pallone Elastico, a sports ball made for a game played in the courtyards of the local villages but their interests soon focused on larger initiatives, namely the creation of the first rubber flooring production line in 1955. Their commitment to excellence, their determination to succeed as well as their gracious personalities and leadership inspired generations of employees to build a company that has evolved into a diverse and adaptive multi-national entity.

Mondo's global success has been built upon our investment in research and development, from the raw materials to our final products and including the equipment and processes that are necessary to meet the changing needs and expectations of our customers. Mondo acquired Artigo, a division of Pirelli in 1992. Pirelli used advanced technology and design concepts coupled with Mondo's skills and experience to make it a formidable union. Artigo is the purveyor of the Mondo brand outside of North America.

MONDO RUBBER FLOORING

Rubber is able to express an emotion, transmit a taste for beauty and tell a story of excellence and enthusiasm. We seek practical and high-performance solutions, characterized by an appearance that is able to interpret a contemporary vision of space. Extreme durability, increased comfort, reduced noise and improved safety. You can expect your Mondo Contract Rubber flooring to enhance any space you desire.



Raw and synthetic rubber, coconut fibers and color pigments used in the production of Mondo Rubber Flooring.

ALL BEGINS WITH RUBBER



Raw rubber after mixing.

Rubber is a raw material with few rivals where resilience and basic elasticity are concerned. Using advanced processes that perfect its characteristics, we are able to increase its technical performance. Mineral fillers, natural pigments and vulcanization accelerators are added to the rubber in varying quantities depending on the specific product that we wish to obtain. Mixing is the most important stage, fundamental for determining the right consistency of the material, but also for ensuring a uniform distribution of the color. The raw rubber, left to cool and cut into swathes, already has an elastic aspect albeit in a form that is still rough and irregular.



The production has always taken place in Italy: from the historical plant south of Milan in the 60s, in 1995 we moved to Cairo Montenotte where production is now concentrated. The plant has grown over the years, adding a modern, high-performance “mixing room” to the department where the flooring is embossed. We work twenty-four hours a day, for minimum of 5 days a week, to avoid interrupting the process. This schedule best uses the efficiency and quality advantages of our modern vulcanizing lines.

The mix is then sent to the production line to begin the process that makes it possible to obtain a sheet between 2 and 5 mm thick. After the calendaring operation, which precisely determines the thickness of the flooring, the material is subjected to vulcanization, continuously passing between metal cylinders heated to high temperatures.



The exclusive process, engineered within the group, customized the assembly of various units of machinery. Rubber flooring production follows precise and exacting protocols and benchmarks. Unlike PVC, the essential nature of rubber is very specialized. It demands more precision than other resilient flooring materials. While many production stages, like vulcanization, have undergone major improvements in reduction of waste, the core processes have remained consistent and steadfast since inception.

With our Mondo innovative technology, we can now fully integrate flooring production into sheets. Mondo retains the title of the widest rubber sheet good, reducing the total number of seams for every project. Today, the vulcanization lines are simply fed with the mix and 60m further along the sheets of finished product are automatically packed, reducing the impact of labor and energy consumption.



© Photos by Valentina Sommariva

Rolls of raw rubber after compounding (pre-vulcanization) to produce Kayar K73.

We are proud to have succeeded in creating a system that allows us to automatically recover the waste generated during production. This excellent example of respect for the environment, a primary inspiration of our research, is made even more credible synergized with cost reductions, according to the principles of reduce-reuse-recycle.

Another important development has been the introduction of an innovative surface treatment applied during the production process. This proprietary coating, Mondoshield, is applied to the majority of our smooth surface products; it dramatically reduces primary and secondary maintenance regimens, which translates into lower life cycle costs, reduced chemical usage and energy consumption.

In addition, we targeted improvements to our primary product formulas. The emphasis in recent years has been on improving their environmental characteristics, and in particular, minimizing VOC (volatile organic compounds) emissions.



From the very beginning, Artigo's production and R&D capabilities have strived to provide practical and high-performance solutions, with enhanced aesthetics that are able to interpret a contemporary vision of space. Unique designs and textures form distinctive traits of each of our products and are the result of the specific cylinder or mold utilized during production.

These exclusive qualities that now make Artigo a dynamic and sustainable partner for any design orientated architectural project in which a solution associating resilience, flexibility and durability over time is required, but that is also able to express an emotion, transmit taste for beauty, tell a story of excellence and enthusiasm.

Information from the Artigo production plant in Cairo Montenotte, Italy. Photos by Valentina Sommariva.



© Photos by Valentina Sommariva

Inside the Cairo Montenotte (Italy) plant.





THE DYNAMICS OF RUBBER FLOORING

Virgin rubber is a raw material with few rivals where resiliency is concerned. Mondo's extensive research and development has allowed us to capture and retain harmonious synergies between surface, body and environment. Using raw materials, we combine and optimize design, performance, comfort and safety benchmarks of our surfaces in order to create spaces that enhance our well-being. Mondo is a name synonymous with quality and exceptional performance characteristics.

PRODUCT CHARACTERISTICS

- Durability
- Comfort
- Design
- Safety
- Ease of maintenance
- Sustainable



DESIGN

Rubber flooring was long thought of as the studded rubber tiles used mostly for their practicality. Mondo has been able to use proprietary state-of-the-art manufacturing processes and equipment to push the limits of the design and color possibilities of rubber flooring. Innovative design solutions are the result of an open dialogue with planners and designers, some quite well known such as Ponti, Mollino, Albin and Sottsass. These collaborations resulted in products such as Kayar, where the actual surface of the material was modified by adding coconut fibers to its composition. Massetto, a recent product, has a smooth surface featuring a spatula effect, which exudes the imperfections typical of artisan craftsmanship.

PRODUCT CHARACTERISTICS

- Smooth or textured surfaces
- Artisanal craftsmanship
- Unique wear layer compositions
- Use of natural rubber
- Sustainability





Photo Credit: orphisme.ca



WELL-BEING

Rubber is obtained from two sources. It is either sustainably extracted from the Hevea tree or made from synthetic materials. Mondo rubber flooring does not contain toxic substances such as PVC, heavy metals, halogens, asbestos, formaldehyde, cadmium or volatile plasticizers. Due to our manufacturing process, Mondo Contract Rubber Flooring is naturally bacteria and microbe resistant. VOCs are also not a concern, as Mondo Rubber Flooring is certified in accordance with GREENGUARD Gold, the highest level of VOC compliance in North America. Mondo Rubber flooring is LBC – Red List Free and can be recycled after its long useful life.

PRODUCT CHARACTERISTICS

- VOC Compliance - GREENGUARD Gold
- LBC – Red List Free
- No PVC or heavy metals
- Rapidly Renewable
- Bacterial and microbial resistance.



HIGH PERFORMANCE

At the onset, high performance is coupled with extraordinary durability characteristics in all Mondo contract surfaces. Traditionally, rubber has been used throughout the past century in the most arduous of applications. Natural resiliency, the vulcanization process and Mondo's proprietary dual durometer construction allow us to customize the performance characteristics of our floors including optimum impact absorption, anti-fatigue properties, indentation resistance, rolling load resistance, sound absorption and stain and chemical resistance, in addition to a Class 1 fire rating. The unique combination of performance characteristics of our flooring makes it the ideal choice for high-traffic areas, or those areas that endure high static or dynamic loading.

PRODUCT CHARACTERISTICS

- Durability
- Comfort
- High static and rolling load resistance
- Sound Absorption





MONDOSHIELD UV CURED SURFACE TREATMENT

All Mondo smooth commercial rubber flooring products are treated with Mondoshield. Mondoshield is a factory applied polymeric surface treatment that has been cured by UV lights on the production line. Unlike traditional coatings and waxes applied to floors applied directly on-site, Mondoshield was designed with longevity in mind and is an integral part of the manufacturing Mondo's commercial smooth rubber flooring products.

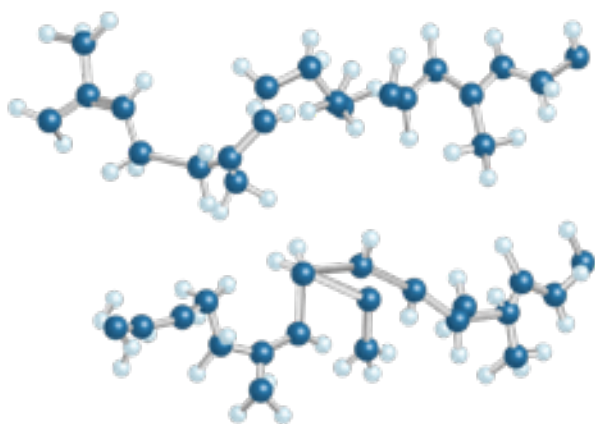
The factory applied surface treatment is designated to be low-gloss and requires no special care. Basic floor maintenance with a neutral floor cleaner is all that is recommended to preserve the appearance of your Mondo flooring product.

Mondoshield will provide many added benefits, including increased resistance to wear, scratching and staining, which will serve to reduce a facilities overall maintenance efforts. In addition, Mondoshield does not contain any red listed ingredients posted by the LBC (Living Building Challenge).

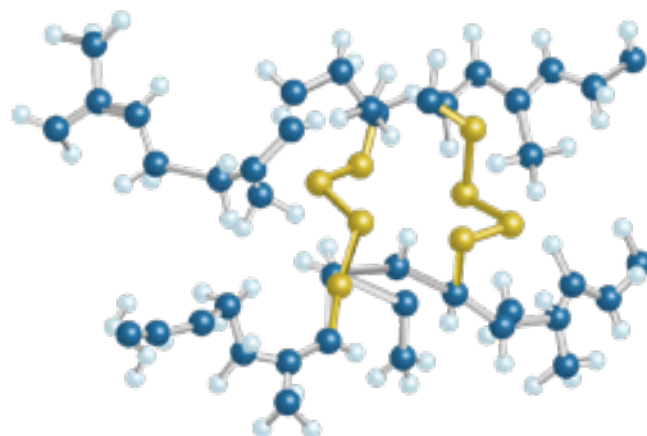
VULCANIZATION

Vulcanization is what is known as the chemical process that transforms natural and synthetic rubber into more durable and performing products at the molecular level. Mondo is able to achieve this process through ISO 9001/14001 manufacturing protocols. The process involves the introduction of vulcanization agents that will form strong cross-links between polymer chains. Vulcanized materials have superior mechanical properties. Therefore, after this process, Mondo flooring products become uniform and durable and cannot be separated at any juncture of its construction and final form.

Lamination on the other hand, does not produce a molecular bond; it is a process of taking two separate materials and adhering them through the use of heat, pressure, welding or adhesives, or a combination of these processes. Since no strong molecular bond is formed, the two materials are prone to separation during production and throughout their lifetime. Lamination can be effective but its primary objective is its low cost. In no way can vulcanization be compared to lamination in terms of overall quality and long-term durability.



Before vulcanization



After vulcanization

DUAL DUROMETER TECHNOLOGY

Mondo rubber flooring products are constructed with proprietary Dual Durometer construction, a technology we are continuously refining by using both internal and external R&D. The Mondo Contract Flooring division introduced the technology in 2001 in order to improve our ability to adapt to the increasing demands of the resilient flooring market. Mondo's Sport division initially created the Dual Durometer construction when improving the product for of high performance sport. Mondo became the Official Track Supplier of the Olympic Games in 1976 with the introduction of a softer, waffled underlayment vulcanized to a harder durometer wear layer. The results have secured Mondo's position for delivering high performance products ever since.

Durometer in itself quantifies how hard rubber is. Therefore, the technology alters the hardness of rubber in order to increase the ultimate performance of a given product. Mondo has been able to identify and achieve specific high performance values within a wear layer (performance layer) such as abrasion and load resistance while meeting other specific values in our underlayment (comfort layer) such as shock absorption, comfort, noise reduction and other key environmental and sustainable properties. All other virgin rubber manufacturers remain static in their research and simply continue to provide monolithic products that cannot obtain the dynamic properties that Dual Durometer construction can provide.



ENVIRONMENT



The environment is our priority. Mondo is committed to achieving the highest standards that respect both our ecosystem and health of our society. Thus offering our users, lasting, high quality flooring that respects the environment in all its aspects.

Strict controls on production, the uncompromising selection of raw materials and the prestigious international environmental certification of our finished products are undeniable proof of our commitment to the wellness of our planet. In 2010, Mondo increased our contribution to sustainable energy. We invested in the installation of 4,173 solar panels on our factory roof, able to generate about 1.04 GWh of energy per year. This means a reduction of about 600 tons of CO2 emissions in the air.



Mondo products contribute to LEED credits and BREEAM certification as well as compliance to many other criteria set by third party entities achieving environmental sustainability of buildings. We also carried out a thorough study on the Life Cycle Analysis of our products through the Environmental Product Declaration (EPD) that tells the complete story of the production process of a product including information on its long-term impact on the environment, the reduction of the ozone layer, water pollution and the emission of greenhouse gases. We continue to demonstrate our commitment to the environment with the introduction of Mondo's innovative underlayment with rapidly renewable content.

SUSTAINABILITY

As a member of the U.S. Green Building Council (USGBC), Mondo is committed to producing surfaces that do not harm the environment at any stage of the manufacturing process, from the time raw materials are harvested to production to disposal following their useful life 20 years later or more. Mondo's rubber flooring products contribute to LEED initiatives through such properties as being bacteria and microbe resistant throughout and free of harmful chemicals.

We actively help to minimize emissions of VOCs (volatile organic compounds) in the environment where our products are installed. Mondo rubber flooring is made of sustainable materials including renewable natural rubber, natural fillers and color pigments. They are free of lead, heavy metal, halogens and volatile plasticizers.

Our products have been tested in third-party ISO certified laboratories. Our resulting M1, A+, BLUE ANGEL, GREENGUARD and GREENGUARD Gold certifications are proof of our commitment to offering products that will help to maintain better indoor air quality. These certifications qualify our flooring for LEED and BREEAM credits and for many other international environmental initiatives on building sustainability.



CERTIFICATIONS



GREENGUARD is an industry-independent certification that ensures that a product has passed some of the most stringent standards and comprehensive worldwide low emission of VOCs in indoor air. It qualifies products for LEED, CHPS and BREEAM credits and is recognized by the GBC and the Green Building for Healthcare Council (GGHC). It requires on-going random testing, evaluating more than 10,000 potential chemicals to be executed by an ISO 17025 accredited laboratory.

This limits around 365 different VOCs. All Mondo flooring is certified GREENGUARD Gold.



The Red List contains materials prevalent in the building industry that are polluting the environment, bio accumulating up the food chain until they reach toxic concentrations and/or harming construction and factory workers.



The **M1** classification presents emission requirements for the building materials, fixture and furniture with respect to good indoor air quality. M1 stands for low emissions and all Mondo flooring have this certification.



ISO 9001 aims to enhance customer satisfaction through the quality assurance process and that products are compliant with the applicable requirements.



ISO 14001 engages the company in a dynamic and ongoing process which overall is necessary to achieve more ambitious goals in terms of environmental performance.



The Blue Angel German environmental label identifies the best products from an ecological and environmental point of view; it ensures the non-toxicity of the finished product and its components, and ensures very low VOC emissions within buildings.



The French VOC regulation certifies in a simple and direct way the level of emissions of volatile organic compounds according to French law. Mondo products are classified A+.



USBGC is a non-profit organization part of the international network of GBC. These associations share the objectives of promoting and accelerating the creation of a building culture of sustainability, encouraging the comparison between the industries by creating a community of sustainable building.



Our products are available on the mindful Materials website. You can consult the online database to learn about all the sustainability properties of our flooring and how you can use it to qualify for LEED credits.



The Environmental Product Declaration® (EPD) tells the complete story of the production process of a product, including information on its long-term impact on the environment, the reduction of the ozone layer, water pollution and the emission of greenhouse gases.



The Health Product Declaration® (HPD) offers a transparent, unbiased framework for manufacturers to provide cost effective reporting of material product content and associated health information.

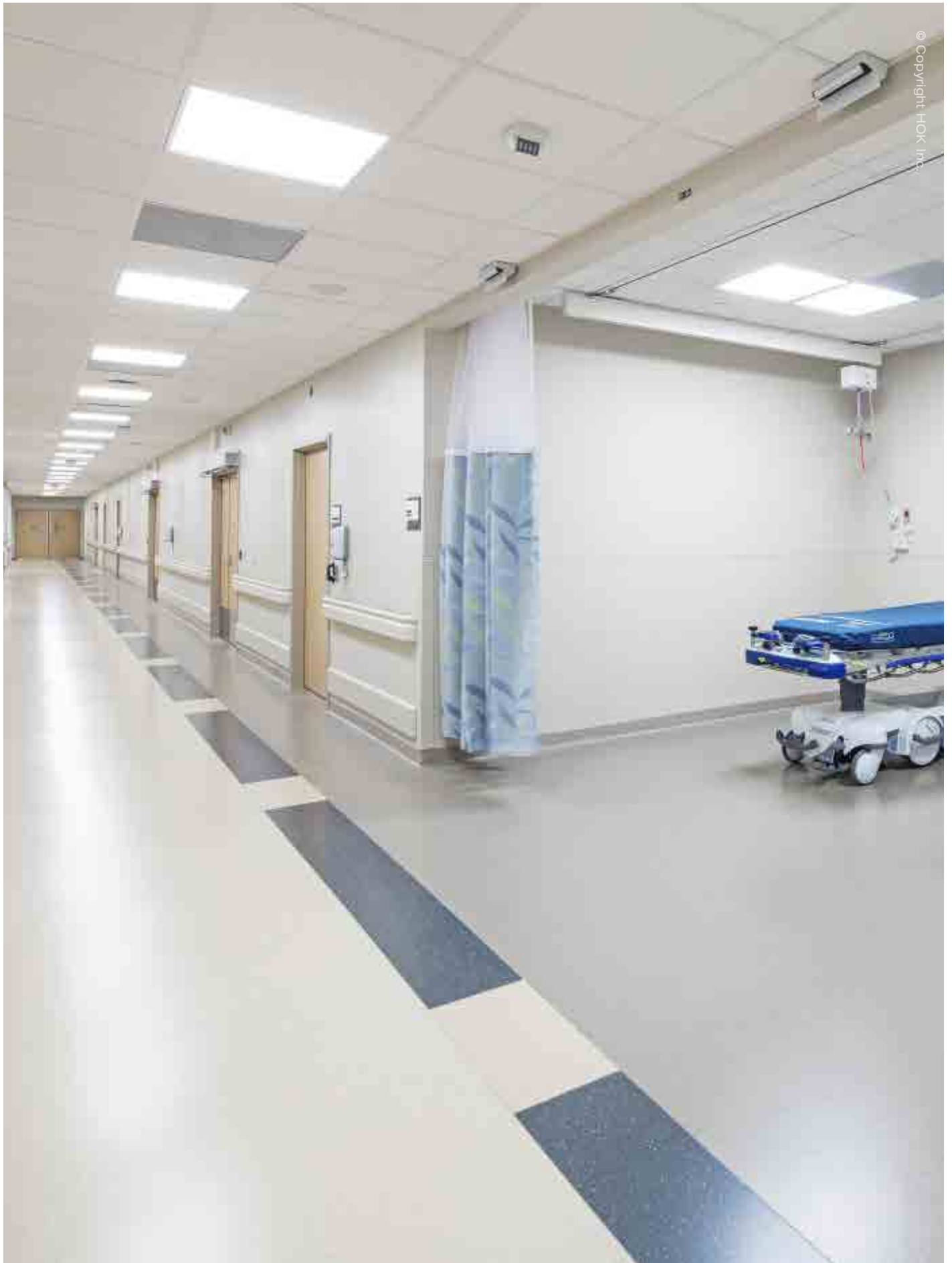


HEALTHCARE



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HIGHER EDUCATION







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K-12



SPECS

TEST	Description	DHARMA	GRANITO	HARMONI	KAYAR
ASTM D412	Modulus at 10% Elongation	≥ 300 psi	509.37 psi	482.28 psi	455.64 psi
ASTM D2047	Static Coefficient of Friction (Neolite, dry)	≥ 0.80	≥ 0.80	≥ 0.80	≥ 0.80
ASTM D2240	Durometer Hardness (Shore A)	≥ 85	95	97	95
ASTM D3389	Abrasion resistance (H18 wheels, 1000g, 1000 cycles)	≤ 0.2g	0.15 g	0.04 g	0.22 g
ASTM E648	Critical Radiant Flux	> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1
ASTM E662	Optical Density of smoke	≤ 450	≤ 450	≤ 450	≤ 450
ASTM F925	Chemical Resistance*	Compliant	Compliant	Compliant	Compliant
ASTM F970	Static Loading (tested at 250 psi)	≤ 0.005 in.	0.001 in.	0.001 in.	0.001 in.
ASTM F970	Static Loading (tested at 800 psi)	≤ 0.005 in.	< 0.005 in.	< 0.005 in.	< 0.005 in.
ASTM F1514	Heat Resistance	Compliant	Compliant	Compliant	Compliant
ASTM F1515	Light Resistance	Compliant	Compliant	Compliant	Compliant
ASTM G21	Resistance to Fungi	-	No Growth	No Growth	No Growth
ASTM E2179	Impact Sound Transmission Reduction	-	-	~ 14 dB (ΔIIC)	-
Acoustics ISO 10140-3	Impact Sound Insulation	~ 6 dB (ΔL _w)	~ 6 dB (ΔL _w)	-	~ 11 dB (ΔL _w)

Values obtained from manufacturing controls can vary between production lots and do not constitute representations or warranties as to any particular production lot.

Mondo reserves the right to modify product design and/or specifications at any time without notice.

LAVA	MASSETTO	NATURA	UNI	ZEUS
386.37 psi	413.89 psi	>345 psi	336.34 psi	465.77 psi
≥ 0.80	≥ 0.80	≥ 0.80	≥ 0.80	≥ 0.80
90	95	90	94	95
0.54 g	0.14 g	0.11 g	0.13 g	0.56 g
> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1	> 0.45 W/cm ² Class 1
≤ 450	≤ 450	≤ 450	≤ 450	≤ 450
Compliant	Compliant	Compliant	Compliant	Compliant
0.001 in.	0.001 in.	0.001 in.	0.001 in.	0.001 in.
< 0.005 in.	< 0.005 in.	< 0.005 in.	< 0.005 in.	< 0.005 in.
Compliant	Compliant	Compliant	Compliant	Compliant
Compliant	Compliant	Compliant	Compliant	Compliant
No Growth	No Growth	No Growth	No Growth	No Growth
-	-	~ 12 dB (Δ IIC)	-	-
-	~ 10 dB (Δ L _w)	-	~ 10 dB (Δ L _w)	~ 12 dB (Δ L _w)

* For the complete list of chemicals tested, concentrations and contact time, please communicate with Mondo's Technical Department. General technical and warranty information are available on Mondo's website.



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