

PERFORMANCE ENGINEERED FLOORING PANELS





ResinDek® flooring panels, manufactured by Cornerstone Specialty Wood Products, are the premier value engineered solution for industrial work platforms, pick modules, mezzanines and equipment storage. Since 1994, ResinDek flooring panels have been installed in distribution centers, warehouses, manufacturing plants, and cold storage facilities for major corporations worldwide. The intent of Cornerstone Specialty Wood Products then and now is “We don’t just make better mezzanine floors...We make mezzanine floors better”. We strive to provide solutions that improve the ergonomics in work environments, reduce environmental impacts, and bring significant value to the professionals in material handling and storage.

With this objective in mind the team at Cornerstone Specialty Wood Products is committed to:

- Better products with easier installation
- Application-specific flooring for all industries
- Excellent field support and product testing
- LEED® and FSC® certified products
- Material and labor savings for customers



www.resindek.com | 888.755.3048 | 513.772.5560



Value Engineered Solution with Proven Performance

ResinDek® flooring panels are custom manufactured with engineering processes which enhance the functionality, durability and life of the floor. Premium materials and unsurpassed manufacturing methods ensure that every ResinDek floor panel will withstand heavy equipment, rolling carts, and pallet jack loads. Backed by a 10-year product warranty, ResinDek panels have proven structural integrity that supports live and dead pallet jack limits from 2,000 – 8,000 lbs.

ResinDek® Mezzanine Floor Panels



Product Name	Pallet Jack Load Limits **	Thickness	UF	Finishes Available			
				GDS2	ESD	TriGard®	MetaGard®
ResinDek® LD	up to 2,000 lbs.	3/4"	■	■	■	■	■
ResinDek® SD	up to 2,500 lbs.	3/4"	■	■	■	■	■
ResinDek® MD	up to 3,500 lbs.	3/4"	n/a	■	■	■	■
ResinDek® HD	up to 4,500 lbs.	3/4"	n/a	■	■	■	■
ResinDek® MAX	up to 8,000 lbs.	1-1/2"	n/a	■	■	■	■
* ResinDek® Xspan®	up to 3,000 lbs.	1-1/8"	n/a	■	■	■	■
* ResinDek® Xspan® FR	up to 3,800 lbs.	1-1/8"	n/a	■	■	■	■

Finishes Available

Unfinished
Gray Diamond Seal 2™
ESD Certified Static Control
TriGard®
MetaGard®

Options

Invisi-Loc® fasteners
T & G Configurations

All ResinDek Products can contribute towards earning points for LEED® qualified buildings.

* No Corrugated Required

** Includes Weight of Pallet Jack

No Added Formaldehyde

All ResinDek panels are certified to have No Added Formaldehyde. ResinDek panels can contribute towards earning points for LEED® qualified buildings. When required ResinDek panels are available with FSC® Certification. FSC® License Code FSC-C124474.



Evaluation Report

ResinDek panels have been independently evaluated and approved for use in Types I-V construction as part of a fire-resistance rated assembly by the IAPMO Uniform Evaluation Services. United States ER Number 467. Canada ER Number UEL 5027.



For more information about LEED, FSC, or the Evaluation Service Report, please contact Cornerstone Specialty Wood Products® or visit our website.

High Performance ResinDek® Flooring Panels

ResinDek engineered flooring panels are custom manufactured with specially sorted and processed wood fibers, customized formaldehyde free resins, and a wax emulsifier. The ingredients are combined and compressed under extremely high pressure and temperature, resulting in a panel with superior physical properties that are especially designed and built to withstand heavy equipment, rolling carts, pallet jack loads, automated guided vehicles and autonomous mobile robots.

ResinDek panels are custom manufactured and available in sizes up to 4' x 10' (1220 mm x 3048 mm). ResinDek® tongue and groove configurations promote effective panel to panel wheel load transfers. When required, tongue and groove configurations are available on all 4 sides. All ResinDek panels are covered under a 10-year product warranty.

ResinDek® LD

ResinDek LD is a tremendous value for warehouse mezzanine floors, work platforms or industrial platforms that require durability, a showcase appearance, and ease of maintenance. ResinDek LD supports up to 2,000 lbs in live and dead pallet jack loads. With no delamination and a 10-year warranty, ResinDek LD is an economical and durable alternative to polydeck, OSB, and plywood.

ResinDek® SD

ResinDek SD is a standard duty mezzanine-flooring panel that provides a durable showcase appearance that is easy to maintain for years. ResinDek SD is manufactured with a higher density of wood fiber and resin content than ResinDek LD, making it the perfect solution for supporting live and dead pallet jack loads up to 2,500 lbs.



ResinDek® MD

ResinDek MD is a medium duty mezzanine-flooring panel that is the perfect solution for supporting live and dead pallet jack loads up to 3,500 lbs. ResinDek MD is a valued engineered solution that will provide long-lasting durability, aesthetic appeal and is easy to maintain.

ResinDek® HD

ResinDek HD is a heavy duty mezzanine flooring panel that features the durability, showcase appearance and maintainability of ResinDek. With even higher density of wood fiber and resin content than ResinDek MD, ResinDek HD is the perfect flooring solution for elevated platforms that must support live and dead pallet jack loads up to 4,500 lbs.

ResinDek® MAX

ResinDek MAX is designed and engineered to support electric pallet jacks. At 1-1/2" thick ResinDek MAX can withstand both the daily rigors of heavy, electric pallet jack rolling loads and dead loads up to 8,000 lbs. This maximum duty flooring panel provides long-lasting durability and is easy to maintain in the most extreme conditions.



ResinDek® Coating and Surface Options

Gray Diamond Seal® 2

Gray Diamond Seal 2 is the standard by which all other coatings in our industry are measured. This superior finish is designed and engineered for long-lasting durability, clean-ability and slip resistance. Gray Diamond Seal 2 comes standard with anti-static protection, electrostatic dissipative (ESD) protection is optional. Gray Diamond Seal 2 and TriGard® (shown below) have been tested in accordance to the following standards:

- Stain Resistance: NEMA LD 3.4
- Taber Abrasion: ASTM D4060
- Slip Resistance: ASTM D2047, BS 7976-1-3:2002

TriGard® Coating Technology

TriGard coating for ResinDek panels is the solution for tomorrow's technology. TriGard is specifically engineered and designed to handle the rigorous demands of ultra-high rolling traffic that is typically found in robotic applications. With five times greater wear resistance than Gray Diamond Seal 2 and three times greater scratch resistance, TriGard will outlast and outperform any industrial mezzanine floor coating on the market! TriGard comes standard with electrostatic dissipative (ESD) protection.



ResinDek® Coating and Surface Options

ESD - Electrostatic Dissipative Finish for Gray Diamond Seal® 2 and TriGard® Coatings

With our electrostatic dissipative finish, ResinDek® mezzanine floor panels with ESD provide an outstanding static control solution for electrically sensitive devices such as laptops, bar-code scanners, servo-drive motors, and pick-to-light systems that are common in distribution centers. Not only will the ESD finish eliminate downtime of expensive electronic devices caused by electrostatic discharges, but it will also prevent uncomfortable static shocks to employees. ESD is standard with TriGard and is available with Gray Diamond Seal 2.

- ResinDek® panels with ESD have been subjected to extensive independent testing, and have been found to be in compliance with the following ESD Association specifications:
 - ANSI/ESD S20.20 - Protection of Electrical and Electronic Parts, Assemblies and Equipment.
 - ANSI/ESD S7.1 - Resistive Characterization of Materials—Floor Materials.
 - ANSI/ESD STM97.1 - Floor Materials and Footwear—Resistance Measurement in Combination with a Person.
 - ANSI/ESD STM97.2 - Floor Materials and Footwear—Voltage Measurement in Combination with a Person.
 - ASTM F-150 - Electrical Resistance of Conductive and Static Dissipative Flooring.
- Testing results are summarized as follows:
 - Average point-to-point resistance = 6.6×10^6 ohms
 - Average point-to-ground resistance = 7.8×10^6 ohms
 - ResinDek® mezzanine floor panels with ESD generated less than 10 volts with static controlled footwear, and experienced a rapid voltage decay from 5,000 volts to less than 50 volts in under .50 seconds.

Unfinished

ResinDek UF provides a skid resistant surface and installs easily over corrugated metal B Deck with our recommended top side screw fastening systems. The uncoated ResinDek UF, moisture resistant flooring panel is priced competitively and will never delaminate. Also, unlike plywood, OSB or other engineered wood products, ResinDek UF has a 10-year product warranty.

ResinDek® Steel Surface Option With Iron Clad Protection

ResinDek® with MetaGard® (Patent Pending)

ResinDek with MetaGard is the perfect solution for heavy wear areas and robotic applications. ResinDek flooring panels with the MetaGard surface combines the structural integrity of the ResinDek panel along with the strength and durability of a steel wearing surface. The MetaGard steel surface is fused to the ResinDek panel with a proprietary bonding agent and features an edge that encapsulates the perimeter of the panel. This creates a floor that will not delaminate, has superior physical properties, is level for rolling loads, and has no sharp edges that could cut or snag objects passing over it.

Why Choose ResinDek with MetaGard?

- Provides smooth panel to panel transition with no trip spots
- Eliminates the need to install additional steel slates
- Less expensive than diamond plate, bar grate and concrete
- Improved noise abatement compared to diamond plate



ResinDek with MetaGard For Robotic Traffic Has Advantages Over Elevated Concrete Flooring (additional info on pg. 14)

- ResinDek panels do not produce dust or require sealing like concrete does.
- In testing, ResinDek with MetaGard has been shown to be five times more abrasion resistant than concrete in heavily trafficked areas where dirt and debris are not routinely removed, such as 24/7 operations.
- ResinDek with MetaGard's steel surface is extremely resistant to gouges and scratches.
- ResinDek flooring provides a more consistent finish in floor levelness and flatness.

Designed for Heavy Wear Areas and Robotic Applications

The Perfect Flooring Solution for:

- **Automated Guided Vehicles**

ResinDek® with MetaGard® can withstand millions of passes and high volumes of heavy loads exerted by modern robotic vehicles continuously moving around a warehouse.

- **Drop Zones and Heavy Wear Areas**

ResinDek flooring panels with MetaGard can withstand the daily abuse associated with drop zones, heavy wear or high traffic areas.

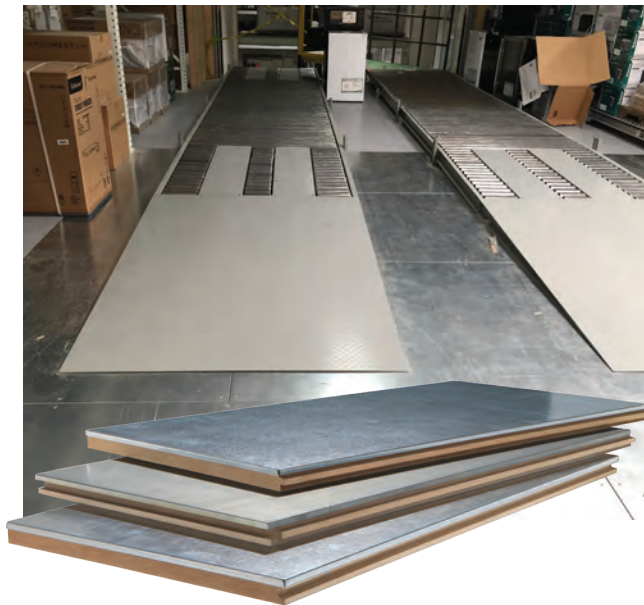
- **Aggressive Rolling and Dragging Traffic Areas**

ResinDek panels with the MetaGard surface helps minimize wear caused by dragging or pushing pallet jacks and totes across the floor. It's the perfect solution for pallet and case flow modules.

- **Dirty Process Areas**

If debris or process area dirt is a problem, MetaGard's tough steel surface will help minimize surface wear.

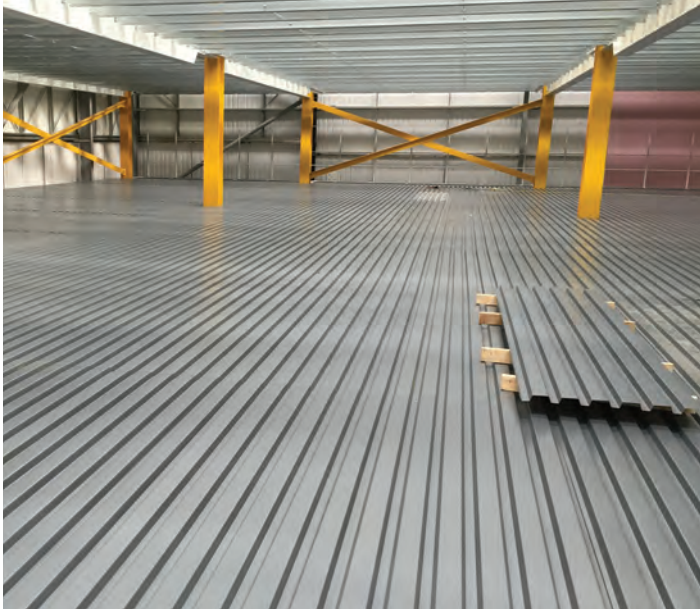
ResinDek with MetaGard has been tested per ASTM D2047 standards and has been found to meet or exceed OSHA specification for slip resistance. In addition, the MetaGard finish has electrostatic dissipative properties which protect sensitive electronic equipment from damage.



The MetaGard steel surface of the ResinDek panel increases the pallet jack load carrying capacity of the panel. Contact Cornerstone Specialty Wood Products for more information.

Corrugated Metal Decking - B Deck

Cornerstone Specialty Wood Products, LLC® provides corrugated metal deck products in a variety of profiles, thicknesses, yield strengths and finishes. The Engineers at Cornerstone Specialty Wood Products will help you optimize sizes, runs, steel thicknesses, corrugated profiles, and beam spacings, thus saving you time and money. To assist with the ease of installation we can even supply pre-punched B Deck for use with our Invisi-Loc® underside fastening system.



A bright white underside is available for excellent light reflectivity. You can also order it in galvanized or gray primer.

Corrugated Metal Decking - B Deck

We recommend that a minimum of 20 gauge metal B Deck be used on all ResinDek® flooring projects (with the exception of Xspan®) and a minimum of 18 gauge when live and dead pallet jack loads exceed 2,500 lbs.

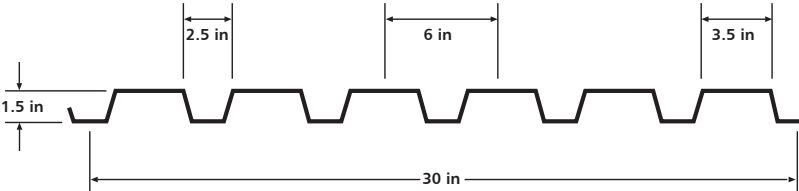
B Deck 1.5” Allowable Uniform Loads (PSF) / Loads That Produce L/240 Deflection

Number of Spans	Gauge	Min Yield (KSI)	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"
Single	20	60	565 / 462	415 / 291	318 / 195	251 / 137	203 / 100	168 / 75	141 / 58	120 / 45	104 / 36	90 / 30
	18	60	792 / 658	582 / 414	445 / 278	352 / 195	285 / 142	236 / 107	198 / 82	169 / 65	145 / 52	127 / 42
	16	33	575*	422*	323*	255*	207 / 186	171 / 140	144 / 108	122 / 85	106 / 68	92 / 55
Double	20	60	563*	418*	322*	256*	208*	172*	145*	124 / 116	107 / 93	93 / 75
	18	60	788*	586*	452*	359*	292*	242*	204 / 202	174 / 159	150 / 127	131 / 103
	16	33	552*	410*	317*	252*	205*	170*	143*	122*	105*	92*
Triple	20	60	692*	516*	399 / 388	317 / 273	258 / 199	214 / 149	180 / 115	154 / 91	133 / 72	116/59
	18	60	966*	722*	558 / 534	445 / 375	362 / 273	300 / 205	253 / 158	216 / 124	187 / 100	163 / 81
	16	33	676*	505*	391*	311*	254*	210*	177*	152*	131 / 128	114 / 104

NOTE: * Allowable Uniform Load shown only, L/240 Exceeds Allowable Load

B Deck Physical Properties

Gauge	Thickness (in)	Weight (lb/ft2)	
		Painted	Galvanized
20	.0358	2.1	2.2
18	.0474	2.8	2.9
16	.0598	3.4	3.5



Installation is Fast and Easy with the ResinDek® Fastening Systems

Stand-Up Screwdriver & Top Side Drill Screws

For conventional top side screw installation, use Cornerstone Specialty Wood Products, LLC® collated stand-up screwdriver and collated drill screws. Not only will the collated screwdriver save you up to 40% in fastening costs, but it will reduce installation fatigue with its ergonomic design. The screws are engineered for strength, durability and easy installation. No countersinking or pre-drilling is required as the wings near the top of the shaft create a counterbore for the screwheads. The number 2 square drive head in conjunction with the drill point easily pierce up to 12 gauge steel decking. The screws are designed to drill through the ResinDek panels and steel decking prior to the threads engaging, thus preventing the panels from lifting.

Invisi-Loc® Underside Fastening System

Invisi-Loc provides showcase mezzanine floors with no visible fasteners that are dependable, economical and easy to install. The Invisi-Loc fastening system mounts fasteners under the mezzanine decking hiding unwanted screw holes on top. Plus, when installed with our pre-punched corrugated metal decking, installation time is reduced and potentially dangerous metal shavings are eliminated.

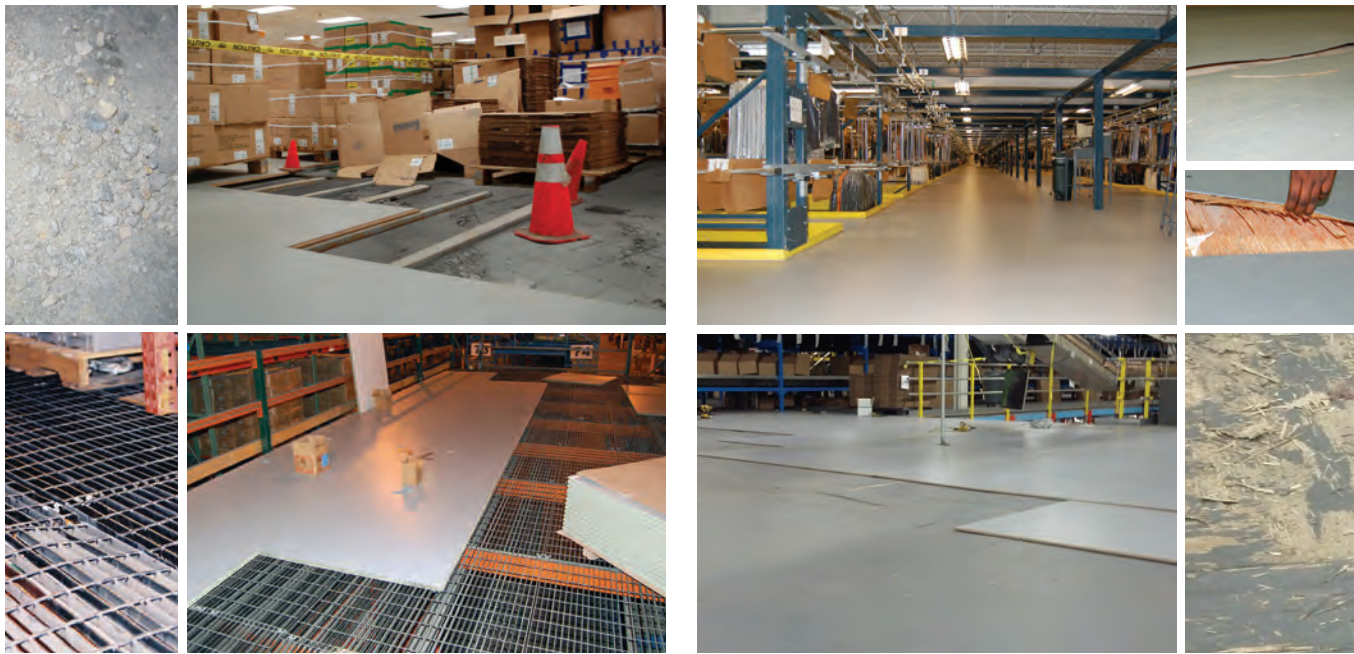


Invisi-Loc Fastening System



ResinDek® Panels - The Rework Solution for Damaged Floors

If you have damaged floors ResinDek flooring panels are the optimal choice. ResinDek panels can replace or easily install over polydeck floors that are delaminating, plywood that is splintering, damaged bar or plank grate, and even cracked concrete.

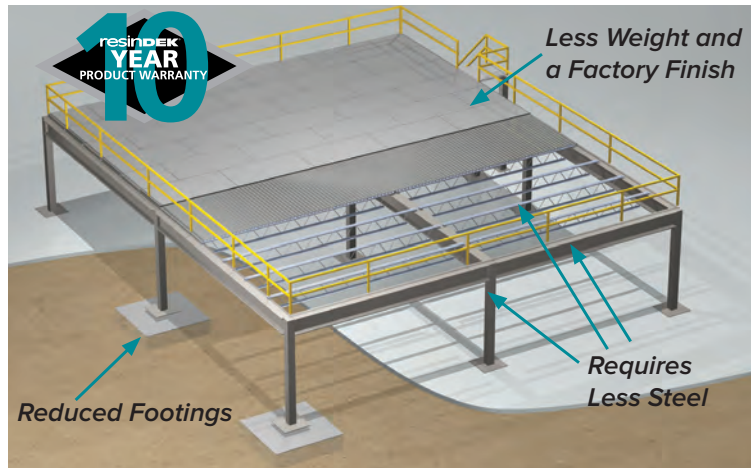


ResinDek's® Value Engineering Solution Provides Substantial Savings

ResinDek panels have the proven structural integrity and the strength you associate with a concrete floor yet offers significant savings. It is quite common to **save up to \$5/sqft* or more** with tax benefits when using ResinDek instead of concrete. How? Simple. . . **Less Weight + Less Footings + Less Steel + Less Time = Real Savings**

- ResinDek is 90% lighter than concrete which allows for less steel to be used in the support structure.
- With ResinDek concrete footings may be significantly reduced or eliminated altogether.
- Platforms using ResinDek can be designed with an allowable deflection limit of L/240, whereas concrete's allowable deflection is limited to L/360: this reduces the amount of steel required in the support structure.
- Construction time can be reduced by as much as 3 - 5 weeks depending upon the size of the job.
- Concrete needs time to cure, ResinDek is supplied with a factory finish, so once ResinDek is installed it's done.
- The material cost per square foot for ResinDek is less than that of concrete.

** Actual savings may vary based on project scope and location. Tax benefits are based upon estimates and the ability to categorize the mezzanine as equipment rather than a part of the building structure. Consult local building codes and tax advisor before using any information provided.*



Concrete with Corrugated Steel Deck weighs 45 psf



ResinDek® with Corrugated Steel Deck weighs 5 psf

ResinDek® Concrete Conversion Cost Savings Success Story

A large sporting goods retailer had used both ResinDek and concrete for elevated platforms before. They needed two identical mezzanines at their Katy, Texas DC. So the question became, what type of flooring would provide the best value? Two identically sized mezzanines were constructed at the same DC and a cost analysis was performed.

Concrete Mezzanine Costs

1. Footings:	\$285,000
2. Structural Steel:	\$823,000
3. Steel Erection Plus	
All Other Costs:	\$1,598,000
<hr/>	
Total Cost of Structure:	\$2,706,000



Heavy concrete structures require massive footings and 14" columns



ResinDek Mezzanine Costs

1. Footings:	\$148,000
2. Structural Steel:	\$535,000
3. Steel Erection Plus	
All Other Costs:	\$1,379,000
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Total Cost of Structure:	\$2,062,000



ResinDek mezzanines only requires 10" columns

Savings with ResinDek: \$644,000



Total savings with ResinDek was \$644,000. *The ResinDek product gave us some real price advantages, and we were able to pull in savings in 3 areas; the footings, the structural steel, and the erections costs. Using ResinDek also allowed us to use smaller diameter piers with smaller bells on the caissons."*

Russell Bergeron President of Tri-R-Erecting & General Contractor

Systems Integrator Saved Time and Money Using ResinDek® with MetaGard®

Kuecker Logistics Group designed and equipped a new 655,000 sqft distribution center for a large retailer of closeout merchandise and excess inventory. The distribution facility includes full case pick modules equipped with a central conveyor on each level to transport the picked cases to a centralized merge point. Associates on each level of the four-level modules pick a variety of case sizes from pallets during a single shift. When empty pallets are removed from the pick positions, the associates slide them on their ends to designated pallet drop zones. When designing the distribution center, Chase Watt, Site Foreman and Project Manager for Kuecker Logistics Group, turned to Cornerstone Specialty Wood Products, LLC® for the pick module flooring.

“We’ve worked with Cornerstone and their ResinDek flooring panels for many years; it’s the best flooring product we’ve installed in pick modules, with high durability and fast installation time, and the best engineering services,” explains Watt.

To save time, money and provide a durable warranted product, Kuecker Logistics Group’s designed the pick modules’ three elevated levels with a combination of ResinDek with the Gray Diamond Seal® 2 finish and ResinDek with the MetaGard galvanized steel finish.



Systems Integrator's Success Story continued...

"Before Cornerstone developed the MetaGard finish, we would specify a second layer of steel to be applied on top of the flooring to protect it from the pallets as they're dragged across the surface. It's a common technique in the industry for extreme wear applications," Watt notes. "The disadvantage of that is it's essentially a second installation, which takes more time and adds to the materials and contractor costs. When we saw the new MetaGard finish on the ResinDek panels at a trade show, we knew we wanted to use it in our next project."

Watt had no problem convincing his customer of the many benefits of the ResinDek flooring, including high durability, non-slip surface, easy maintenance, a 10-year warranty, and light reflectivity that contributes to a brighter, safer work environment.

Additionally, there is no difference in ResinDek panel thickness, whether the MetaGard finish is specified or not. This ensures a smooth, level flooring surface — unlike floors that have an additional layer of steel applied to high traffic areas, which can cause a trip hazard. But among the most appreciated advantages of the product are the free engineering services and support provided by Cornerstone Specialty Wood Products.

"I love the simplicity aspect of it," says Watt. "Also, Cornerstone gives you an exact drawing of your pick module and your floor layout showing precisely which ResinDek panel goes where. Panels that need to be field cut are clearly marked with instructions about which end should be trimmed. It's essentially a turnkey design that is very easy for a contractor to install quickly; they know the installation is not going to be a headache, and that saves both time and cost."

Further, because the installers Watt used to install the ResinDek panels had not worked with the MetaGard finish before, Cornerstone sent a team to train the contractors for two days to ensure the flooring was installed properly. *"That's unbelievable satisfaction from a customer service standpoint. I think it's the best flooring product in the industry," Watt concludes.*

ResinDek® Flooring Saves Time, Money, and Provides a Level Platform

A project located in Manchester, U.K. had a three level mezzanine with 220,000 per sqft level. The flooring system that was selected was 3/4" ResinDek HD with the TriGard® finish and corrugated steel decking. During the final walk through, the main Contractor made the following comments:

"The ResinDek flooring system offered a substantial savings over elevated concrete platforms, which was the only real alternative for this project. The levelness of this floor (plus or minus 1/8" across a 220,000 sqft continuous surface) is just not something that we can normally produce with concrete."

"The speed of installation was impressive. ResinDek goes down quickly, and the floor, once installed allows for instant structural access for subsequent trades. Concrete, on the other hand, requires 10 days of curing time per bay, along with additional screeding and levelling work. My guess is that we saved a solid 5 weeks of construction time by using ResinDek instead of concrete."

"We are sold on the superiority of the ResinDek Flooring System compared to a traditional concrete floor!"



ResinDek® Performance Advantage - Always Innovating and Always Testing



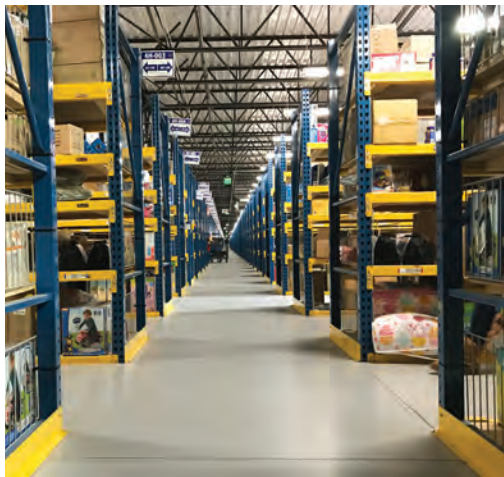
Cornerstone Specialty Wood Products' team never stops evaluating and testing new approaches for mezzanine floors. We believe in helping our customers solve problems through innovative designs and long-lasting durability. At our advanced research and engineering facility we have designed and built a series of floor testing equipment that accurately replicate field conditions. In addition to testing internally we also send our products out to be evaluated by independent laboratories for a wide variety of tests.

Here's an example of just some of the testing:

- Structural Testing
- ResinDek Physical Property Testing
- Moisture Resistance Testing
- Fire Testing
- Coating Testing
- Metallurgical Testing on Steel Corrugated Decking
- Fastener Testing
- Ergonomic / Tibial Shock
- ESD (Electrostatic Dissipative) Testing
- Coating Wear Testing (Taber Abrasion)
- 3D Analysis of Wheel Load Pressures

With constant testing and new product development we have been able to solve both existing problems and address the challenges of new technologies and applications for our customers. If you have a custom loading condition that we can recreate, we will work with you to develop a custom test. If a custom test application can be successfully completed to meet the rigors of our requirements, we will stand behind your unique application with our unmatched 10-year product warranty.





ResinDek® 10-Year Product Warranty, The Only Warranty That Covers Pallet Jack Loads for 10 Years!

Cornerstone Specialty Wood Products, LLC® warrants all ResinDek panels to be structurally sound, able to safely carry the specified design loads, and free from defect. For complete details on the ResinDek 10-year product warranty please visit www.resindek.com or call 888.755.3048.



LEED®

All ResinDek panels are certified to have No Added Formaldehyde. ResinDek mezzanine flooring panels can contribute towards LEED v4 Credit IEQ 4.4, as well as MR 4, and potentially MR 5, depending on the project's location.



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