resinDEK®

Performance Engineered Flooring

Mezzanines and Ground Level

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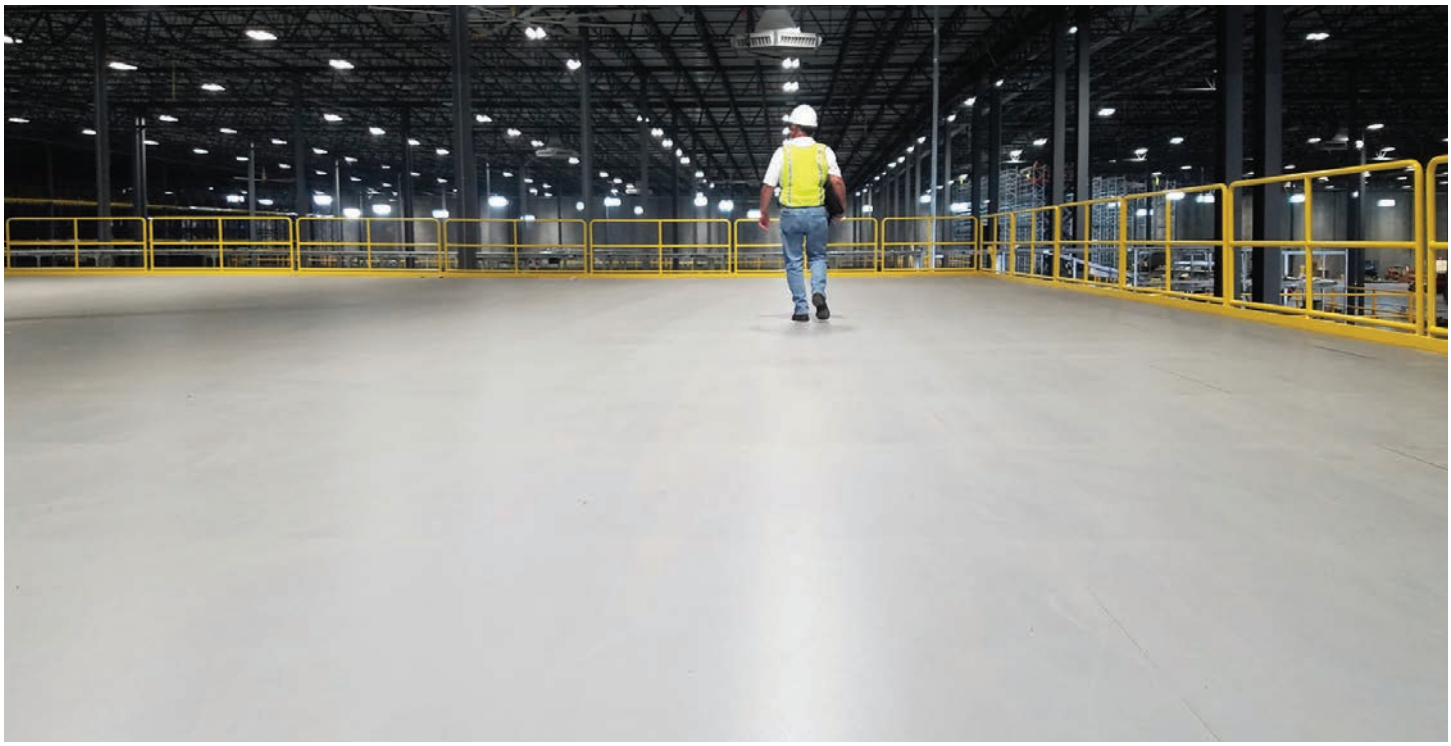


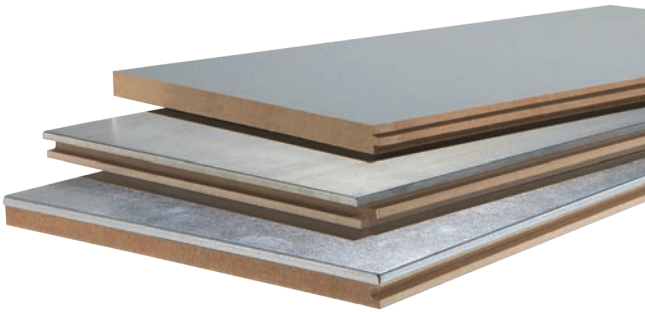
ResinDek® Panels are Backed by a 10-Year Product Warranty!

ResinDek panels are warranted to be free from defect, structurally sound, and able to safely carry the specified design loads. The warranty will flow through and transfer to the end user for the entire period of the warranty. For more information, visit our website at www.resindek.com/resources/warranty.

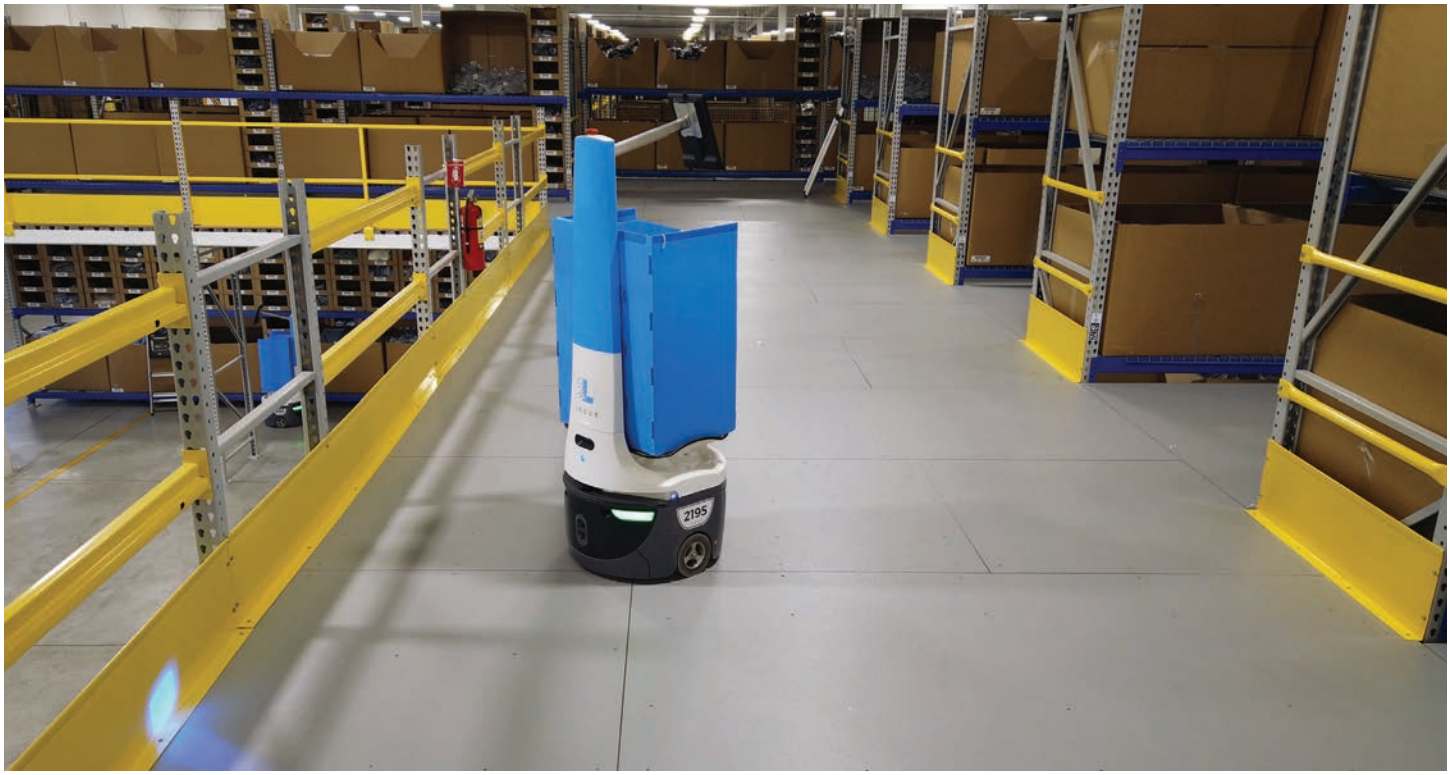
ResinDek® Performance Engineered Flooring

ResinDek® mezzanine flooring panels are engineered to excel in today's demanding warehouse environments, withstanding constant use from automated vehicles, pallet jacks, and robotic systems. These high-performance panels deliver exceptional durability for elevated platforms and ground-level automated transport routes, making them a preferred choice across warehousing, distribution, manufacturing, and cold storage applications.

What sets us apart is our commitment to customization. We develop application-specific solutions that precisely match each facility's unique requirements, backed by comprehensive engineering support, onsite services, extensive performance testing, and a 10-year product warranty. ResinDek flooring systems not only optimize workflow and improve worker ergonomics but also reduce environmental impact while ensuring optimal performance of automated equipment.



ResinDek® flooring panels are custom manufactured with engineered 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 jacks, AGVs and AMRs.



ResinDek® Flooring Panels for AGVs, AMRs and Rolling Pallet Traffic

ResinDek custom engineered wood flooring panels are manufactured with mostly recycled and recovered wood fibers, eco-friendly resins, free from urea formaldehyde, and a wax emulsifier for moisture resistance. The ingredients are combined and compressed under extremely high pressure and temperature, resulting in a panel with superior physical properties. ResinDek panels are available with fire retardant options, other than the Xspan FR - which is standard. ResinDek panels come in sizes up to 4' x 10' (1206 mm x 3048 mm) with tongue and groove configurations, for effective wheel load distribution between panels. Our finishes are developed by our internal coating innovation lab and engineered for the specific type of traffic that travels across the floor.

							Material Handling Finishes			Robotics Finishes	
Product Name	**B Deck Gauge**	**Pallet Jack & Product Load Limits**	**Robot & Product Load Limits**	**Maximum Robot Contact Pressure**	**Thickness**	**Moisture Resistance**	**UF**	**Gray Diamond Seal® or ESD**	**MetaGard® GVT**	**TriGard® ESD or ESD Ultra**	**MetaGard® SST**
	ga / *mm*	lbs / *kg*	lbs / *kg*	psi / *MPa*	in / *mm*						
ResinDek® LD [1]	20 / *0.9*	up to 2,000 / *910*	up to 500 / *230*	500 / *3.4*	0.75 / *19*	MR50	✓	✓	✓	✓	✓
ResinDek® MD **ResinDek® MD**	20 / *0.9* 18 / *1.2*	up to 2,500 / *1,135* up to 3,500 / *1,590*	up to 2,000 / *910* up to 3,000 / *1,365*	750 / *5.2* 1,000 / *6.9*	0.75 / *19*	MR50	✓	✓	✓	✓	✓
ResinDek® HD **ResinDek® HD** [1,2]	18 / *1.2* *N/A*	up to 4,500 / *2,045* N/A	up to 4,000 / *1,815* up to 750 / *345*	1,200 / *8.3* 750 / *5.2*	0.75 / *19*	MR50	✓	✓	✓	✓	✓
ResinDek® WR [1]	20 / *0.9*	up to 2,000 / *910*	up to 500 / *230*	500 / *3.4*	0.75 / *19*	MR90	✓	✓	✗	✓	✗
ResinDek® MAX	18 / *1.2*	up to 8,000 / *3,360*	up to 6,000 / *2,725*	1,500 / *10.3*	1.50 / *38*	MR50	✓	✓	✓	✓	✓
ResinDek® Xspan® [3]	*N/A*	up to 3,000 lbs / *1,365*	up to 2,500 / *1,135*	900 / *6.2*	1.125 / *28*	MR50	✓	✓	✓	✓	✓
ResinDek® Xspan® FR [3] Fire Retardant Panel	*N/A*	up to 3,000 lbs / *1,365*	up to 2,500 / *1,135*	900 / *6.2*	1.125 / *28*	MR50	✓	✓	✓	✓	✓
ResinDek® ReShield™ [4]	*N/A*	up to 3,500 / *1,590*	up to 3,000 / *1,365*	1,000 / *6.9*	0.25 / 6	MR50	✗	✓	✗	✓	✗

Notes:

1 *Not Suitable for AGVs*

2 *ResinDek HD robot and product load values above are calculated with 225 psf uniform loads at 16" (406 mm) center supports*

3 *ResinDek Xspan load values are calculated with 375 psf uniform loads at 16" (406 mm) center supports*

4 *ResinDek ReShield allowable loads are dependent upon the substrate that it is being installed on. Contact us for more information.*

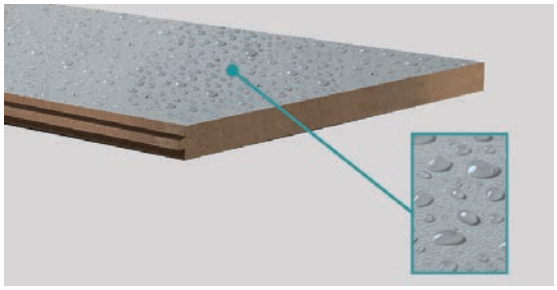
- *For flooring used with corrugated B Deck: Please note load values above are calculated on 36" (914 mm) beam spacing, increased spacing will increase deflection and/or decrease capacity.*
- *For flooring solutions with no B Deck: All allowable loads are based on a two span condition. Uniform load values are based on L/240 deflections, any deviation can positively or negatively impact these values. Please contact us for other span conditions. The calculations and load tables above have been compiled based on specified calculation methods and assumptions. The loads provided are for the purpose of information for preliminary studies and can not be used as a reference in structural studies. Contact an accredited engineering office or architect to perform a complete stability analysis.*

ResinDek® LD, ResinDek® MD and ResinDek® HD

ResinDek LD, MD, and HD are 3/4" (19 mm) thick engineered wood panels designed for mezzanines, pick modules, conveyor systems, and robotic platforms, each offering varying load capacities to meet specific application needs. They provide a flat, level surface capable of supporting heavy rolling pallet jack loads, AMRs, and AGVs. ResinDek LD offers exceptional durability, making it a cost-effective alternative to polydeck, OSB, and plywood. ResinDek MD enhances strength and longevity, while ResinDek HD, the densest and most robust option, is engineered for the most demanding environments and is even suitable for ground-floor robotic traffic or cold storage applications.

ResinDek® WR - Water Resistant

ResinDek WR flooring panels are ideal for new construction projects exposed to outdoor elements for up to 120 days, as well as high-humidity interiors and limited washdown applications. Their exceptional moisture resistance meets the stringent MR90 standard, ensuring long-lasting durability in challenging environments. Perfect for mezzanines, modular offices, and self-storage facilities, ResinDek WR panels can also be used on the ground floor, providing a reliable and versatile flooring solution for AGVs and AMRs.



ResinDek® MAX

ResinDek MAX is designed and engineered to support electric pallet jacks. At 1-1/2" (38 mm) thick, ResinDek MAX can withstand both the daily rigors of heavy electric pallet jacks rolling loads up to 8,000 lbs and AGV/AMR rolling loads up to 6,000 lbs. This maximum duty flooring panel provides long-lasting durability and is easy to maintain in the most extreme conditions.

ResinDek® Xspan® and ResinDek® Xspan® FR

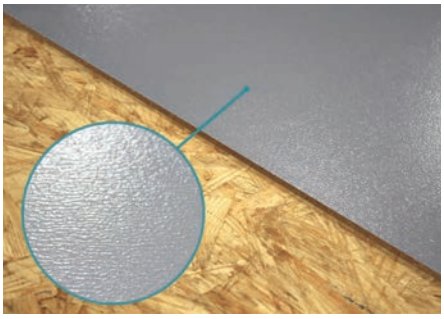
ResinDek Xspan and ResinDek Xspan FR panels are 1-1-8" (28 mm) thick and have been extensively tested and approved by IBC Code Officials for use as a structural flooring system in certain applications where a metal corrugated substructure is not required. ResinDek Xspan FR is a fire-retardant structural mezzanine floor solution that does not require a metal corrugated substructure. It meets ASTM E-84 Class "A" flame spread less than 25, meets UK Class "0", as well as European standards B-Class (B_{FL}-s1 | B-s1,d0) for both top and bottom. Structural supports must be reviewed and approved by the ResinDek team and must be capable of supporting floor loads at specific intervals. For further details, call us and/or your local building code official.

ResinDek® Xspan® and Xspan® FR Flooring Panels

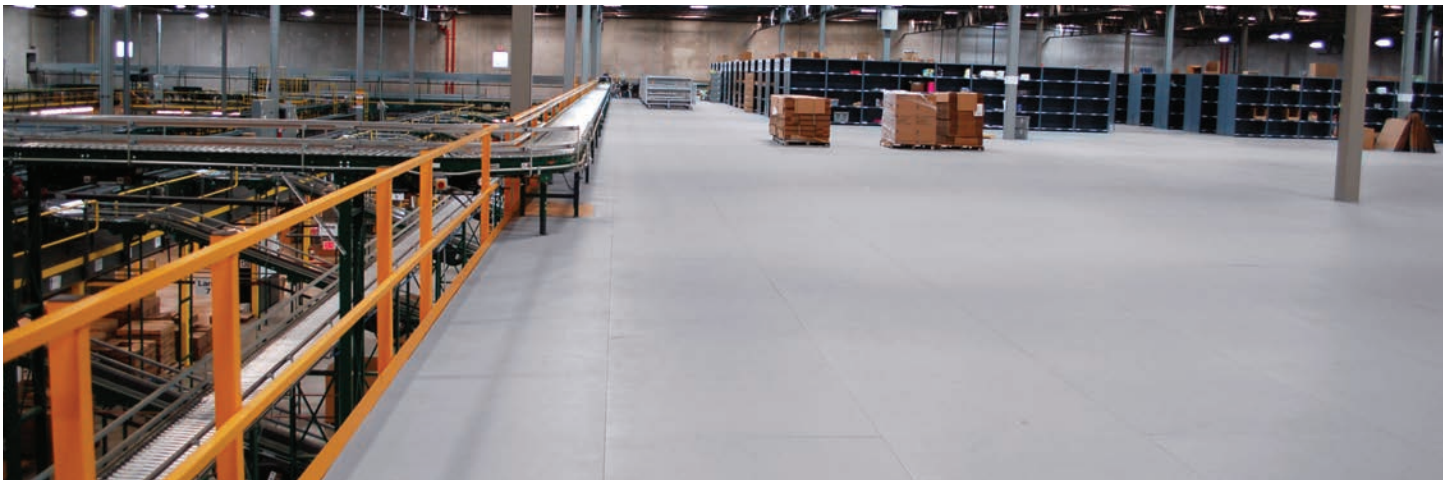
1-1/8"/28mm Thick Single Panel Solution - No Corrugated B-Deck Required
Panel Weight: 5.2 PSF (25.4 kg/m²), 6.6 PSF (32.3 kg/m²) with MetaGard

Beam Spacing	16"/ 400 mm	24"/ 600 mm	32"/ 800 mm	40"/ 1,000 mm	48"/ 1,200 mm
Uniform Loads (lbs/ft²) *(kN/m²)*	375 / *18.1*	225 / *10.9*	125 / *6.1*	75 / *3.8*	50 / *2.5*
Total Pallet Jack & Product Load (lbs/*kg*)	3,000 / *1,365*	2,700 / *1,230*	2,300 / *1,045*	2,000 / *910*	1,500 / *685*
Total Robot & Product Load (lbs/*kg*)	2,500 / *1,135*	2,000 / *910*	1,500 / *685*	N/A	N/A
Robot Contact Pressure (psi/*MPa*)	900 / *6.2*	750 / *5.2*	600 / *4.1*	N/A	N/A

ResinDek® ReShield™



ResinDek ReShield flooring panels provide a seamless upgrade for existing floor surfaces through an innovative 1/4" (6 mm) thick solution. These lightweight panels install directly over most level substrates—including plywood, OSB, chipboard, and unfinished ResinDek floors—without extensive demolition or preparation work. Excelling in both automated and traditional material handling environments, these durable panels deliver immediate value by extending the life of your current flooring infrastructure. By eliminating the need for complete floor replacement, ResinDek ReShield panels offer a cost-effective path to enhanced floor performance without compromising on quality or functionality.



ResinDek® Finishes for Heavy Equipment, Rolling Carts and Pallet Jacks

Gray Diamond Seal® Finish

For traditional material handling applications, Gray Diamond Seal sets the industry standard for industrial floor coatings.

The Gray Diamond Seal finish offers several benefits, including:

- Provides excellent wear, slip resistance & exceptional resistance to common stains
- Easy to clean & maintain, and will provide a showcase appearance year after year
- The formulation incorporates standard antistatic protection to minimize the build-up of electrical charges as personnel and wheeled loads travel over it

Gray Diamond Seal® ESD Finish

Gray Diamond Seal ESD finish is ideal for applications requiring an electrostatic dissipative (ESD) finish.

The Gray Diamond Seal ESD finish offers several benefits, including:

- 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
- Eliminates downtime of expensive electronic devices caused by electrostatic discharges, and also prevents uncomfortable static shocks to employees
- ResinDek panels coated with the Gray Diamond Seal ESD finish comply with ANSI ESD Association specifications

MetaGard® GVT Finish

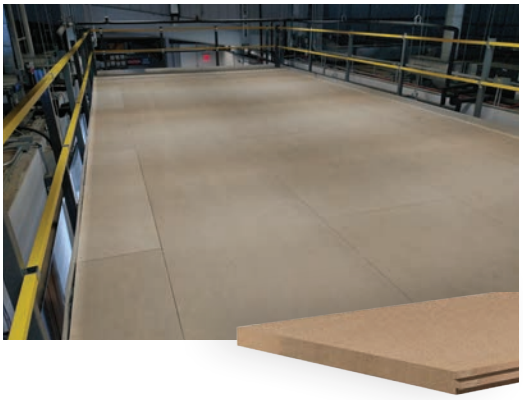
MetaGard GVT is ideal for drop zones, pallet flow and case flow modules, and where aggressive dragging or pulling of non-wheeled loads occurs.

The MetaGard GVT finish offers several benefits, including:

- A steel surface that encapsulates the top and sides of the ResinDek panel
- The steel is fused to the ResinDek panel with a proprietary bonding agent creating a floor that will not delaminate, has superior physical properties, is level for rolling loads, and has no sharp edges that could cut or snap objects passing over it
- Engineered to ensure a smooth panel-to-panel transition, ResinDek with MetaGard GVT panels can be used alongside other ResinDek panels without a steel surface, creating a more cost-effective solution as it enables placement of MetaGard GVT flooring in the areas of maximum wear

Unfinished (UF)

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® Finishes for Automated Warehouse Robots

The durability and condition of the floor are important considerations for the optimal performance of AGVs and AMRs. Worn, uneven surfaces can disrupt the functioning of the vehicle's laser-based navigation sensors, slowing down its rate of travel. Coefficient of friction can impact the robot's acceleration, stopping accuracy, and turning. Gloss and light reflectivity can affect the fluidity and accuracy of the robot. To meet these demands of various robots, ResinDek panels are available in three unique finishes for automated warehouse robots: TriGard® ESD, TriGard® ESD Ultra and MetaGard® SST.

Description	Reference Standard	Test Procedure	TriGard® ESD	TriGard® ESD Ultra	MetaGard® SST
Coefficient of Friction: BOT 3000E	ASTM A326.3	Neolite sensor has material that is 95+/-3 Shore A	Avg Dry: 0.62 Avg Wet: 0.28	Avg Dry: 0.62 Avg Wet: 0.47	Avg Dry: 0.77 Avg Wet: 0.68
Abrasion Class	ASTM D4060	180 grit aluminum oxide sand paper replaced every 500 cycles with 1 kg of weight	Wear Revolutions: 6,000 cycles	Wear Revolutions: 24,000 cycles	Wear Revolutions: >50,000 cycles
	EN 13329	European surface evaluation using sandpaper wheels		AC6	AC6
Gloss, 85 deg	ASTM D523	Tested with glossmeter geometries of 85°	7 GRUs	7 GRUs	8 GRUs

TriGard ESD and TriGard ESD Ultra utilize our unique coating technology that is engineered and designed specifically for robotic traffic. Both come standard electrostatic dissipative properties (ESD) to limit the flow of electrical current and discharge to less than 50 volts.

TriGard® ESD Finish

TriGard ESD Coating is the perfect flooring finish for autonomous mobile robots that use lidar navigation system or a variable path.

The TriGard® ESD finish offers several benefits, including:

- Engineered to withstand high-frequency robotic traffic
- Optimal coefficient of friction, allowing robot to run at it's peak performance
- Ideal degree of light reflectivity that does not impair a vehicle's laser-based navigation sensors

TriGard® ESD Ultra Finish

TriGard ESD Ultra is engineered for ultra-high repetitive travel patterns and defined travel paths typically seen with AGVs following fiducials.

The TriGard ESD Ultra finish offers several benefits, including:

- Innovative finish that provides 4X greater wear than TriGard ESD coating
- Optimal coefficient of friction, allowing robot wheels to travel fluidly and with precision
- Coating can be modified for surface roughness and light reflectivity
- R10 Slip Resistance: EN 16165:2021-10, Annex B

MetaGard® SST

ResinDek with MetaGard SST is engineered for the extreme wear of AGVs and has been proven to withstand more than 2 million annual pivoting passes generated when AGVs change direction. In testing, ResinDek® with MetaGard SST has been shown to be 5x more abrasion resistant than concrete in heavily trafficked areas where dirt and debris are not routinely removed. ResinDek with MetaGard SST flooring panels combine the structural integrity of a ResinDek panel along with the strength and durability of a steel wearing surface.

The MetaGard® SST finish offers several benefits, including:

- Fused to the ResinDek panel with a proprietary bonding agent and features an edge that encapsulates the perimeter of the panel, creating a floor that will not delaminate
- Has superior physical properties
- Level for rolling loads
- Has no sharp edges that could cut or snag objects passing over it

A Hybrid Flooring Solution

TriGard® ESD Ultra and MetaGard® SST

We recommend using a combination of ResinDek with MetaGard in the higher traffic, debris-laden areas and ResinDek with TriGard ESD Ultra in the cleaner, lower traffic regions, maximizing the performance of the platform while decreasing the overall cost of the robotics flooring system. This creates a cost-efficient flooring solution.

Product Name	Thickness	Robot & Product Load Limits	Maximum Contact Pressure	Substructure	*Number of AGV and AMR Passes for Each Finish*					
					TriGard® ESD		TriGard® ESD Ultra		MetaGard® SST	
					AMR*	AGV**	AMR*	AGV**	AMR*	AGV**
ResinDek® LD	3/4" / 19 mm	500 lbs / 230 kg	500 psi / 3.4 MPa	20 GA / 0.9mm B-Deck	≤ 20M		≤ 50M		≤ 100M	
ResinDek® MD	3/4" / 19 mm	2000 lbs / 910 kg	750 psi / 5.2 MPa	20 GA / 0.9mm B-Deck	≤ 20M	≤ 5M	≤ 50M	≤ 20M	≤ 100M	≤ 50M
	3/4" / 19 mm	3000 lbs / 1365 kg	1000 psi / 6.9 MPa	18 GA / 1.2mm B-Deck	≤ 20M	≤ 5M	≤ 50M	≤ 20M	≤ 100M	≤ 50M
ResinDek® HD	3/4" / 19 mm	4000 lbs / 1815 kg	1200 psi / 8.3 MPa	18 GA / 1.2mm B-Deck	≤ 20M	≤ 5M	≤ 50M	≤ 20M	≤ 100M	≤ 50M
	3/4" / 19 mm	750 lbs / 345 kg	750 psi / 5.2 MPa	Steel beams/purlins	≤ 20M	≤ 5M	≤ 50M	≤ 20M	≤ 100M	≤ 50M
ResinDek® WR	3/4" / 19 mm	500 lbs / 230 kg	500 psi / 3.4 MPa	20 GA / 0.9mm B-Deck	≤ 20M		≤ 50M		≤ 100M	
ResinDek® MAX	1-1/2" / 38 mm	6000 lbs / 2725 kg	1500 psi / 10.3 MPa	18 GA / 1.2mm B-Deck	≤ 20M	≤ 5M	≤ 50M	≤ 20M	≤ 100M	≤ 50M
ResinDek® Xspan®/ Xspan® FR	1-1/8" / 28 mm	2500 lbs / 1135 kg	900 psi / 6.2 MPa	Steel beams/purlins	≤ 20M	≤ 5M	≤ 50M	≤ 20M	≤ 100M	≤ 50M
ResinDek® ReShield™	1/4" / 6 mm	3000 lbs / 1365 kg	1000 psi / 6.9 MPa	See Note Below***	≤ 20M	≤ 5M	≤ 50M	≤ 20M		

Note: *The wear life of the topside finish is dependent on the robot loads, wheels, frequency of cleaning and regular maintenance.*
**AMRs are mobile robots that navigate freely without following floor markings. They adapt their routes around obstacles and typically carry lighter loads than AGVs, causing less floor wear.*
***AGVs are guided robots that follow floor markings. They're heavier and carrier bigger loads than AMRs. AGVs stop when they meet obstacles. Their fixed paths cause more wear on specific floor areas.*
*****ResinDek ReShield allowable loads are dependent upon the substrate that it is being installed on. Contact us for more information.*

ResinDek® for Ground Floor Robotic Applications

While more operations are deploying Automated Guided Vehicles (AGVs) and Autonomous Mobile Robots (AMRs) in their facilities, not every existing ground floor surface can support them. Although it may be possible to grind down uneven areas, patch cracks, add a new layer of concrete on top, or apply an epoxy coating over the surface, ultimately these repairs have multiple drawbacks. First, it takes a considerable amount of time and manual labor to grind down concrete — which also creates a lot of dust. Patching often does not match the properties of the original concrete flooring, creating more problems for robot navigation. And pouring fresh concrete or an epoxy coating both take extensive amounts of time to dry and set properly, while still not offering the wear resistance robots often require.

Additionally, some facilities may have other floor coverings laid over the concrete, such as tiles with asbestos content. Safely removing this material is both dangerous and costly. Further, the surface beneath it will likely be marred by adhesive, as well as scratched and damaged — requiring additional remediation.

The solution is to install ResinDek® panels directly on top of an existing ground floor. The panels create a level floor with surface characteristics that are critical for the successful deployment of robots. Installing ResinDek floor panels directly over an existing ground floor is faster, cleaner, easier, and more cost-effective. It also creates the optimal flooring surface to support a successful AGV or AMR deployment.

vs. concrete

Concrete Floor Problems

- Carts and pallet jack are difficult to impossible to roll over cracked or spalling concrete
- Concrete is expensive to replace, needs time to cure and will likely cause significant downtime
- Unsightly work environment lowers productivity

ResinDek Flooring Solution

- ResinDek flooring panels can solve difficult concrete problems
- With a variety of panel grades available, ResinDek flooring panels can support pallet jack load limits from 2,000 lbs – 8,000 lbs (910 kg - 3,630 kg)
- ResinDek is supplied with a factory finish, so once ResinDek is installed it's done
- Cleans easily and is aesthetically pleasing
- ResinDek panels are backed by a 10-year product warranty


Cracked Concrete

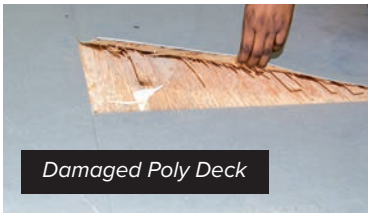

Cracked & Spalling Concrete

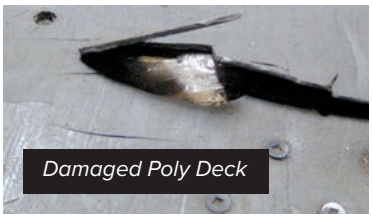
Poly Deck Floor Problems

- Pallet jack loads are difficult to roll on a delaminating floor
- A delaminating floor is a trip hazard and a potential worker's compensation claim
- Unsightly work environment lowers productivity
- Poly deck has lower allowable wheel loads

ResinDek Flooring Solution

- ResinDek flooring panels will never delaminate and are easy to maintain
- With a variety of panel grades available, ResinDek flooring panels can support pallet jack load limits from 2,000 lbs – 8,000 lbs (910 kg - 3,630 kg)
- ResinDek panels are aesthetically pleasing with long lasting durability
- ResinDek panels are backed by a 10-year product warranty


Damaged Poly Deck

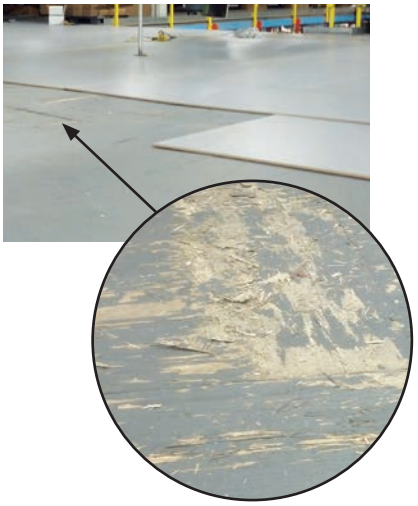

Damaged Poly Deck

Plywood Floor Problems

- Plywood will splinter and delaminate, making it difficult for pallet jacks to roll across
- Plywood shows stains, is difficult to clean, and uses Formaldehyde based resins
- Allowable wheel loads are lower for plywood

ResinDek Flooring Solution

- ResinDek flooring panels can support pallet jack load limits from 2,000 lbs – 8,000 lbs (910 kg - 3,630 kg)
- ResinDek flooring panels easily install over plywood, will never delaminate & clean easily
- ResinDek panels are certified to contain No Added Formaldehyde and can contribute towards LEED®
- ResinDek panels are backed by a 10-year product warranty



Bar or Plank Grating Floor Problems

- Rolling pallet jacks are loud and difficult to maneuver on bar and plank grating
- Not suitable for robotics or workstations
- Unforgiving surfaces may cause workplace injuries (trip hazard and objects can fall through)
- Working on bar grate is equivalent to adding 18 lbs. (10 kg) to your body compared to ResinDek

ResinDek Flooring Solution

- Can be installed over bar or plank grating or in-place of it, and is engineered for rolling loads
- Is a solid flooring surface, thus prevents items from falling to the level below
- ResinDek flooring is worker-friendly and ergonomic, see our website for additional information
- ResinDek panels are backed by a 10-year product warranty
- ResinDek panels are aesthetically pleasing with long lasting durability


Damaged Plank Grating


Damaged Bar Grating

Biomechanical Analysis of Walking on ResinDek® Flooring vs. Bar Grating and Concrete

Ohio State University Institute for Ergonomics completed a research study to determine if there were quantifiable differences in objective biomechanical measures that could be used to characterize different walking surfaces used in warehouse and distribution centers.

Testing Parameters

- 16 volunteers fitted with pedometers at two different facilities, ordinary work routine
- Wore their usual work shoes during the collection process (athletic shoes and work boots primarily)
- Pedometers collected at the end of an 8-hour shift
- Using an average of 30” per pace, employees averaged 21k steps = 10 miles per day
- Measure acceleration of the tibia as participants walk on concrete, bar grating and ResinDek
- Statistically analyze and compare the tibial acceleration data

Research Results Summary

- Significantly less tibial shock with ResinDek at work rate walking speed (15% faster than an avg. walking pace)
- Concrete increased the tibial shock by 7.8%
- Bar Grating increased the tibial shock by 10.6%
- Working on concrete is equal to adding 12 lbs. to your body compared to ResinDek
- Working on bar grating is equal to adding 18 lbs. to your body compared to ResinDek

ResinDek® vs. Concrete - Providing Substantial Savings for New & Retrofit Applications

Cost Savings & Speed of Construction with ResinDek vs. Concrete

An independent cost comparison study published by Rescorla Engineering found that an elevated platform with ResinDek flooring was up to 34% less expensive than the concrete alternatives. In fact, it is quite common to save up to $5/sqft* or more with tax benefits when using ResinDek instead of concrete. How?

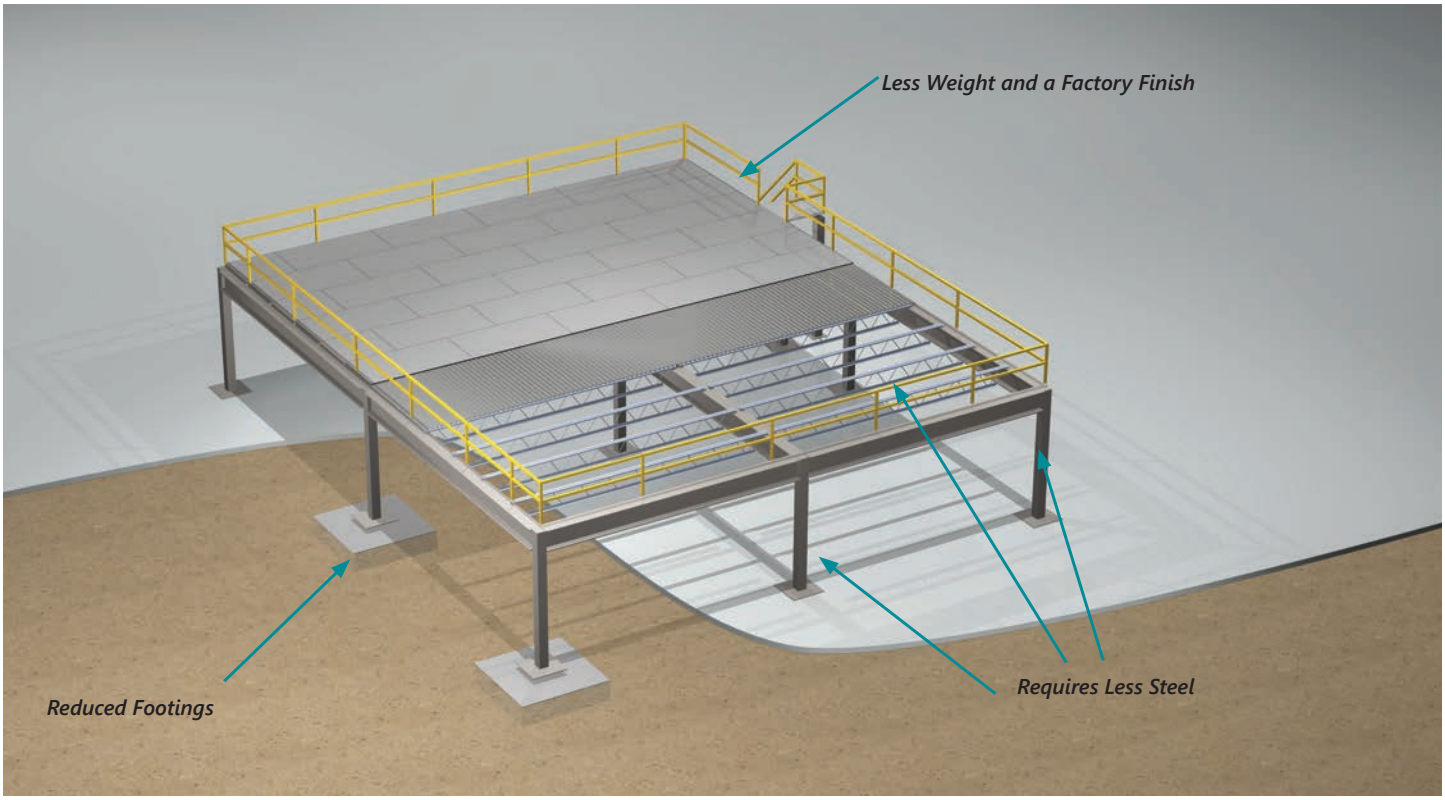
ResinDek panels have the proven structural integrity and the strength you associate with a concrete floor yet offers significant savings. An independent study found that ResinDek flooring is ***exponentially more cost effective than concrete***. How? Simple. . . Less Weight + Less Footings + Less Steel + 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
- Since ResinDek is supplied with a factory finish, and concrete needs time to cure, ResinDek can be installed faster
- 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.*

A Low Maintenance, Flat, Level Surface

- ResinDek floors provide a consistent finish in floor flatness, levelness and surface roughness. Worn or uneven surfaces can disrupt the functioning of the vehicle's laser-based navigation sensors, slowing down its rate of travel. ResinDek panels ensure a level flooring surface with just the right amount of surface roughness to avoid the impairment of a robot's navigation or slow its movement.
- ResinDek panels do not produce dust, require sealing or crack like concrete. Unlike concrete, ResinDek does not require large expansion joints. In addition, individual panels can be removed without having to refinish an entire floor.



ResinDek® Certifications and Product Testing

SCS Global Certifications, LEED® and FSC®

As part of our commitment to environmental sustainability, all ResinDek® panels are certified by SCS Global Services for use of recycled materials and to have no added formaldehyde. They also contribute towards earning points for LEED® qualified buildings. ResinDek® panels may also be specified for construction with FSC® certified materials (FSC® License Code FSC-C124474).

Flame Spread Index and UL Classification

When tested in accordance with ASTM E84, the ResinDek panels plus the corrugated metal deck assembly meet Class A criteria for an interior finish. ResinDek Xspan FR is a fire resistant panel and meets ASTM E-84 Class "A" flame spread less than 25, meets UK Class "0", and meets European standards B-Class (B_{FL}-s1 | B-s1,d0) for both top and bottom.

UL Classification ResinDek® flooring system can be UL Classified for up to a 2-hour fire rated assembly under UL Design No. L701 and UL File No. R39265.

Uniform Evaluation Service Report

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

ResinDek® 10-Year Product Warranty

ResinDek panels are backed by our comprehensive design engineering services and a 10-year product warranty. The panels are warranted to be to be free from defect, structurally sound, and able to safely carry the specified design loads. The warranty will flow through and transfer to the end user for the entire period of the warranty.

Environmental Product Declaration

ResinDek HD and ResinDek Xspan have received an Environmental Product Declaration (EPD) from NSF, recognizing their sustainability and environmental transparency. With EPD certification, ResinDek HD and ResinDek Xspan support green building initiatives while delivering the strength, durability, and performance needed for industrial and commercial applications.

We never stop evaluating and testing new approaches for mezzanine floors. Our goal is to help customers solve problems through continuously evaluating and testing new approaches to enhance our flooring system.

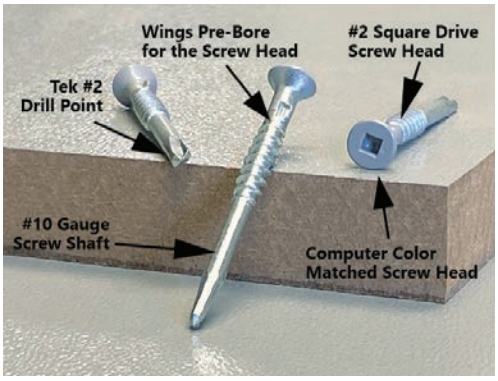
ResinDek flooring panels outperform other flooring solutions time and time again. We go to great lengths to extensively test internally and send our products to be evaluated by independent laboratories as well as robotic manufacturers. At our advanced research and engineering facility we have designed and built a series of floor testing equipment that accurately replicates field conditions. Here is an example of just some of the testing that we do:

- Taber Abrasion
- Gouge Resistance
- Gloss, 85 Deg.
- Reflectivity
- Surface Roughness
- Uniform Load Capacity
- Dynamic Coefficient of Friction
- Stain Resistance
- Electrostatic Dissipative Surface
- Impact Resistance
- Dynamic and Static Rolling Load Capacity
- Fire Resistance & Ratings
- Modulus of Rupture
- Modulus of Elasticity
- Surface Hardness
- Pallet Jack Capacity
- Point Load Capacity
- Screw Pull Test

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 ResinDek product warranty.

Top Side Engineered Fasteners

ResinDek® engineered fasteners are designed for strength, durability, and easy installation. No countersinking or pre-drilling is required as the wings near the top of the shaft create a counter-bore for screw heads. 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.



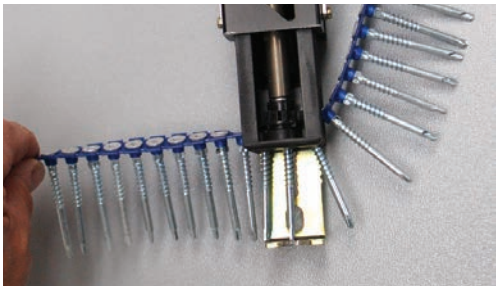
- Available in collated strips
- Stout # 10 wire gauge screw
- Zinc coating for high humidity environments resists corrosion
- Your choice of gray or beige drill screws
- Can be installed with our upright screw gun

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 ResinDek panels and steel decking prior to the threads engaging, thus preventing the panels from lifting.

Collated Screws for Corrugated Metal Deck

B-Deck screws work best in roll form beams and structural steel under 3/16” (4.8 mm) thick. Valleys less than 2- 1/2” (38.1 mm) wide may not accommodate the screw gun. Contact Cornerstone Specialty Wood Products, LLC® for additional information.



- The above Fastening Systems are for ResinDek® LD, MD and HD
- Additional Fastening Systems are available - please contact ResinDek for more information

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.

- 20 Invisi-Loc engineered fasteners are required per 4’ x 8’ (1219 mm x 2438 mm) sheet - A pneudraulic installation tool and a standard medium-duty air compressor supplies the required power
- Corrugated metal decking is pre-punched and B metal deck is fastened to the bar joists like other steel decking using drilling screws or welding
- All pneudraulic installation tools can be rented or purchased from ResinDek
- When installed according to ResinDek specifications the Invisi-Loc® Underside Engineered Fastening System carries a 10-year warranty

Corrugated Metal Decking - B Deck

ResinDek provides corrugated metal deck products in a variety of profiles, thicknesses, yield strengths and finishes. The Engineers at ResinDek 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.

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

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. (1,135 kg)

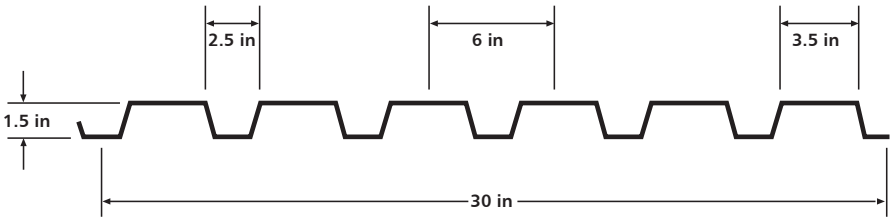
B Deck 1.5" Allowable Uniform Loads (PSF) / Loads that Produce L/240 Deflection

Number of Spans	B-Deck Thickness Gauge/*mm*	Min Yield KSI *(MPa)*	36" *(914mm)*	42" *(1067mm)*	48" *(1219mm)*	54" *(1372mm)*	60" *(1524mm)*	66" *(1676mm)*	72" *(1829mm)*	78" *(1981mm)*	84" *(2134mm)*	90" *(2286mm)*
Single	20 *0.9mm*	60 *(413)*	565 / 462 *27.1 / 22.1*	415 / 291 *19.9 / 13.9*	318 / 195 *15.2 / 9.3*	251 / 137 *12 / 6.6*	203 / 100 *9.7 / 4.8*	168 / 75 *8 / 3.6*	141 / 58 *6.8 / 2.8*	120 / 45 *5.7 / 2.2*	104 / 36 *5 / 1.7*	90 / 30 *4.3 / 1.4*
	18 *1.2mm*	60 *(413)*	792 / 658 *37.9 / 31.5*	582 / 414 *27.9 / 19.8*	445 / 278 *21.3 / 13.3*	352 / 195 *16.9 / 9.3*	285 / 142 *13.6 / 6.8*	236 / 107 *11.3 / 5.1*	198 / 82 *9.5 / 3.9*	169 / 65 *8.1 / 3.1*	145 / 52 *6.9 / 2.5*	127 / 42 *6.1 / 2*
	16 *1.5mm*	33 *(227)*	575* *27.5**	422* *20.2**	323* *15.5**	255* *12.2**	207 / 186 *9.9 / 8.9*	171 / 140 *8.2 / 6.7*	144 / 108 *6.9 / 5.2*	122 / 85 *5.8 / 4.1*	106 / 68 *5.1 / 3.3*	92 / 55 *4.4 / 2.6*
Double	20 *0.9mm*	60 *(413)*	563* *27**	418* *20**	322* *15.4**	256* *12.3**	208* *10**	172* *8.2**	145* *6.9**	124 / 116 *5.9 / 5.6*	107 / 93 *5.1 / 4.5*	93 / 75 *4.5 / 3.6*
	18 *1.2mm*	60 *(413)*	788* *37.7**	586* *28.1**	452* *21.6**	359* *17.2**	292* *14**	242* *11.6**	204 / 202 *9.8 / 9.7*	174 / 159 *8.3 / 7.6*	150 / 127 *7.2 / 6.1*	131 / 103 *6.3 / 4.9*
	16 *1.5mm*	33 *(227)*	552* *26.4**	410* *19.6**	317* *15.2**	252* *12.1**	205* *9.8**	170* *8.1**	143* *6.8**	122* *5.8**	105* *5**	92* *4.4**
Triple	20 *0.9mm*	60 *(413)*	692* *33.1**	516* *24.7**	399 / 388 *19.1 / 18.6*	317 / 273 *15.2 / 13.1*	258 / 199 *12.4 / 9.5*	214 / 149 *10.2 / 7.1*	180 / 115 *8.6 / 5.5*	154 / 91 *7.4 / 4.4*	133 / 72 *6.4 / 3.4*	116 / 59 *5.6 / 2.8*
	18 *1.2mm*	60 *(413)*	966* *46.3**	722* *34.6**	558 / 534 *26.7 / 25.6*	445 / 375 *21.3 / 18*	362 / 273 *17.3 / 13.1*	300 / 205 *14.4 / 9.8*	253 / 158 *12.1 / 7.6*	216 / 124 *10.3 / 5.9*	187 / 100 *9.0 / 4.8*	163 / 81 *7.8 / 3.9*
	16 *1.5mm*	33 *(227)*	676* *32.4**	505* *24.2**	391* *18.7**	311* *14.9**	254* *12.2**	210* *10.1**	177* *8.5**	152* *7.3**	131 / 128 *6.3 / 6.1*	114 / 104 *5.5 / 5*

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



ResinDek® Shelving System

ResinDek® Fully Customizable Shelving System

The ResinDek Shelving System easily stores and supports case goods in a rack or shelving structure inside a warehouse distribution or manufacturing center. The ResinDek Shelving System consists of ResinDek horizontal shelving, ResinDek vertical dividers, steel or lumber supports, and when required vertical end stops. This system easily installs without hardware, and our ResinDek dividers are far superior to cardboard and is less expensive than steel.

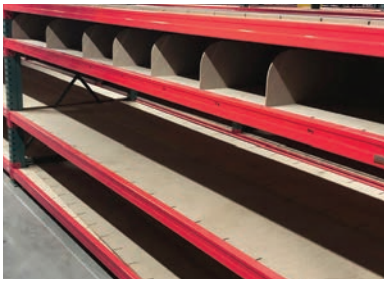
SHELF HEIGHTS	SHELF DEPTHS	VERTICAL DIVIDER SPACES
6" to 20"	8" to 60"	4" on center to 48" on center

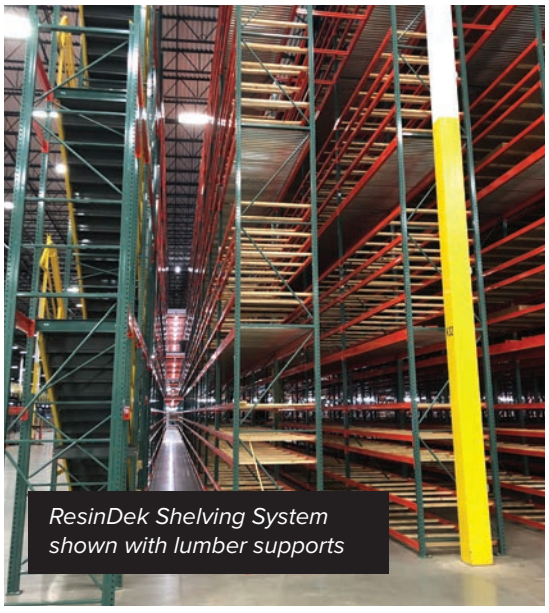
Through the utilization of custom machining, the ResinDek Shelving System can be designed to accommodate shelf heights of 6" (152.4 mm) to 20" (508 mm), shelf depths from 8" (203.2 mm) to 60" (1,524 mm), and vertical divider spaces from 4" (101.6 mm) on center to 48" (1,219.2 mm) on center. The custom machining allows for the possibility of the vertical dividers to be moved without the use of hardware, which provides a great deal of flexibility in the design of vertical divider spaces between shelves or within an individual shelf bay. If flue space is required then the single sided ResinDek Shelving System can easily fasten to the shelf supports to maintain proper flue space.

ResinDek Shelving System is custom manufactured using a proprietary blend of moisture resistant medium and high density fiberboard. It is available in single sided, double sided, with or without flue space. The panels may be unfinished as shown, or available with our Gray Diamond Seal® 2 finish. ResinDek horizontal shelving and vertical dividers come in thicknesses ranging from 1/4" to 3/4".

The lumber supports are manufactured in accordance with Southern Pine Inspection Bureau Standards. ResinDek furnishes a #2 grade stamped Southern Yellow Pine lumber support. The supports may have custom machining to accommodate unique site requirements, including notches to accommodate the height of a step beam and the horizontal shelving members.

The lumber supports have been tested extensively for this application. Load carrying capacity varies by length of support, but they have been proven to support up to 800 lbs each when the length is 48" (1,219.2 mm) or less. The ends of lumber supports can be screwed down to rack or shelving beams at their ends.





ResinDek Shelving System shown with lumber supports

resinDEK®

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