

resinDEK®

Manufactured by:



CORNERSTONE

SPECIALTY WOOD PRODUCTS, LLC®



◆ Performance Engineered Ergonomic Flooring Solutions

Why Does Ergonomic Performance Matter?

The Warehouse Workforce has a Higher Injury Rate than Other Occupations

The 2021 Bureau of Labor Statistics showed that warehouse injuries occurred in 5.5 out of 100 employees, compared to 2.7 per 100 in all other occupations. Warehouse injuries make up 1% of the total workforce. The Warehouse workforce comprised 1.93M of the work population in 2023. This means that a warehouse worker is more likely to get injured on the job than the workforce at large.

Warehouse Injuries and Absenteeism Reduce Productivity

The annual cost of workplace injuries was \$167 billion in 2021. From 2021 to 2020, the days away from work in the transportation & warehousing sector increased by 23% from 99,800 cases to 122,700 cases.

Almost everyone at some time has experienced pain or discomfort from walking or running on hard surfaces for long periods of time. So the mezzanine work floor you install deserves some thought for productivity, safety, and workforce comfort.

Research Conducted by The Ohio State University's Institute for Ergonomics

A world leader in 3rd party logistics and an apparel retailer volunteered their locations in the vicinity of Columbus, Ohio, (over 500,000 in square feet.) The ergonomic test data collected at these two locations was conducted on concrete, bar grate and ResinDek® flooring surfaces.

Testing Parameters:

- 47 volunteers, two different facilities, ordinary work routine
- Pedometers collected at the end of an 8 hour shift
- With a 30" pace, employees averaged 21,000 steps, or 10 miles per day!
- Used accelerometers on volunteers and measured tibia acceleration on various surfaces and different walking speeds
- Measured tibia acceleration on various surfaces
- Wore their usual work shoes during the collection process

Biomechanical Analysis of Walking on ResinDek & Other Mezzanine Floors

- Significantly less tibial shock with ResinDek® at work rate walking speed*
- Concrete increased the tibial shock by 5.4% at the work rate walking speed
- Bar grate work rate walking pace showed an increased tibial shock rate of 10.6%
- *Work rate walking speed defined as walking 15% faster than an average walking pace

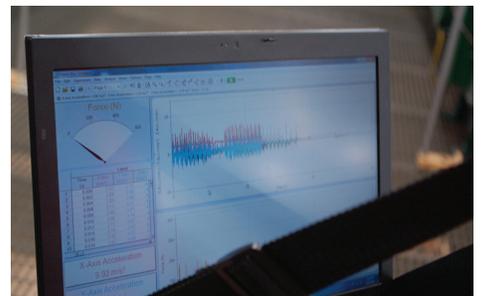
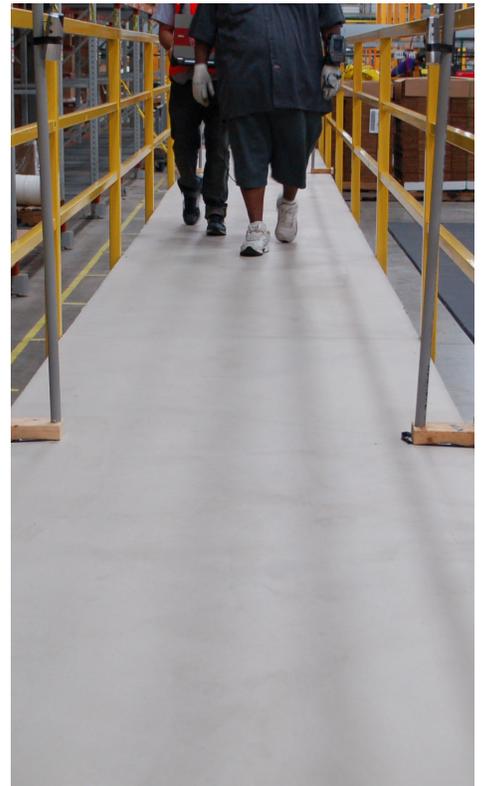
So What Does This Really Feel Like?

If you convert the data from tibia shock force to pounds, you can easily see and feel the difference:

- Working on Concrete is Equal to adding 12 lbs. to your body compared to ResinDek®
- Working on Bar Grate is Equal to adding 18 lbs. to your body compared to ResinDek®



Field data collected by The Ohio State University's Institute for Ergonomics of walking on bar grate and concrete surfaces produced significantly higher impact forces on the body than ResinDek, resulting in higher risk of injuries and fatigue over time.



A researcher from Ohio State University takes tibia shock readings on a ResinDek® mezzanine.



The 3E's of ResinDek® Flooring

Environmental of ResinDek®

According to a life cycle assessment conducted by Coldstream Consulting:

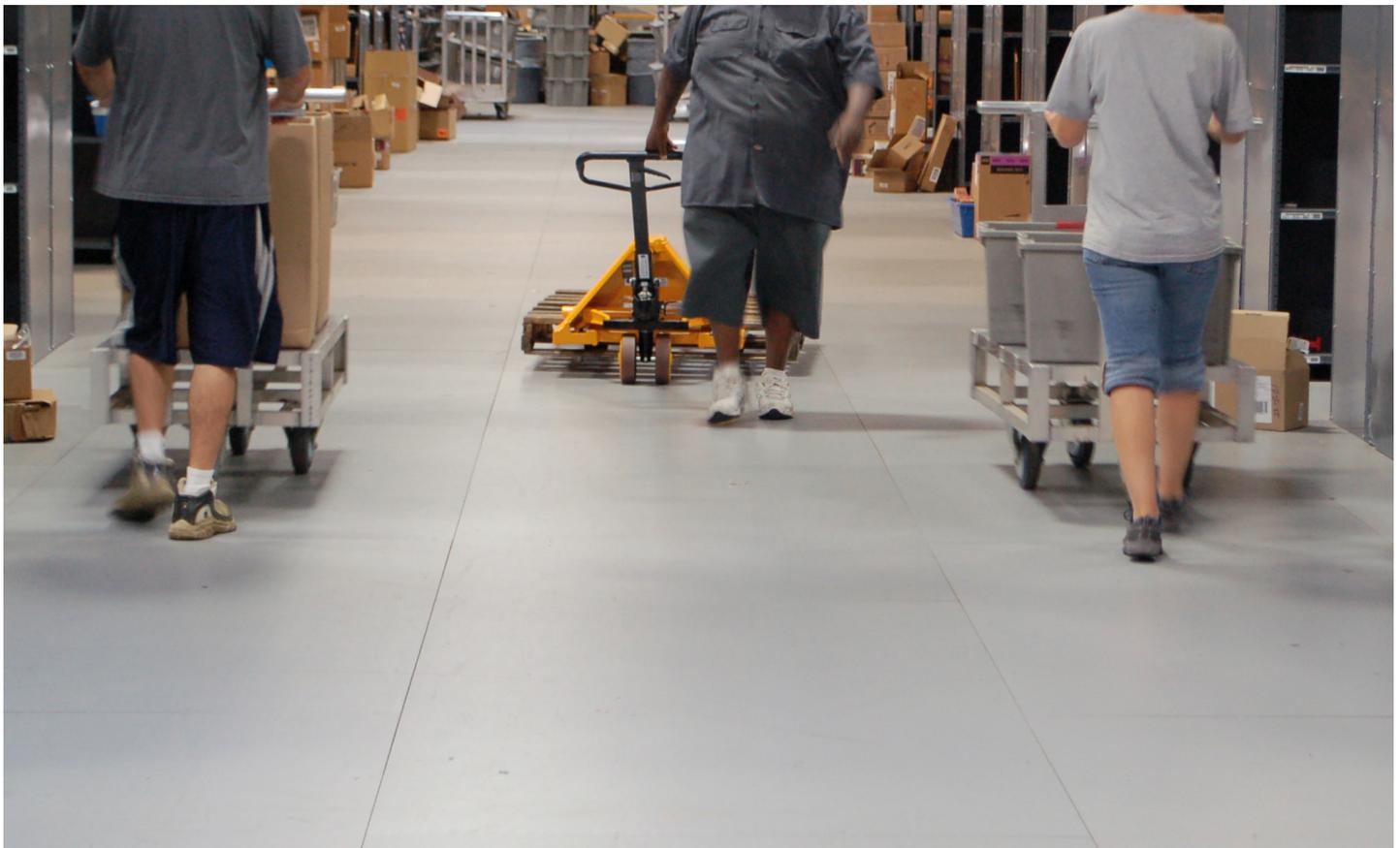
- ResinDek is a Net Energy Producer (80% more energy at end of life cycle than consumption)
- ResinDek produces 50% LESS hydrogen ions than concrete
- ResinDek generates 67% LESS smog than concrete
- ResinDek is a carbon negative product since it absorbs more during its life cycle than it emits
- Installing a 50,000 sqft. mezzanine with ResinDek panels instead of concrete saves enough consumed energy and pollution produced that it is the equivalent to taking 56 cars off the road for a period of one year

Ergonomics of ResinDek®

- More comfortable to walk and work on
- Reduced tibial shock
- More resilient work surface than bar grate or concrete

Economics of ResinDek®

- ResinDek saves up to \$5 per sq. ft. vs concrete
- ResinDek saves \$2-\$4 per sq. ft. vs bar grate



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