



DesertBoard.

An aerial photograph showing a dense, lush green canopy of palm trees, likely a coconut palm forest, filling the entire frame. The perspective is from directly above, looking down on the crowns of the trees.

**BUILD RESPONSIBLY  
LIVE BEAUTIFULLY  
BREATHE EASILY  
WITH DESERTBOARD'S PSB®**



THE WORLD'S FIRST PALM BASED WOODEN BOARD





DesertBoard.

Beyond Net Zero – the carbon sink board that will reduce  
the carbon footprint of your built environment.

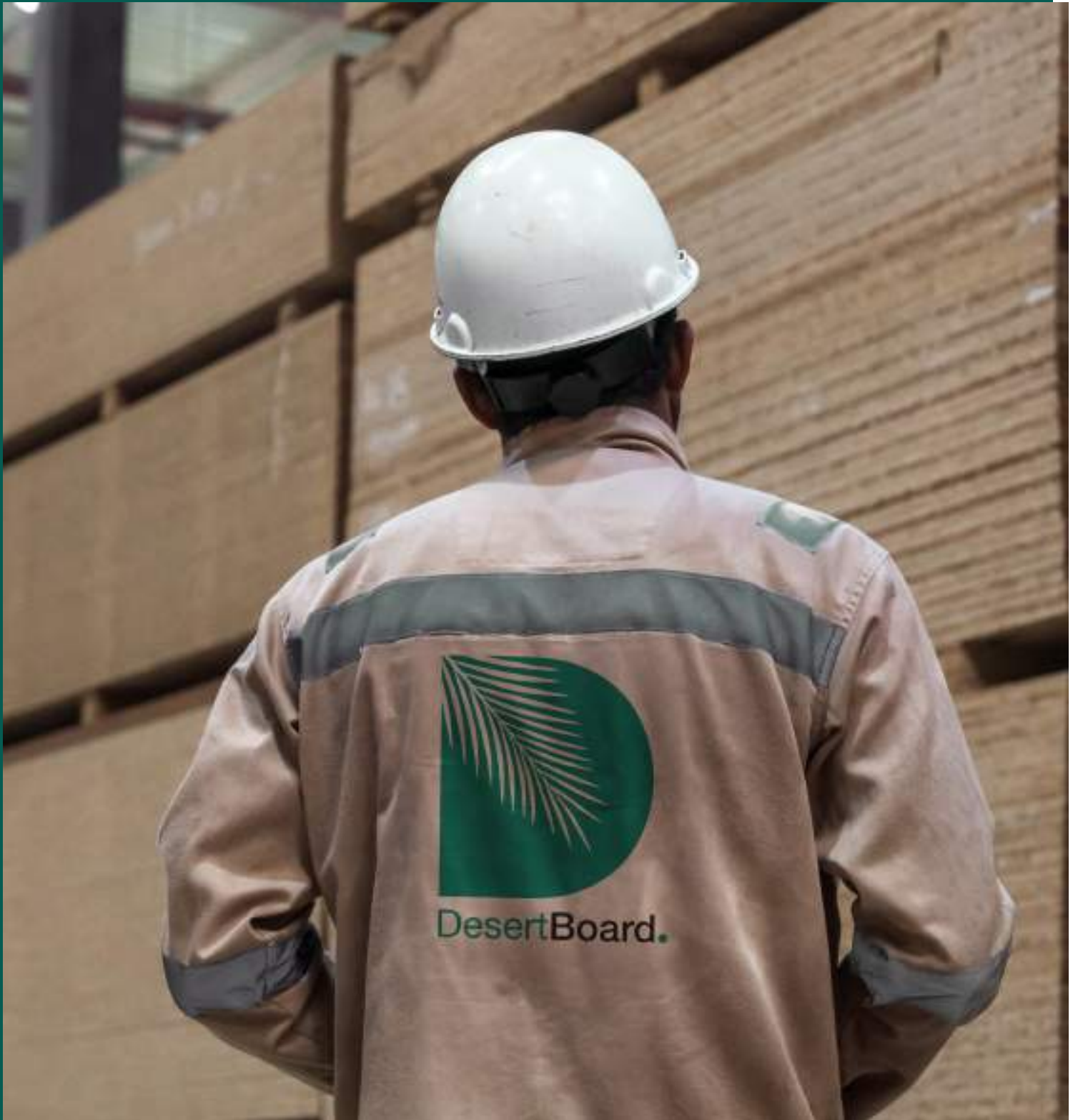






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# ABOUT THE COMPANY

Inspired by the profound respect for the palm tree and guided by the visionary leadership of the late Sheikh Zayed, former President of the United Arab Emirates, DesertBoard embarked on a pioneering journey in 1997. Founded by Mr. Hatem Farah, the company was driven by the ambitious goal of transforming palm frond biomass into innovative and sustainable construction materials.

After years of dedicated research and overcoming challenges, 2017 marked a pivotal moment with the experimentation phase, leading to the creation of the first Palm Strand Board (PSB®) in 2021. This initiative symbolized a fusion of technology and sustainability, setting a new benchmark for eco-friendly production in the construction industry. This milestone not only represented perseverance and innovation but also set DesertBoard on a path to fulfilling its vision to become a leader in sustainability within the UAE and worldwide.

# WE ARE COMMITTED TO OUR MISSION

DesertBoard's mission remains unwavering: to lead the decarbonization of the construction sector through the production of sustainable and innovative construction materials. Focusing purely on eco-friendly products, DesertBoard understands the significance of minimizing the carbon footprint for building and living and fostering healthier environments.

Today, DesertBoard stands as a testament to carbon storage and the reduction of the upfront carbon footprint and scope 3 emissions of its client's projects by offering the world's first wooden board made from annually regenerated palm biomass. This pioneering effort has established PSB® as the gold standard in green building, celebrated for its robustness, adaptability, and commitment to environmental responsibility. DesertBoard's journey from a visionary idea to setting global sustainability standards demonstrates its unwavering dedication to fostering a conscientiously constructed future.











# WHAT IS PSB®?

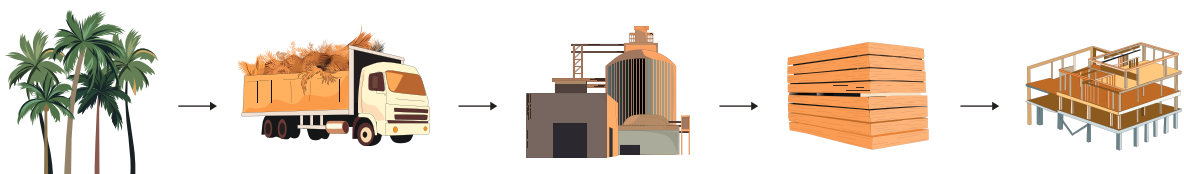
## The World's First Palm Wooden Board

DesertBoard's PSB® is not just a product, it's a revolutionary approach to sustainable construction. Developed in the UAE, our cutting-edge engineered PSB® (Palm Strand Board), is the world's first date palm-based board. Manufactured from the UAE's annually regenerated date palm biomass, we are setting new benchmarks in environmentally sustainable building materials.

Imagine a building board that combines unparalleled durability and versatility with zero toxic emissions, the ability to exceed sustainability goals and store carbon within your project. That's DesertBoard's PSB®. By launching the world's first palm-based board, we've transformed the indigenous, residual materials from date palm trees into formaldehyde free, premium wooden boards that exceed OSB3 standards, that are suitable for structural use and are 100% deforestation free.

Our PSB® is the ideal choice for Carbon Storage Cities and low carbon projects that accelerate the reduction of scope 3 emissions. Engineered to meet the highest standards, our PSB® is designed for a new era of construction in line with the Paris Climate Agreement. It's not just a building material; it's a game-changer in the construction industry and aligned with the principles that enable a circular economy.

## PSB® CREATION PROCESS





# OUR FACILITIES

DesertBoard's Research & Development facility stands as a beacon of innovation and excellence within the industry. Below, we outline the distinctive attributes and practices that set our factory apart:

## **1. Commitment to Excellence and Innovation:**

At DesertBoard, we prioritize rigorous testing and continual enhancement of our processes. Our unwavering commitment ensures that our products not only meet but consistently exceed industry benchmarks.

## **2. Utilization of Cutting-Edge Technology and Process Controls:**

At DesertBoard, we prioritize rigorous testing and continual enhancement of our processes. Our unwavering commitment ensures that our products not only meet but consistently exceed industry benchmarks.

## **3. Utilization of Cutting-Edge Technology and Process Controls:**

Our facility is equipped with state-of-the-art technologies and maintains stringent process controls. Through regular testing in our laboratories and partnerships with independent third-party testing organizations, we guarantee the utmost quality and performance of our products. Furthermore, in order to improve productivity and safeguard the Health and Safety of our employees, our plant is automated with dust extraction systems to reduce the amount of dust generated during the production process.

## **4. Adherence to European Standards and Sustainability Certifications:**

DesertBoard's products comply with rigorous European Standards and have earned certifications from globally recognized bodies dedicated to sustainability. Our affiliations with the Emirates Green Building Council (a member of the World Green Building Council), United Nations Climate Action, United Nations Climate Neutral Now and the International Code Council underscore our dedication to eco-friendly practices.

## **5. Innovative Energy and Waste Management:**

We source our electricity from the UAE's grid, which is steadily shifting towards sustainability through the incorporation of various renewable energy sources such as solar, nuclear, wind, and hydroelectric, among others. This shift reflects our commitment to minimizing our environmental footprint. DesertBoard distinguishes itself with a unique approach that marries unparalleled quality and innovation with an unwavering dedication to environmental stewardship in its manufacturing processes.









Particleboard Board.

#### PSB Boards

- Decorative Boards
- Acoustic Boards
- Fire Rated Boards
- Shuttering Boards
- 10x Usage
- 40x Usage
- Scaffolding

#### PSB Doors

- Decorative Door
- Laminated Door
- Fire Rated Door

#### PSB Floors

- Laminate Floors
- Raised Floors



# **APPLICATIONS OF PSB®**





## **FIRE RATED DOORS**

PSB® EcoCore FR is ideal for constructing fire-rated doors, providing both strength and fire resistance.



## FURNITURE

Used as a core material in furniture manufacturing, contributing to the durability and stability of furniture pieces.

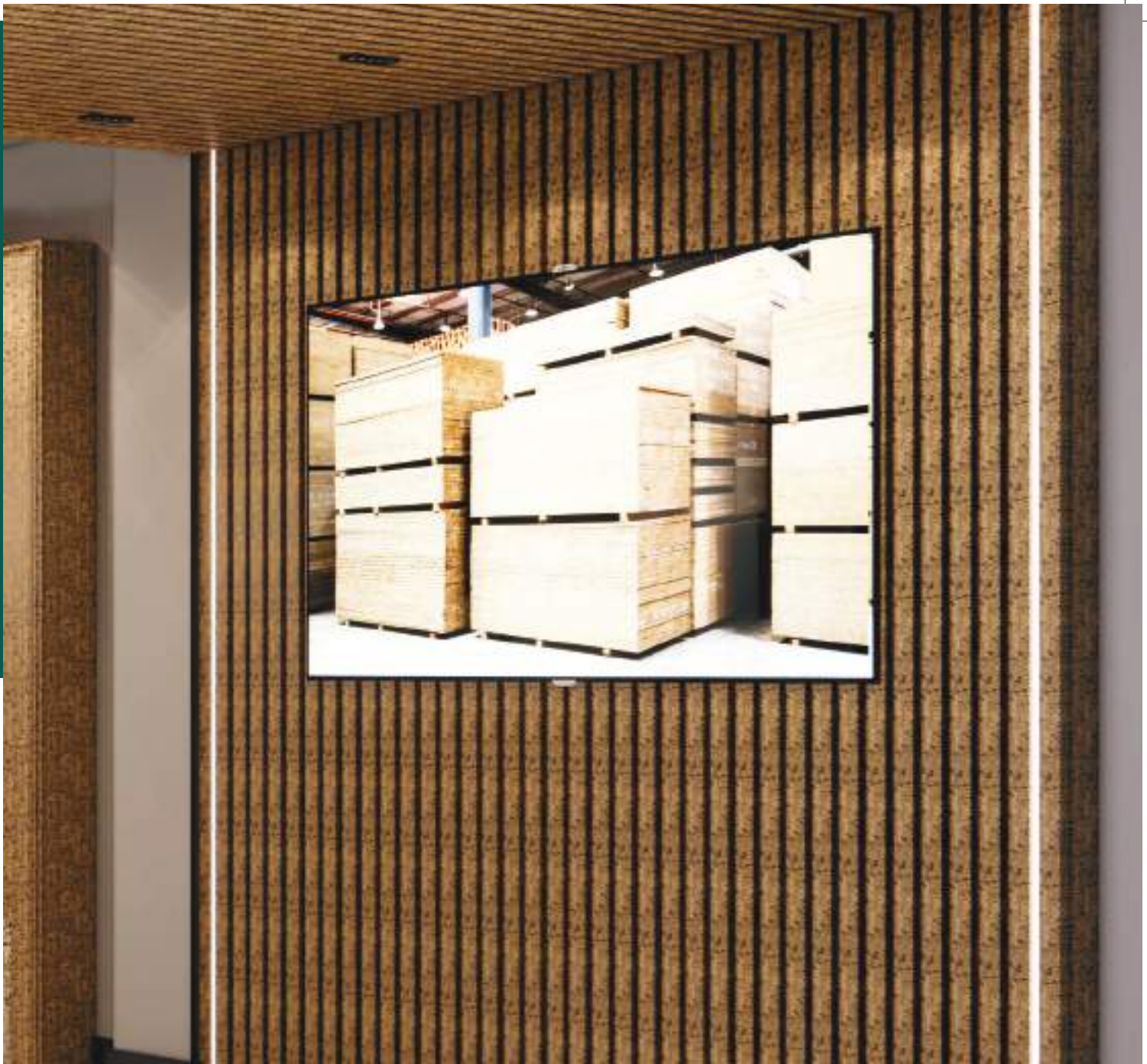


## **CABINETRY**

Employed in cabinetry construction to create strong and moisture-resistant cabinet doors and panels.







## **WALL CLADDING**

Used for wall cladding applications to enhance the appearance and strength of walls while resisting moisture.



## **FLOORING**

Serves as a durable and moisture-resistant flooring material, ideal for both residential and commercial spaces. Its strength and resistance to wear make it a practical choice.



## HOUSE BUILDING

Can be used in various aspects of housing construction, including as a structural material in framing, sheathing, for I joists, (I beams), and subflooring.



## **BOOTHS AND STANDS**

Ideal to create booths, stands, and partitions at various events, trade shows, or exhibitions.







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شركة المقاولات الهندسية ذ.م.م.  
Engineering Contracting Co. LLC



PesenBoard

Sustainable  
PSB Boards  
Made in UAE







## **SITE HOARDING**

Suitable for creating sturdy site hoarding and construction barriers.

## **KITCHEN CABINETS**

Optimal for kitchen cabinets and cupboards.





## FORMWORK AND SHUTTERING

Enables cost reduction through multiple utilization, (40+ times) for creating formwork and shuttering, providing durability and reusability for concrete moulds.







## **PACKAGING**

A sustainable solution for reusable packaging.



## DIY

A versatile material for DIY projects.



## **MODULAR AND PORTABLE STRUCTURES**

Suitable for constructing modular and portable buildings or structures due to its strength and resistance to environmental factors.





# THE PSB® RANGE

DesertBoard PSB® can be tuned with diverse performance characteristics to suit a wide range of architectural and design applications.

## **PSB® PRIME**

Formaldehyde Free, High Strength, Moisture Resistance.

## **PSB® SUPREME**

Formaldehyde Free, High Strength, High Moisture Resistance.

## **PSB® ULTRA**

Formaldehyde Free, High Strength, Ultra High Moisture Resistance.

*Note: All above boards can be made to meet the fire resistant standards as per ASTM E84 class B.*

## **PSB® ECOCORE PRIME**

Formaldehyde Free, High Strength, Moisture Resistance.

## **PSB® ECOCORE SUPREME**

Formaldehyde Free, High Strength, High Moisture Resistance.

## **PSB® ECOCORE FR**

Formaldehyde Free, High Strength, High Moisture Resistance.

*(\*Specifically made for 60 minutes and 90 minutes fire rated doors as per EN-1634-1, and UL-10C)*

## **PSB® CONFORM**

Formaldehyde Free, High Strength, Durable, Ultra High Moisture Resistance.

## **PSB® DESIGN**

Formaldehyde Free, Smooth Surface, Moisture Resistance.



# HEALTH CONCERNS WITH UREA FORMALDEHYDE & TRADITIONAL WOODEN BOARDS

Traditional wooden boards made with urea formaldehyde can pose several health concerns due to the emission of formaldehyde gas.

In contrast, formaldehyde-free construction boards like PSB® represents a revolutionary advancement in the industry, for both workers and end-users. Here's why:

## **1. Improved Indoor Air Quality:**

Formaldehyde-free construction boards eliminate the emission of formaldehyde gas, leading to healthier indoor environments. This is particularly beneficial for workers who spend extended periods in construction settings, and for end-users who reside or work in buildings constructed with these boards.

## **2. Reduced Health Risks:**

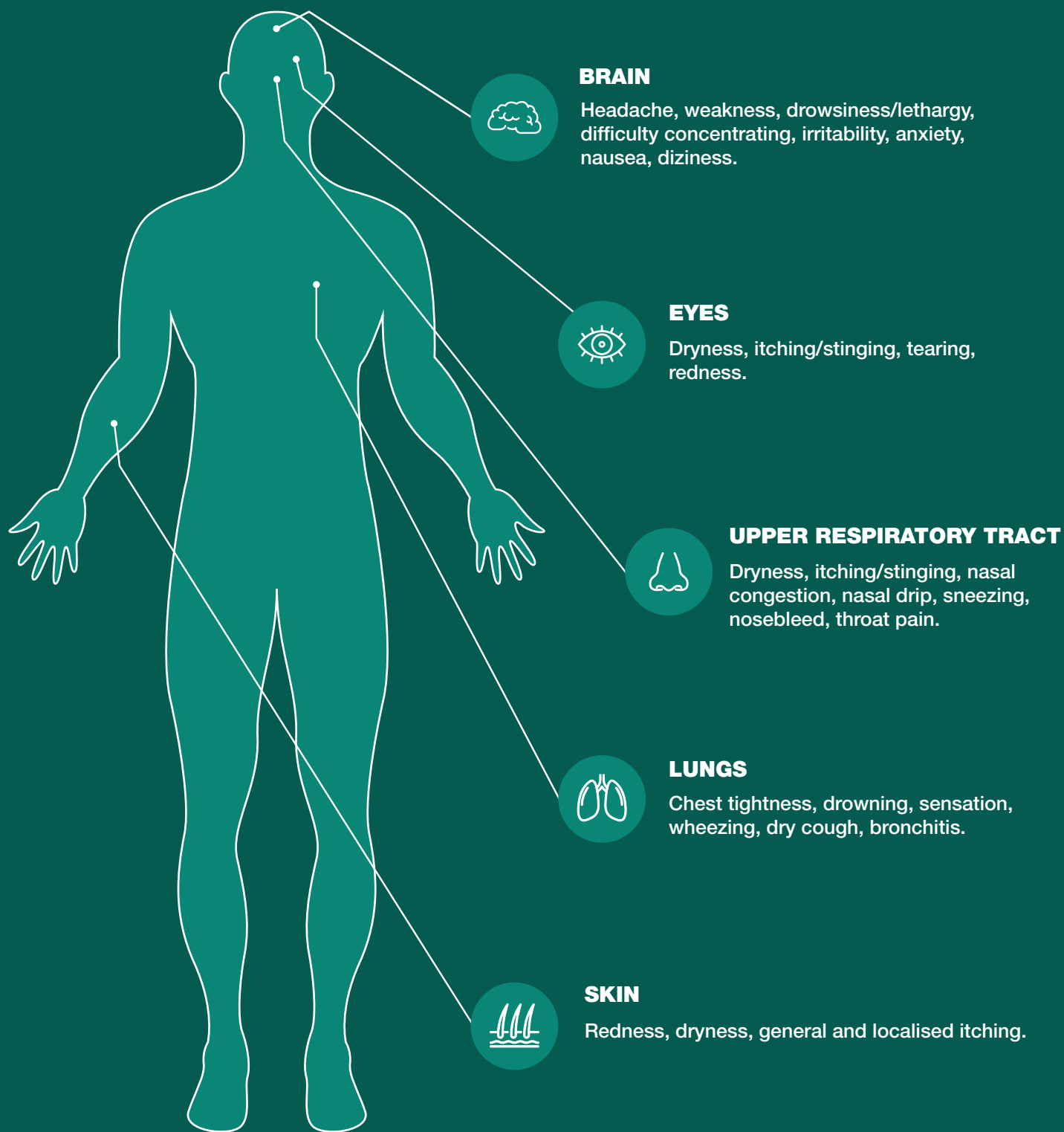
By eliminating formaldehyde emissions, formaldehyde-free construction boards reduce the risk of respiratory issues, skin and eye irritation, allergies, and long-term health effects, including cancers like nasopharyngeal cancer and leukemia.

## **3. Enhanced Safety:**

Workers involved in the manufacturing and installation of formaldehyde-free construction boards are exposed to lower health risks, contributing to improved workplace efficiency, eliminating employee illness, improving safety and overall well-being.

***“Build Responsibly, Live Beautifully, Breathe Easily with DesertBoard’s PSB®”***





*Health Concerns With Urea Formaldehyde & Traditional Wooden Boards*

# PSB<sup>®</sup> UNIQUE CHARACTERISTICS



## ZERO EMISSIONS



Experience a healthier living environment with our PSB<sup>®</sup>. Our meticulously manufactured boards are made with Zero Formaldehyde PMDI resin and therefore completely free from toxic formaldehyde emissions.

## SUSTAINABLE



Promote sustainability with our PSB<sup>®</sup>. Our raw materials are sourced locally from indigenous regenerative residual palm tree biomass, diverting it from landfill and therefore reducing methane emissions. Our product is manufactured for a sustainable and circular future and prioritizes indoor health.

## CARBON STORAGE



Discover eco-innovation with our PSB<sup>®</sup>, minimizing environmental impact. Each standard m3 of board represents a carbon storage impact of 401 kg of CO<sub>2</sub>e, as identified by an independent LCA. This allows our clients to turn their buildings and communities into carbon storage cities.



### **CONSTRUCTION PERFORMANCE**



Due to their high strength and versatility, our PSB® boards can be fabricated to make beams, columns and slabs, as well as Structurally Insulated Panels (SIPs). Our PSB® conform boards can be reused more than 40 times for concrete shuttering, saving on material use and cost.

### **FIRE RESISTANCE**



Our PSB® offers uncompromising safety, offering the ability to create 60 and 90 minutes of fire resistant doors. Expertly engineered to withstand flames and heat, they provide crucial time for safe evacuation as per EN-1634-1 and UL-10C.

### **SOUND INSULATION**



Utilizing advanced acoustic solutions, Our PSB® is designed to mitigate noise transmission, promoting serene and peaceful environments that reflect the palm's origins.



# PSB® UNIQUE CHARACTERISTICS



## HIGH MOISTURE RESISTANCE

Our products exhibit superior moisture resistance, enhancing your interiors against the adverse effects of humidity and making them ready for the trials of our changing climate.



## STRONG AND DURABLE

Manufactured for 100+ years longevity, our products stand as a testament to strength and durability and guarantee sustained quality, especially in areas of frequent use.



## INDOOR & OUTDOOR

PSB® boards are conscientiously designed for both indoor and outdoor applications and deliver exceptional performance.



## ADAPTABLE AND SOPHISTICATED

Our products can be coated, laminated or veneered to accommodate a range of finishes, from classic to contemporary. Their inherent versatility guarantees they complement any aesthetic vision.





### **VERSATILE**

Our products epitomize adaptability, catering to varied architectural and construction needs. Whether for superior interiors, or exterior durability, they consistently outperform.



### **HIGH-LOAD BEARING**

Our materials bear heavy loads with unwavering stability. Their exceptional load-bearing capacity ensures structural integrity, providing architects and designers with the assurance to construct confidently, whether it's for skyscrapers or foundational support.



### **HIGH SCREW WITHDRAWAL**











With higher-screw withdrawal strength, more so than many traditional wooden boards, our material ensures secure and lasting connections.



























# TECHNICAL DATA SHEET





PHYSICAL PROPERTIES	TEST	UNIT	RESULTS
Length		mm	2440
Width		mm	1220
Thickness		mm	9 - 44

TOLERANCE OF NOMINAL DIMENSIONS	TEST	UNIT	RESULTS
Length & Width	  BS EN 324-1	mm	+ - 3
Thickness – Sanded Boards	  BS EN 324-1	mm	+ - 0.3
Thickness – Un-Sanded Boards	  BS EN 324-1	mm	+ - 0.8
Edge Straightness Tolerance	  BS EN 324-2	mm/m	1.5
Squareness Tolerance	  BS EN 324-2	mm/m	2

MECHANICAL PROPERTIES	TEST	UNIT	RESULTS
Moisture Resistance (Boil Test)	  BS EN 1087-1	N/mm <sup>2</sup>	0.181
Thickness Swelling - 2 H	  BS EN 317	%	3.29
Thickness Swelling - 24 H	  BS EN 317	%	<12
Moisture Content	  BS EN 322	%	6.73
Density	  BS EN 323	kg/m <sup>3</sup>	742
Formaldehyde Concentration	 ASTM D5582-22	mg/L	(E0) <0.3
Bending Strength	  BS EN 310	N/mm <sup>2</sup>	29.23
Modulus Of Elasticity In Bending	  BS EN 310	N/mm <sup>2</sup>	3539
Internal Bond	  BS EN 319	N/mm <sup>2</sup>	1.03
Screws Withdrawal - Face	  BS EN 320	N	1112
Screws Withdrawal - Edge	  BS EN 320	N	1356
Fire-Resistance Rating	 EN 1634-1	Minutes	90
Positive Pressure Fire	 UL-10C	Minutes	90
Reaction To Fire	 ASTM E84-22		CLASS B
Sound Transmission Test (Inoperable)	 ASTM E90-09	dB	40
Sound Transmission Test (Operable)	 ASTM E90-09	dB	36

# CERTIFICATES



## **EMIRATES GREEN BUILDING COUNCIL**

Desert Board actively collaborates with industry professionals, policymakers, and stakeholders in the UAE, advocating for sustainable practices and fostering innovation in the construction sector.



## **INTERNATIONAL CODE COUNCIL**

Founding Membership with the International Code Council (ICC): Ensures that Desert Board's PSB wooden boards meet stringent international standards for quality, safety, and sustainability, contributing to environmentally sound construction solutions.



## **UNITED NATIONS GLOBAL COMPACT**

Alignment with the United Nations Global Compact: Reinforces Desert Board's dedication to sustainable and socially responsible business practices, supporting environmentally friendly operations and the United Nations Sustainable Development Goals.



## **UNITED NATIONS CLIMATE NEUTRAL NOW**

Active Participation in the United Nations Climate Neutral Now Initiative: Demonstrates Desert Board's firm commitment to reducing its carbon footprint and actively contributing to mitigating climate change through rigorous measurement, reduction, and offsetting of greenhouse gas emissions.



## **ENVIRONMENTAL PRODUCT DECLARATION**

PSB's life cycle analysis and sustainability attributes.





### **AL SA'FAT GREEN BUILDING SYSTEM**

Conformance with the Al Sa'fat Green Building System: Ensures that Desert Board's Palm Strand Boards significantly contribute to environmentally friendly construction practices and meet the highest sustainability standards, promoting safe, formaldehyde-free wooden boards in the UAE.



### **SASO**

Compliance with SASO (Saudi Standards, Metrology, and Quality Organization): Ensures Desert Board's PSB comply with SASO regulations, protecting consumer health, preventing counterfeit goods, and adhering to updated technical standards in support of the Saudi economy.



### **TUV**

TUV Factory Audit for Wood Manufacturing: Showcases Desert Board's dedication to high manufacturing standards, ensuring quality, safety, and efficiency in wood production through regular TUV audits.



### **INTERTEK FIRE RATINGS - WARNOCK HERSEY**

Compliance with Intertek Fire Ratings: Highlights Desert Board's dedication to showcasing the safety and performance attributes of its products, ensuring high standards of fire safety in its materials.



### **ISO CERTIFICATIONS**

Adherence to Multiple ISO Certifications: Demonstrates Desert Board's commitment to quality management, environmental sustainability, and safety across its operations by maintaining various ISO certifications.

# Timeline Of A Sustainable Revolution

Palm Strand Board (PSB®) symbolizes more than just innovation; it represents a vision for a sustainable future. From a simple beginning, Desert Board's factory now sets global standards, promoting environmentally-friendly architecture. As the world shifts towards sustainability, PSB® aims to redefine construction standards. Each board embodies both functionality and a sustainable vision.

1997



## CULTURAL IMPORTANCE

Across cultures, the palm tree has held significant importance, not just symbolically, but also as an essential necessity of daily life. In various religious texts, from the Quran to the Bible, palm trees are frequently referenced, symbolizing victory, peace, and fertility. Furthermore, throughout history, the way of life in the Middle East has relied on Palm trees as a source of nourishment and building material for houses.



## 1997: THE SEED OF INNOVATION

Mr. Hatem Farah, deeply moved by the profound admiration the late Sheikh Zayed held for the palm tree, embarked on a mission to uncover innovative methods to recycle waste from palm fronds. With a strong knowledge and passion for wood, and drawing inspiration from nature's ability to rejuvenate, Mr. Farah envisioned the creation of engineered wooden panels made from discarded palm leaves. This vision marked the beginning of a journey that would evolve into a ground breaking initiative.

2009-2021



## 2009-2021: RESILIENCE & REFINED VISIONS

In 2014, after years of dedicated research, the team began their experiments aimed at revolutionizing green construction materials. Despite numerous challenges over twelve years, their determination only grew stronger. Viewing each setback as a learning opportunity, they were guided by the principle of innovation and adaptation. Their perseverance culminated in the creation of Palm Strand Board (PSB®), a symbol of sustainable woodwork.

DECEMBER 14, 2021



## DECEMBER 14, 2021: TURNING THE TIDE

On a significant day, after years of dedicated effort and research, the team produced the first PSB® wooden board. This wasn't merely a manufacturing milestone; it symbolized perseverance, innovation, and a vision for eco-friendly production. PSB® represented the fusion of technology and sustainability, ushering in a hopeful future for sustainability sourced engineered wooden boards.



2023



### 2023: UAE'S PINNACLE OF SUSTAINABILITY

In 2023, the UAE positioned itself as a leader in sustainable innovation by introducing PSB®, a 100% sustainable wooden board made from recycled palm waste. This significant achievement, blending innovation with eco-responsibility, marked a pivotal step for global sustainability and set an example for industries worldwide.



### OUR VISION AND FUTURE

Palm Strand Board (PSB®) symbolizes more than just innovation; it represents a vision for a sustainable future. From a simple beginning, Desert Board's factory now sets global standards, promoting environmentally-friendly architecture. As the world shifts towards sustainability, PSB® aims to redefine green construction standards. Each board embodies both functionality and a sustainable vision. Reflecting on this journey, founder Mr. Hatem Farah added:

*"I often express that life is a journey, as you walk through a tunnel, a door opens before you, and if you are perceptive, you take notice of that door"*



### PSB: THE GOLD STANDARD IN GREEN BUILDING

Revolutionizing the construction and design industry, PSB® emerged as the unmatched sustainable choice, and ensured zero formaldehyde emissions, safeguarding indoor environments. Celebrated for its robustness, adaptability, and eco-conscious foundation, PSB® has firmly established itself as the go-to choice for forward-thinking developers, architects, contractors and homeowners alike.





DesertBoard.

**The Carbon Storage Solution For The  
Healthy Built Environment**



# **BUILD RESPONSIBLY LIVE BEAUTIFULLY BREATHE EASILY WITH DESERTBOARD'S PSB®**



**DesertBoard.**

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