



# THE NEW INNOVATION ON ECO-FRIENDLY PRODUCTS



FROM NATURE TO NATURE

源于自然 归于自然

**We want to play a part in saving the  
environment by offering you truly  
green innovative products....**

GPac™ Technology (S) Pte Ltd



# Hong Leong Group

<p>Trade &amp; Industry</p>		<p>Industrial Packaging</p>	<p>Property</p>
<p>Gaimo Yuchai</p>	<p>Henan Xinfel Electric</p>	<p><b>BUILDING MATERIALS</b> Cement, Granite Quarry, Concrete, Steel</p>	<p>CITY DEVELOPMENTS LIMITED</p>
			<p>BEIJING RIVIERA</p>
<p>Finance</p>	<p>HONG LEONG FINANCE</p>	<p>Hotels</p>	
<p>SMEs</p>	<p>Wealth Management</p>	<p>MILLENNIUM HOTELS AND RESORTS</p>	
			<p>e-Business ces.</p>



Eco-Friendly  
**MANUFACTURING**  
Ingredients.



Wood Chips



Garden Waste



Rice Stalk



Durian Husk



Palm Fibres

- Leading manufacturer of processed wood products
- Processed wood pallets comply with ISPM 15 regulation for export worldwide
- No need for heat or fumigation treatment
- Space saving – Nestable
- Logistic cost relatively low due to light weight
- Environmental Friendly
- Termite and Weather resistant
- Free of nails, rounded edge for better shrink wrap

# Environment Friendly Products - From Nature to Nature



# GPac™ Plant – Senai, Malaysia



Malaysia Senai plant capacity of 75,000 pallets/month



22 press machines



Pressing process



Pressing process completed



# Development of ISPM 15 Regulation

- To prevent proliferation of invasive species of wood-born pests
- These species have to date **caused extensive damage** to indigenous plant species & habitats in China, Japan, Brazil, USA, among others.



**Heat or Fumigation Treatment  
Required for Wooden Pallets**



- Adoption of **Kyoto Protocol** in 1997 and in force in 2005
- Chemicals like **Methyl Bromide** used in fumigation causes depletion to ozone layer will be gradually phased out/ limited in 2005 and 2015 by developed & developing nations respectively



**Long-horn beetle**



**Pinewood Nematode**



**Fruit fly**



# Development of Pallet Industry Regulation

- **Wooden Pallet – Deforestation**

- Clamped down on illegal logging & illegal workers in Indonesia and Malaysia
- Increased pressure from international organizations and government bodies on deforestation
- Impact timber supply for wooden pallet

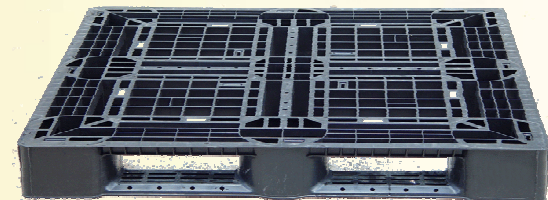


- **Heat Treated or Fumigated Pallet – Regulation**

- ISPM 15 Packaging guideline implemented in 2005
- Limited shelf life for treated pallets
- Australia implemented Fumigation Accreditation Scheme (AFAS) require Treatment Companies to register with AQIS before pallets can be accepted
- Increased demand for alternate products such as compressed/processed wood products

- **Plastic Pallet – Disposal**

- By July 2006, EU stipulates that all disposal of plastic related products such as pallets will be the responsibility of the user or the manufacturer
- Disposal issues include disposal tax, non-acceptance by landfill or incineration plant



**Exemption from ISPM 15** issued by  
Department of Agriculture, Malaysia



GPac™ Technology (M) Sdn Bhd  
PLO 19, Jalan Persiaran Teknologi  
Taman Teknologi Johor  
81400 Senai, Johor  
(Fax: 07-5993719)

Dear Sir,

**COMPRESSED WOOD SHAVING PALLETS NOT REGULATED AND  
EXEMPTED UNDER ISPM NO. 15**

I wish to refer to your letter dated 6 February 2009 regarding the above matter.

- ISPM no. 15 was endorsed for implementation in March 2002. ISPM no. 15 requires all wood packaging materials (WPM) made of unprocessed raw wood be treated either by fumigation with methyl bromide at 48 g/m<sup>3</sup> for 24 hours or heat treatment at a minimum temperature of 56° C for at least 30 minutes. Unprocessed WPM includes pallets, dunnage, crating packing blocks, drums, cases, pallets collars and skids.
- For other WPM such as veneer peeler cores, saw dust, wood wool and shavings, and raw wood cut into thin pieces (less than 6 mm thickness), compressed wood shaving pallets and paper pallets are not regulated and are exempted under ISPM no. 15. **Therefore based on these information compressed wood shaving pallets do not require any treatment.**





# GPac™ Pallets Resistant to Termite Attacks

- **Termite test report by Urban Entomology Laboratory, indicating high resistance to Asian subterranean termite attacks**

## Executive summary

Evaluation of GPac compressed wood, versus normal and rubber woods against the highly destructive Asian subterranean termite, *Coptotermes gestroi*, was conducted in the laboratory by exposing each wood block samples (measuring 2 x 1 x 1 cm) to 250 worker and 25 soldier termites for a period of 14 days. GPac compressed wood has significantly ( $P < 0.05$ ) least wood loss when compared to the latter two samples. Based on ASTM method, the GPac compressed wood was ranked as highly resistant when compared to the normal wood (slightly resistant) and rubber wood (no resistant). It is concluded that **GPac compressed wood is highly resistant to Asian subterranean termite attacks, and certainly has a great potential to be used or incorporated in wood pallet manufacturing industry**



Normal Wood



GPac compressed wood



Rubber Wood

- **Test report from NM Laboratory** regarding **substances of very high concern (SvHC)** in accordance with list published by European Chemicals Agency (ECHA) Regulation No 1907/2006



- **Test report from NM Laboratory** regarding **Cadmium, Lead, Mercury, Hexavalent Chromium, PBBs, PBDEs** in accordance with EU Directive 2002/95/EC (**RoHS**)

**RoHS**

- **Test report from PSB** regarding **3000 hours of Weathering test** in accordance with ASTM-G154 -> **Weather resistant**

**PSB**  
Corporation

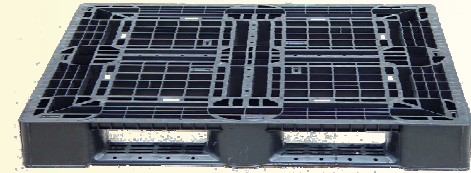
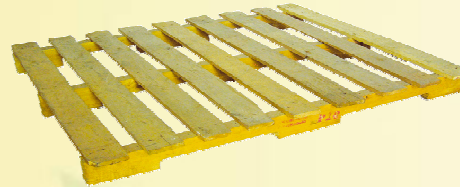
- Received **Singapore Packaging Star Award** and **Asia Star Award**



Asia Star 2005 Winners



# Different Pallet Type Comparison



20 GPac pallet height  
vs  
20 conventional  
wooden pallet height

	Compressed Wood Pallet	Conventional Wood Pallet	Plastic Pallet
<b>ISPM 15</b>	Exempted -> exported worldwide without heat or fumigation treatment	Requires heat or fumigation treatment -> increased treatment cost	Not applicable
<b>Space</b>	Space saving - Nestable	Not nestable	Nestable
<b>Weight</b>	13 kg	20 kg	7 kg
<b>Total Logistics Cost</b>	Low, due to lighter weight and pallets are nestable	Relatively higher	Low
<b>Disposal</b>	Environmental friendly, return to nature	Non-biodegradable	High disposal cost, not accepted at landfill/ incinerator
<b>Resistance</b>	Termite attack resistant, weather resistant	Less resistant than compressed wood pallet	Not applicable
<b>Design</b>	No nails, rounded edge for better shrink wrap	Nails, subject to corrosion	Plastic molded

# GPac™ Pallet Applications



Metal drums



Boxes uniformly loaded



Box on half-sized pallet



Metal cylinders

# GPac™ Pallet Applications



Bulk Bags



Bags arranged criss-cross



Shrink Wrapped Bags

# GPac™ Pallet Models

- Comes with and without skids
- Half-size and various full-size pallets
- Weight from 7 kg to 34 kg
- Stacking load from 2 to 6 tons
- Exported worldwide without heat or fumigation treatment
- Nestable
- Rackable with safety feature (selected models)
- 2 or 4 way entry



P9M  
1200x1000x125mm



P9LS-E  
1219x1016x140mm



P10L-C2  
1100x1100x125mm



P10M  
1100x1100x115mm



P10MS  
1100x1100x133mm



P11MS  
1300x1100x145mm



P16L-A1  
1219x812x120mm



P18L-C2  
1219x1016x115mm

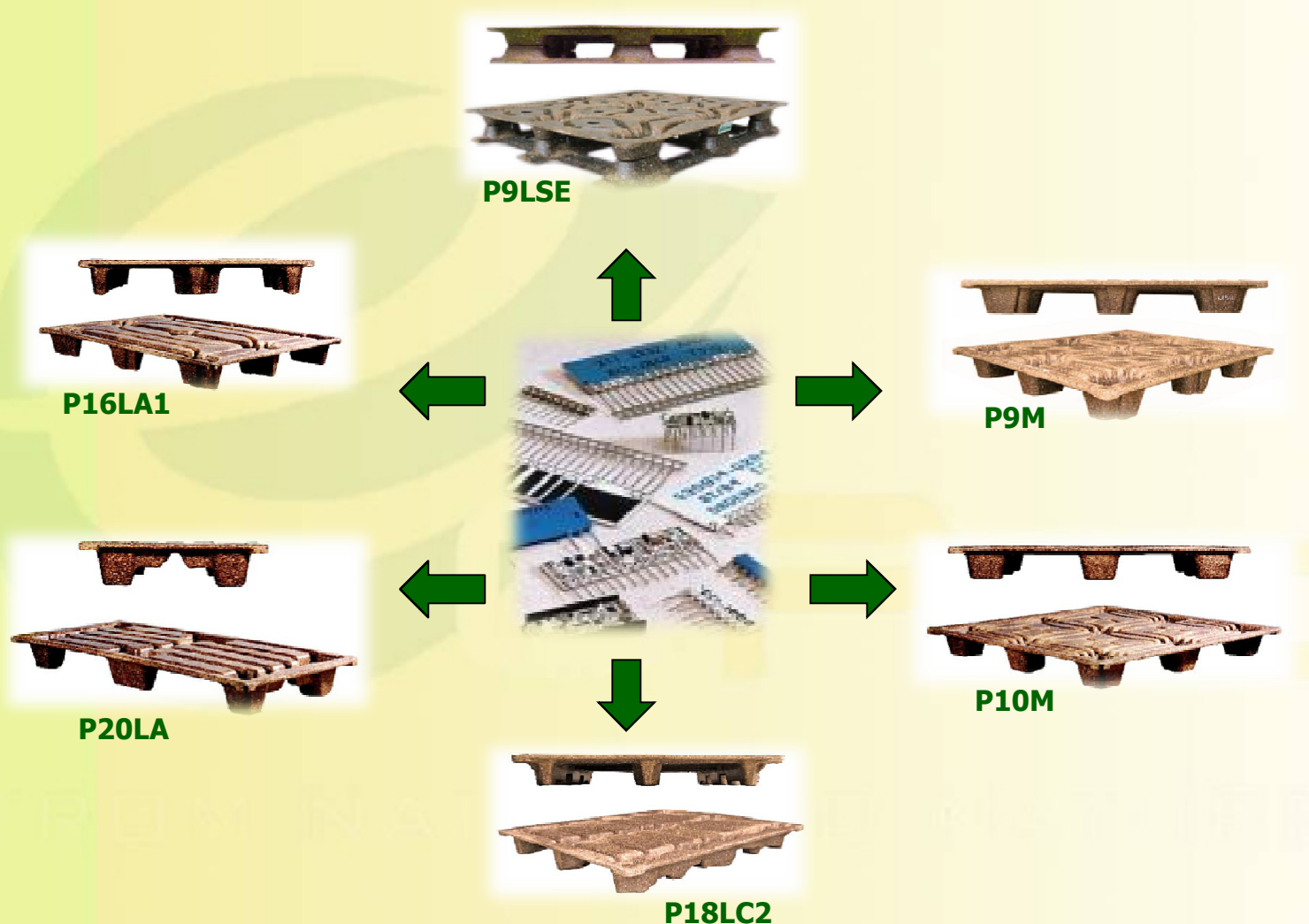


P20L-A  
1219x508x115mm

Model	Size (mm)	Weight* (kg)	Max Stacking Load (uniform; tons)	Max Lifting Load (uniform; tons)	Max Racking Load (uniform; tons)
P9M	1200x1000x125	18	4.0	1.0	N.A.
P9LS-E	1219x1016x140	18	3.2	0.8	0.8
P10L-C2	1100x1100x125	19	4.0	1.0	1.0
P10M	1100x1100x115	18	4.0	1.0	N.A.
P10MS	1100x1100x133	28	6.0	1.5	1.0
P11MS	1300x1100x145	34	6.0	1.5	1.0
P16L-A1	1219x812x120	13	4.0	1.0	N.A.
P18L-C2	1219x1016x115	16	4.0	1.0	1.0
P20L-A	1219x508x115	7	2.0	0.5	N.A.

\* Weight subject to changes due to variation in density of different species of wood fibers used; tolerance +/- 1 kg  
 \*\* Other models available upon request





# Chemical Industries Using GPac™ Pallets



**P11MS**



**P10L2**



**P10MS**

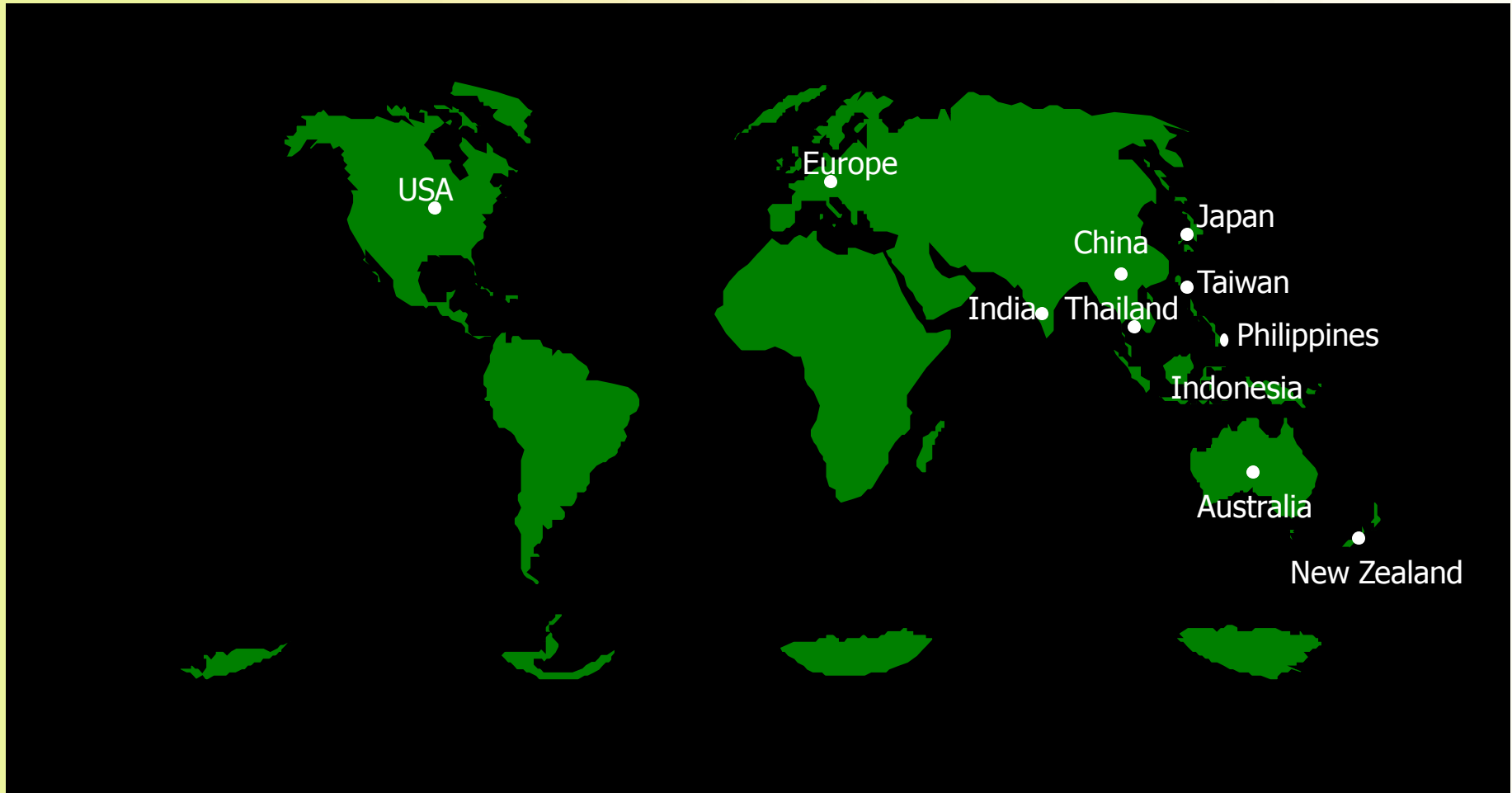


**P10M**





# GPac™ Pallets Exported Worldwide



# GPac™ Pallets Sales Network



# GPac™ Customers

Chemical Market	Electronics
Food & Beverage	Logistics

# **Thank you for your interest in GPac**

**Please visit us for all your pallet  
needs at :**

## **SHREE UMIYA TIMBER INDUSTRIES**

Plot No. : 152-153,IND. Estate G.I.D.C., Gundlav - 396 035.

Dist. Valsad .GUJARAT

Tell : +91-2632-236532, 236532

Fax : +91-2632 236617

E-mail : [info@umiyapallets.com](mailto:info@umiyapallets.com)

Website : [www.umiyapallets.com](http://www.umiyapallets.com)



contact us