



Energy lives here™

Tougher, more durable plastic pallets from recycled materials using Vistamaxx™ performance polymers

Mention plastic pallet manufacturer in Malaysia or even in the AP region and chances are, the name See Hau Global Sdn. Bhd. will crop up. See Hau Global produces a staggering 2.5 million high quality plastic pallets a year, making it the single largest manufacturer in Malaysia and one of the largest manufacturers in the AP region. Its plastic pallets are sold under the Intraco Pallet™ brand.

Key benefits



Enhanced strength,
load-carrying capacity



Stiffness that resists
deformation under load



Durability to withstand
the rigors of shipping
and handling



Aesthetics - better
looking pallets



Cost-effective – lower
dosage needed than
plastomers

Starting out with just one molding machine in 1994, today, See Hau Global has numerous machines using the most advanced injection and compression molding technology to produce heavy duty, durable and cost-effective pallets for all sorts of uses from one-way shipping, nestable, rackable, super hygiene to automatic storage retrieval system pallets. Many of these pallets are exported to the AP region.

“Our goal is to help businesses move, store, and distribute their products faster, better, safer and more cost effectively,” says CC Cheah, deputy managing director, See Hau Global. “We are always looking for improvements.”

The problem

It had not always been smooth sailing for See Hau Global, though. To contribute to a more circular world and to increase the performance of their one-way shipping plastic pallets, See Hau Global decided to incorporate recycled materials, such as PE and PP, into their virgin plastic material. But this presented new challenges.

Mixed post-consumer recycled polyolefin materials may be incompatible and can adversely affect the impact and mechanical strength of the pallets and cause poor surface appearance as well. Impact strength is a critical requirement for pallets and pallets with poor appearance risk being rejected by their customers.

To solve this problem, See Hau Global first tried using an ethylene-based plastomer, but the results still did not measure up to their requirements.

The solution

Having attended an ExxonMobil presentation on the possibilities of Vistamaxx performance polymers and learning about its efficacy in compatibilizing mixed post-recycled materials, See Hau Global decided to trial Vistamaxx polymer as a potential replacement for ethylene-based plastomers in their shipping pallet production.

See Hau Global knew they had found the right solution in Vistamaxx polymer after seeing the results.

Vistamaxx polymers are propylene-based elastomers with ethylene comonomer that create an amorphous phase which gives the polymer a unique semi-crystalline structure. The propylene and ethylene polymer structure enables excellent compatibilization and dispersion of both PE and PP content in the recycled mix. With these attributes, the usage of Vistamaxx polymers lead to better quality pallets than those manufactured using plastomers or those without adding any property enhancement additives. In addition, these improvements were achieved using a lower dosage of Vistamaxx polymers than the plastomers used.

The pallets made with Vistamaxx polymers also had better impact performance and reduced indications of cracking, stress whitening, deformation and other signs of weakness.

The results

As Vistamaxx polymer enables a homogeneous blend with recycled material, it delivers a consistent formulation for plastic pallet manufacturing. See Hau Global also saw improvements in their manufacturing efficiency and productivity.

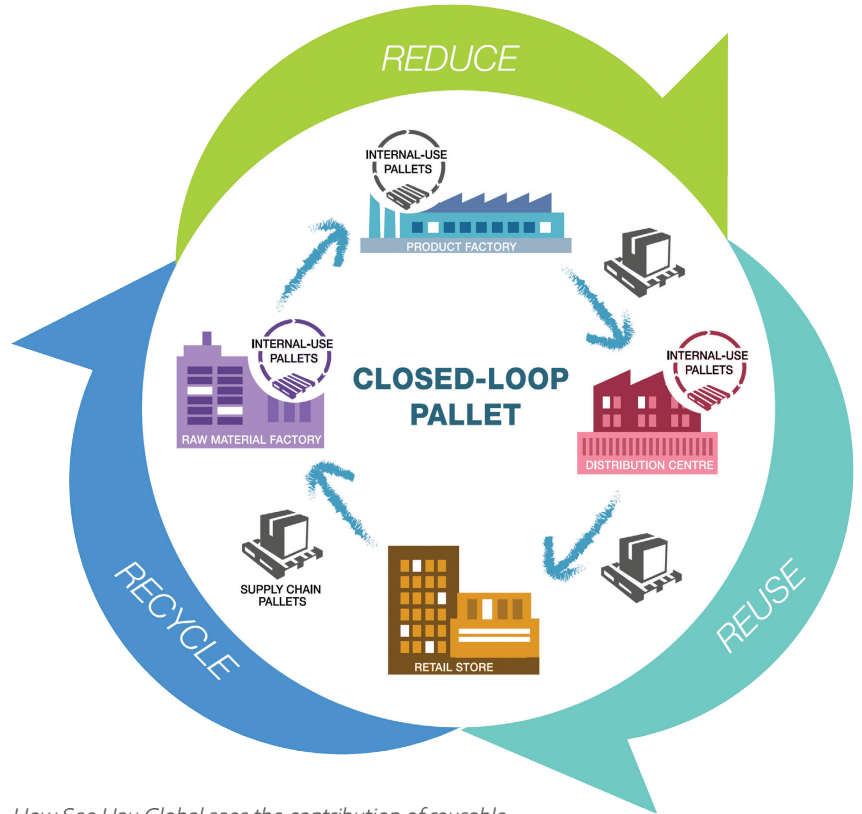
The new pallets manufactured using Vistamaxx polymers are generating higher sales for See Hau Global.

"The versatile performance of Vistamaxx polymer is key to the success of our new pallets. We expect to generate new business due to the optimization of our pallet products," says Mr Cheah.

Properties of Vistamaxx™ 6102 used by See Hau in their shipping plastic pallets

ExxonMobil Method	Density	Melt Flow Rate (230°C/2.16kg)	Tensile Strength at Break	Elongation at Break	Flexural Modulus – 1% Secant
Vistamaxx™ 6102	0.862 g/cm³	3g/10min	>7.6 MPa	>800%	14 MPa

Test based on ExxonMobil method for the Vistamaxx properties.



How See Hau Global sees the contribution of reusable, recyclable plastic pallets to a circular world.



CC Cheah sharing a light moment with staff in their office where plastic pallets are used creatively as wall displays.



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