



AMOS

All Marine Offshore Solutions

AMOS GLOBAL PLASTIC POLICY



AMOS Group Global Plastics Policy

At AMOS Group, we believe that we have an obligation to our employees, our communities, our customers and the environment to operate our business sustainably. We're committed to consuming fewer resources and managing these resources responsibly by adopting the 'reduce, reuse, recycle' principles across all of our waste streams and procurement decisions.

We recognise that the use of plastics requires special consideration and management. This Plastics Policy sets out our specific commitments in this area.

Our Commitment

Improve end-of-life solutions and traceability for our plastic waste.

Education to all stakeholders on the impacts of plastic waste and the best practice behaviours to support our sustainability goals.

Reduce or eliminate the use of plastic packaging where possible.

Support improvements to the plastic waste reduction system by engaging innovators to help support development of environmentally preferable options to plastics and promote reuse and expand recycling capabilities.

Our Strategic Direction

We shall ensure that our operations have suitable recycling systems available to capture plastic waste.

We shall raise awareness amongst our staff with training of waste reduction and energy efficient practices.

We shall encourage all stakeholders to reduce the use of single-use plastics and ensuring that the recycling systems are available internally.

We shall continuously improve tracking of sustainability metrics throughout our operations and supply chain.

We shall partner with our suppliers to operate sustainably, reduce waste, and encourage minimisation of non-essential single-use plastics and ensure that these are incorporated into new business agreements.



Dan Tan
Chief Executive Officer

AMOS Group Limited

Effective Date: 1 Aug 2019

THREE STEP APPROACH in AMOS effort

STEP #1 - **REDUCE** internal generation of plastic waste:

- a) Using best in class techniques and equipment to reduce plastic usage without compromising fit and function of usage e.g. wrapping machines for higher efficient use of plastic wraps.
- b) Reducing the use of plastics in storing and protecting goods in our AMOS warehouses.

STEP #2 – **RE-USE/RECYCLED** packing materials in our supply chain.

- a) Work with our Approved Vendors to use recycled materials in the packaging of our products.

(By Q1 2020, all AMOS carton boxes shall be made from recycled material ONLY.)

STEP #3 – **REPLACEMENT** of traditional plastic wrappings.

- a) Converting to non-plastic material for product packaging, some of which may be reusable.
- b) Re-usable pallet wrappings are multi-use but must be collected after each delivery.

STEP #1: Reduce Stretch Wraps

Wrapping for water-proofing and security of packages.



**Portable and
Easy to Maneuver**

Using best in class techniques and equipment to reduce plastic usage without compromising fit and function of purpose.

Measuring our SUCCESS in 2019

Width of Plastic Wrap		Jul-19	Aug-19	Sep-19	Oct-19
0.5m	Usage in kg/month (2.7kg)	1782.0	1231.2	1431.0	1296
1.5m	Usage in kg/month (47kg)	-	-	-	59
1.8m	Usage in kg/month (54kg)	-	-	-	40
	Total Usage in kg/month (2.7+47+54kg)	-	-	-	1395
	Est. per pallet usage (kg)	0.770	0.560	0.563	0.486
Improvement in reduction usage per pallet (kg)			-0.210	0.003	-0.077

Lower plastic usage after implementing controls

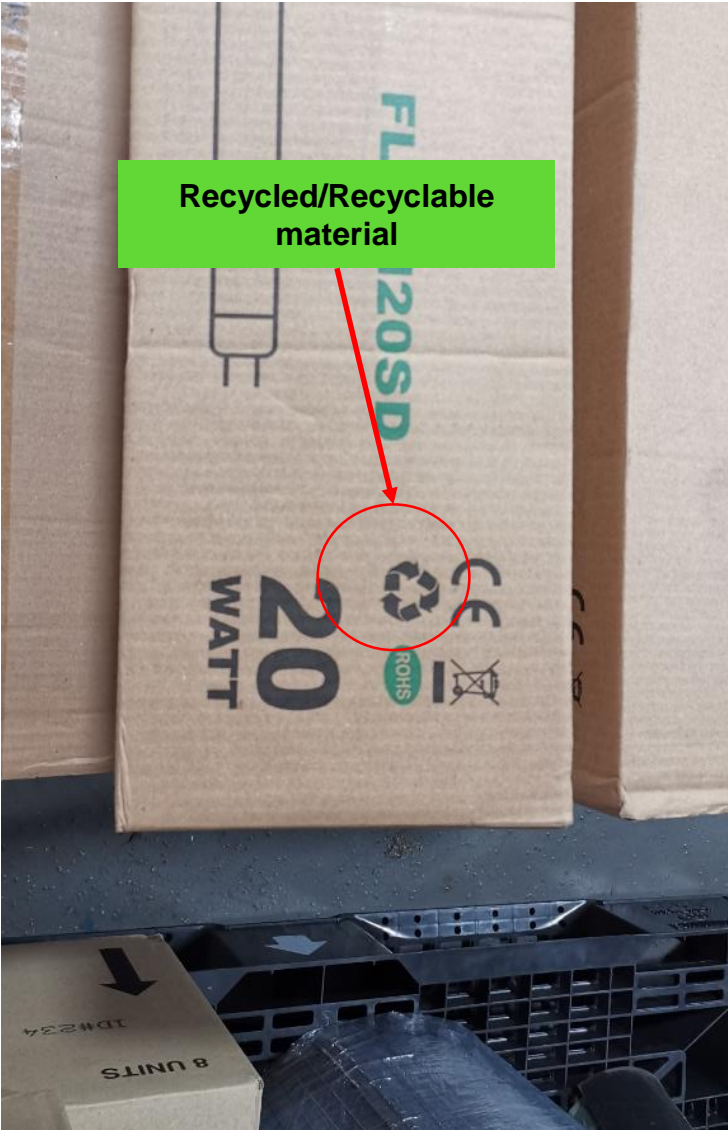
STEP #2: Re-Use/ Recycled Materials for Packaging

Engaging suppliers to use recycled materials for packaging.



**In progress
with Key
Suppliers to
use
Recycled
materials
for
Packaging.**

SUCCESS STORIES in 2019 (RE-USE / RECYCLE MATERIALS by VENDORS)



SUCCESS STORIES in 2019 (REDUCE PLASTICS)



ONLY single plastic wrap for cotton rags during transportation.



STEP #3: TO REPLACE PLASTIC STRETCH WRAPS

Different possibilities in history of Ship Supply



a) Re-Usable Pallet Wrap Cover

1. Not suitable for irregular shape packings.
2. No water protection
3. Extra strapping required for securing items together



b) 1T Sludge Bag

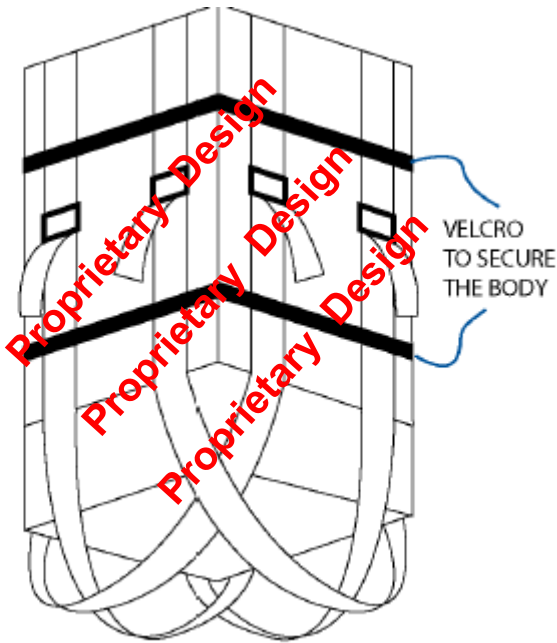
1. Difficult to assess the bottom of the bag
2. Crushing of items
3. Poor visibility of items for regulators' inspections
4. Risk of bag rupture



c) 2T Pallet Lifting Cage

1. Cages will add weight to the lighter boats
2. Large space required to store cages on board and at the warehouse
3. Risk of corrosion and failure, hence cost to maintain assets
4. Additional lifting charges

STEP #3: TO REPLACE PLASTIC STRETCH WRAPS



AMOS PALLET PP COVER

1. Maintains the wooden pallet base as support.
2. Allow slings for under-slung for lifting
3. No risk of bag rupture as it is not load bearing
4. PP material allows waterproofing and easy handling.
5. Covers are 100% re-usable

Further development

1. PP material shall be translucent in subsequent upgraded version



Further upsides;

1. Vessel can fold up and store PP Covers easily.
2. PP Covers shall be RFID tagged for traceability to prevent unsanctioned disposal or loss.
3. Minimal lifting charges apply for return of empty covers.

Expected roll-out in Jan 2020

A Question about Biodegradable – Is it the solution vs plastics?

In short, **NO**

Fact:

- a) Plant-based plastics (bioplastics) made from plants such as potatoes and corn.
- b) Contains additives meant to help break down completely in the environment.
- c) Only happens under controlled, high-temperature settings, such as industrial composting facilities (not under natural conditions)
- d) These additives also make biodegradable plastics impossible to recycle in standard recycling facilities.
- e) Such biodegradable plastics normally break down into smaller pieces when exposed to sunlight, albeit much faster.
- f) Most of these microplastics, eventually get carried by wind and rain into the ocean.
- g) There, they will continue breaking down into smaller and smaller pieces, but they will never go away.



ZeroWasteSG

Zero Waste SG

www.zerowastesg.com ▼

Zero Waste SG is a new not-for-profit and non-governmental organisation dedicated to help Singapore eliminate the concept of waste, and accelerate the shift.



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