

SHIPPERS' ACADEMY COLOMBO



REFRIGERATED CARGO HANDLING BY SEA

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At the End of the session you will know about

- ▣ Cargo Preparation
- ▣ Stuffing the Container
- ▣ Chilled and Frozen Commodities
- ▣ Claims Guide

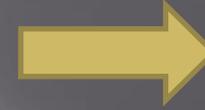
Terminology

Few important points to remember

Oxygen



Heat



Carbon
Dioxide



Ethylene
and many
natural
Gases



Home Fridge and
the Reefer
Container



T Bar Floor and Bottom Air Delivery



Load Line





Shelf Life

Cargo Preparation

Pre Treatment to Cargo

Successful shipping Begins at
the Product Sourcing Areas



“the reefer container is not a hospital.
It can maintain your good quality
cargo – not improve it “.



Pre Cooling of the...

- ▣ Cargo ??
- ▣ Containers ??



- ▣ Operating the Reefer Machinery during Stuffing,
- ▣ Impact of condensed water on the reefer machinery and the packaging.

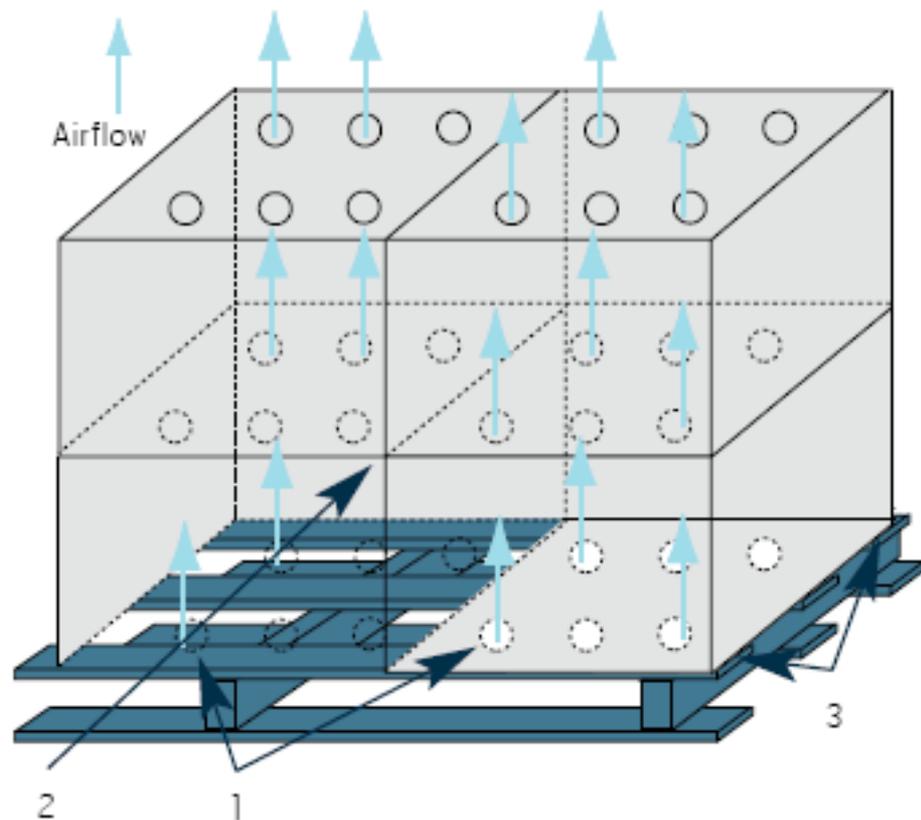
Stuffing to allow proper Air Circulation



Load Line

Use proper Packaging to use the bottom air delivery.

1. Carton alignment for unrestricted airflow
2. Strength of cartons in the corners
3. Corners of cartons supported



Ideal Air Circulation after stuffing

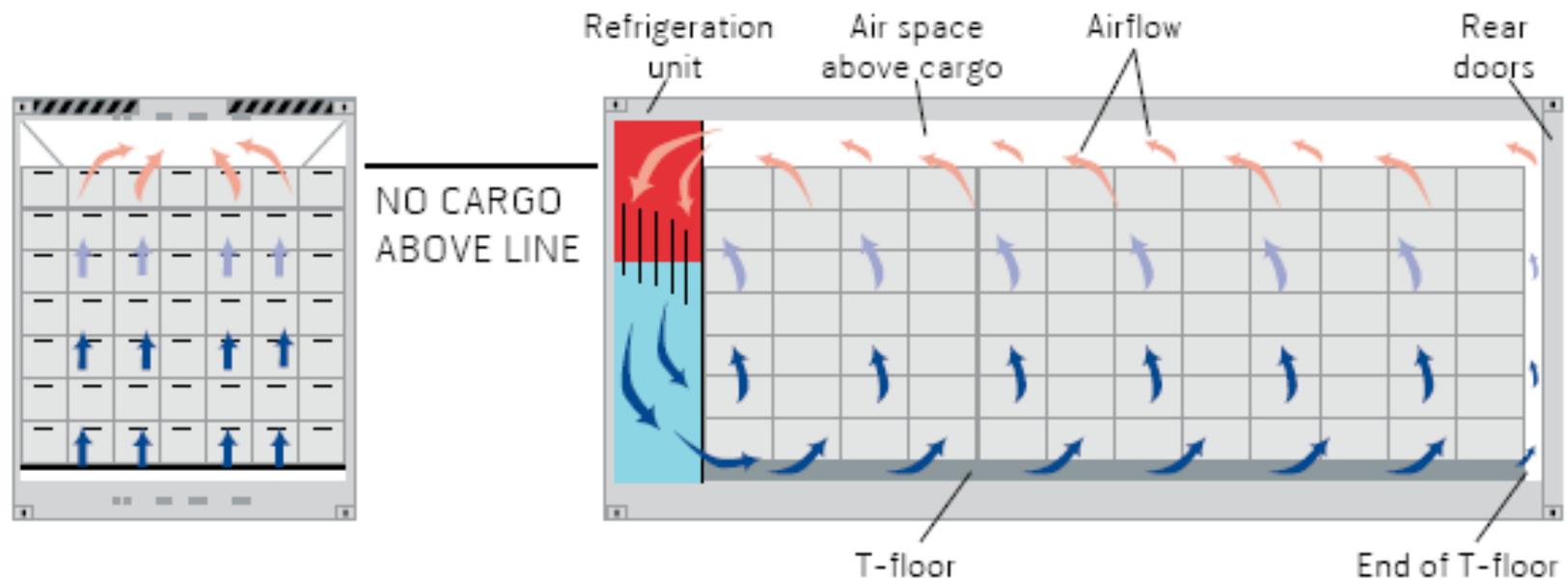
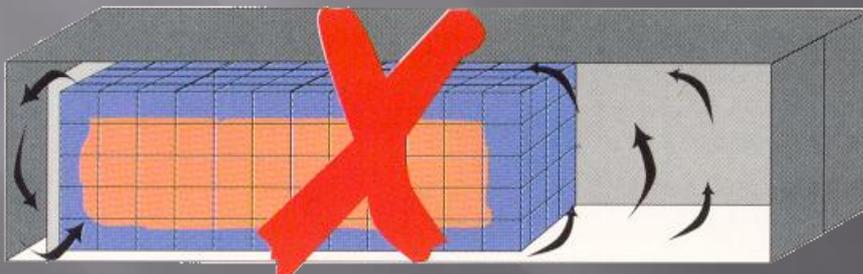
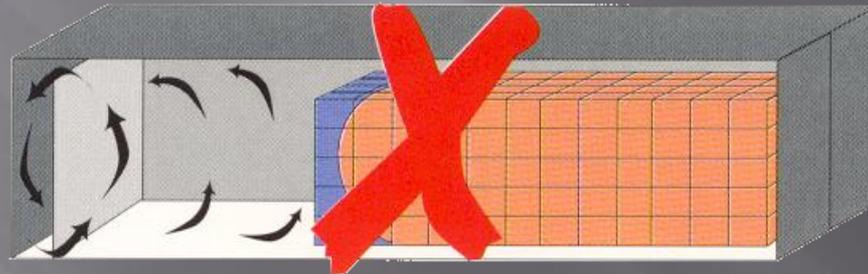
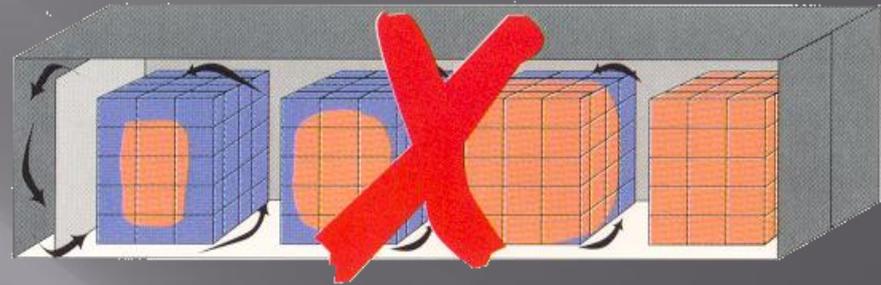


Fig. 1 The correct way to stuff a bottom-air delivery container with chilled or frozen cargo

Things *NOT* to do

Air always takes the path of least resistance. Thus, the air tends to "short circuit" or flow past the carton / cargo rather than through them.



Chilled or Frozen - Definition



-5 C



Chilled commodities are defined as cargoes shipped at -5 C or warmer.

Cooling instructions defined by set point by **delivery** air temperature.

Chilled or Frozen - Definition



Cargoes shipped at -6 C or colder.

Cooling instructions are defined as set point by return air temperature

-6 C



Check that unit is set at correct carrying temperature.

Check that ventilation is set at the correct level in cbm/hour (for frozen cargo always CLOSED)

Check that De-Humidity is set at the correct level (for frozen cargo always OFF)
Stuff the cargo according to guidelines

Cargo should be stable and not able to move once placed on the T-bar floor Cargo must NOT exceed the red load lines

Make sure the airflow is not restricted by cargo or packaging material.

Air gaps should be covered with material allowing no air to pass through.

Load only to the end of the T-bar floor

Close doors immediately after the stuffing has been completed Seal the container

Claims Guide



Steps you should take

- ▣ Notify your insurance underwriter
- ▣ Inform the Carrier Customer Service
- ▣ Engage a surveyor if necessary
- ▣ Mitigate Cargo Loss
- ▣ Collect Documents
- ▣ Submit a quantified Claim
- ▣ Protect against Time Bar

Steps that a Carrier would take

- ▣ Acknowledge receipt of the claim notification
- ▣ Engage a surveyor if necessary
- ▣ Initiate an investigation
- ▣ Await the quantified Claim