REEFER CONTAINER CLIMATE CONTROLLED TRANSPORT RECOMMENDATIONS

In this document, find best practice guidelines to use when transportation requires a climate controlled environment.

Reefer Container

Ensure the floor and drains are free of debris

- Generally check the container for suitability (odor, condition, cleanliness & insulation etc)
- Check the refrigerating machinery
- Check all temperature alarms and safety cut outs
- Make a note of the location of each temperature recorder, supply and return air
- Frozen cargo: Ensure fresh-air vent is closed
- Chilled: Set fresh air vent as required
- Chilled: Set unit at carrying temperatures
- If loading direct from a chilled/cold store, set the unit at the carrying temperature
- Endeavour to acquire an integral container with cooling equipment, dehumidifiers and built-in data loggers
- Ensure that the data recorder back-up battery is fully operational

Be aware that while a porthole container system allows for each container to be cooled individually, centralized refrigeration machinery is used and if the centralized cooling system breaks down then more than one container will most likely be affected.

Preparation of Cargo for the Container

- Frozen cargo: Pre-freeze before loading
- Chilled: Pre-cool cargo before loading
- Ascertain the range of temperatures that all cargo can be carried at
- Ascertain any carrying instructions that are applicable to the cargo
- Ensure adequate wrapping for frozen cargo
- Check the packaging - packaging should be strong, adequately ventilated and waxed/laminated
- Cargo to be good quality and properly sanitized
- Ensure that the cargo is not damaged or susceptible to damage enroute due to current weather conditions

DO NOT:

- Do not leave open floor space at the front bulkhead, place cardboard under empty pallets and over void spaces
- Do not run unit with rear doors open
- Do not load cargo beyond the end of the ‘T’ floor
- Do not plug channels at end of ‘T’ floor
- Do not load cargo above the red/load limit line
- Do not set reefer set point at a temperature below that required by the cargo

Container Stuffing:

- Cartons should be stacked directly on top of each other
- If palletized then the corner of each carton should be supported by the pallet
- Any holes in chilled goods should line up with the holes in cargo beneath it
- If wrapping pallets with plastic then do not cover the top or bottom
- Ensure all cargo is adequately secured
- Place a weatherproof placard on the container door and/or next to the temperature readout stating the minimum and maximum carrying temperature, as well as other instructions such as atmospheric conditions

During Transit and Arrival at Destination

- Monitor the temperatures at regular intervals either in cabin or when the vehicle is stopped or at regular intervals if stored on a vessel
- On arrival produce a printout of the temperatures during transit and retain same in case of a claim for a period of at least 6 months.
- For products with a total value > USD 500,000 it is recommended to accompany same with active recorders so that in the event of an alarm on temperature/humidity/CA conditions immediate action can be taken.

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Additional Considerations Relative to Voyage Delay and Inherent Vice

1. Ensure that each shipment is accompanied by a “container stuffing condition report”, issued by an independent cargo inspectorate indicating the condition and temperatures of the parcel of fresh products upon loading same into the container
2. Provide the parcels of goods loaded into refrigerated containers with 2 temperature recorders, such to be positioned as follows:
   a. Bottom forward at the underside of the 1st pallet load loaded into the container, directly in front of the supply air opening - Be careful with the position that the recorder is not damaged by the prongs of forklift trucks!
   b. Top aft which illustrate the highest temperatures in the cargo compartment during transit
3. The temperature records can be used either to show the appropriate operating condition of the reefer container during the entire transit period or to show negligence of the carrier
4. Ensure that serial numbers of the temperature recorders are inserted on the relevant waybills
5. Ensure that the cargo is block stowed with no uncovered floor areas
   a. This is the only way that the circulating airflow is properly forced through the cargo
   b. Open floor areas create a short circuiting of the airflow as a consequence whereof no air, or at least at a reduced rate, is forced through the cargo and consequently the heat produced by the perishable goods cannot be properly removed
6. Ensure that transport instructions including required temperatures and atmospheric conditions are mentioned on the relevant waybills and that all logistic partners are duly notified in writing about the required settings
7. Ensure that all logistics partners check the quantity, quality and temperatures at each transition in the transport chain and insert any remarks on the designated cargo documents

8. In case of damaged arrival condition, parties in the logistic chain must be timely notified and they must be invited for survey, in particular where a carrier and / or CIF policy holder is involved
9. Approval prior shipment must be obtained in case cargo is to be shipped on board:
   a. Older tonnage e.g. vessel older than **20 years**
   b. If the vessel is operating under a none – IACS classification society,
   c. If the P&I Club is no member of IGP&I,

For further information, please contact your local Marine Loss Control Engineering team.