

Handling Perishable Cargo by Air

SHIPPERS' ACADEMY COLOMBO



Presented by

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Perishable Cargo

- Cargo that is perishable and may spoil or decay because of changes in **altitude**, **temperature**, **humidity**, **climate**, or other environmental conditions or because of **expiration**
- Will decay rapidly if **not refrigerated**, or if some other **preservation technique** is not employed





Perishable Cargo

Individual procedures are applicable for different perishable goods:

- Fresh / Frozen Fish and seafood (PES)
- Fresh / Frozen Meat (PEM)
- Flowers and Plants / Cut Foliage (PEF)
- Fresh fruit and vegetables (PEP)
- Foodstuffs -Food for human or animal consumption (EAT)
- Hatching eggs (HEG)
- Vaccines, medical supplies and live human organs (LHO)

Different types of Air Services

Mainly 03 types of Air Services are there;

■ **Express Service**

- For TOP URGENT / Time Sensitive Air Cargo
- 01 day service from Asia to Europe

■ **Prime Service**

- 2-3 days transit service from Asia to Europe

■ **Deferred Service → This Option is out for Perishable Cargo**

- Slow transit carriers
- 4-6 Days Service

Air Freight of Perishables– Questions to Ask

- From and To (i.e. CMB to CDG or CMB to LHR)
 - Service / Transit – i.e. Express, Prime
 - Advanced booking for perishable cargo / with on-forward reservations
- Shipment details
 - **Exact Commodity / Cargo type → Varying Air Freight rates**
 - Gross weight of each carton and the Total Gross Weight
 - Dimensions of each package
 - Total Number of Packages
- 24-hour Tel / Contact details for both shipper / consignee on the AWB
- Shipments must comply with all local, and international regulations
- Cargo may be inspected to ensure that it complies with Airlines packaging requirements

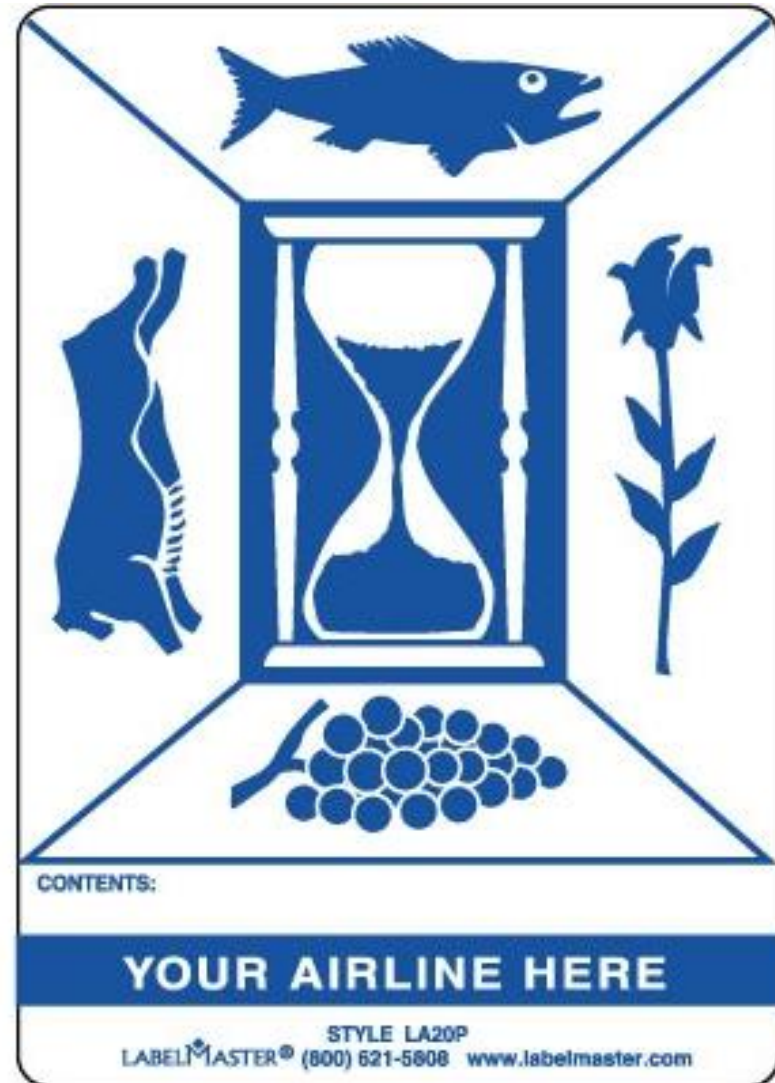


Packaging Requirements

- Appropriate and / or Mandatory labels on boxes
- Must indicate any temperature constraints if applicable
- Each piece must be labeled with the names / addresses / 24-hr contact details of the shipper / consignee
- Must be packaged to ensure safe transportation with ordinary care in handling
- Shipments will be **handled / stored** according to labelling on packages as per the reservation, which must be **consistent** with the Air Waybill.

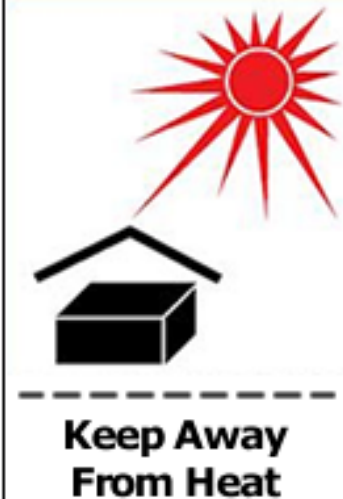
Perishable Cargo - Labeling

- Perishable Cargo Label
(**PERISHABLE**)



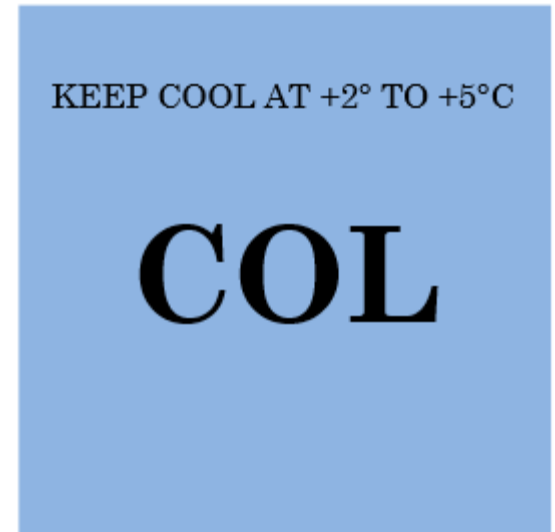
Perishable Cargo - Labeling

- **KEEY DR**Y Label
- **KEEP AWAY FROM HEAT** Label



Perishable Cargo - Labeling

- If it requires a special temperature
- **'KEEP COOL'** or
- **'KEEP FROZEN'** Labels



Perishable Cargo - Labeling

- If it requires;
'THIS WAY UP' Labels



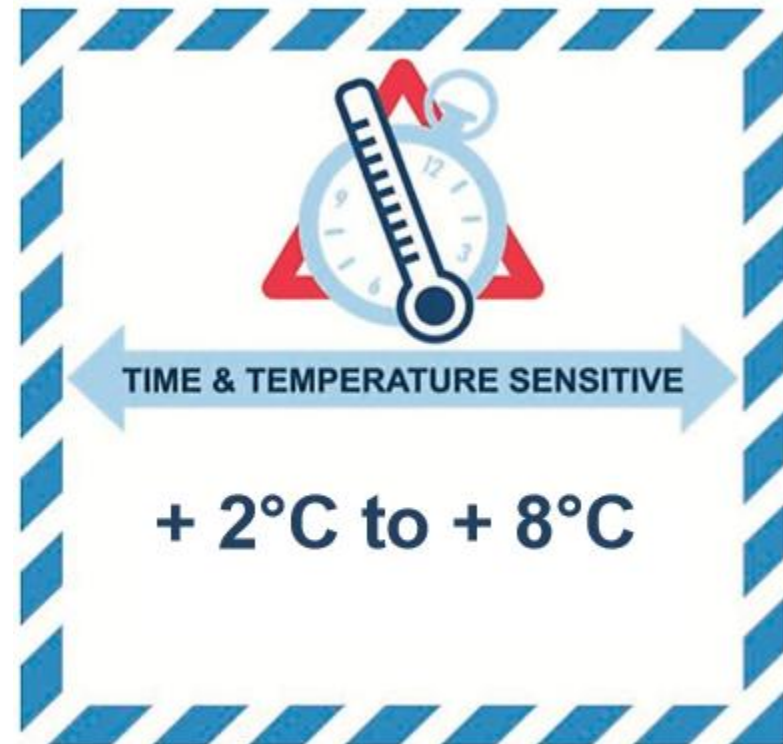
Perishable Cargo - Labeling

- If your perishable cargo is fragile;
'FRAGILE' Labels



Perishable Cargo - Labeling


- **'TIME & TEMPERATURE SENSITIVE'** Labels
- **MANDATORY** in Healthcare Air cargo shipments
 - ☐ +2 °C to +8 °C
 - ☐ +2 °C to +15 °C
 - ☐ +2 °C to +25 °C
 - ☐ +15 °C to +25 °C
 - ☐ Keep Frozen
 - ☐ Do not Freeze



Watchpoints for Perishable Cargo on AWB

- Required information mentioned in '**Handling Information**' section on AWB
- **Note:** If temperature requirement is not declared on the AWB, the shipment will be accepted and handled as **General Cargo**
- To help ensure appropriate handling, the following information should be reflected on the Air Waybill:
 - The exact nature or the closest description of the temperature sensitive cargo: e.g. mangos, strawberries, healthcare, biomedical, general pharma, vaccines, insulin, lettuce, roses, chocolate etc.

- Required information must be written in 'Handling Information' section on AWB

SHIPPER'S NAME AND ADDRESS <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		SHIPPER'S ACCOUNT NUMBER <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		<div style="text-align: center;"> NOT NEGOTIABLE AIR WAYBILL <small>(AIR CONSIGNMENT NOTE)</small> </div> <div style="text-align: right;">  </div> <p style="font-size: small;">Copies 1, 2, and 3 of this Air Waybill are originals and have the same validity.</p> <p style="font-size: x-small;">It is agreed the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT ON THE REVERSE HEREOF (also available at www.aircargo.ups.com). ALL GOODS MAY BE CARRIED BY ANY OTHER MEANS INCLUDING ROAD OR ANY OTHER CARRIER UNLESS SPECIFIC CONTRARY INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER, AND SHIPPER AGREES THAT THE SHIPMENT MAY BE CARRIED VIA INTERMEDIATE STOPPING PLACES WHICH THE CARRIER DEEMS APPROPRIATE. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIER'S LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge.</p>																									
CONSIGNEE'S NAME AND ADDRESS <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		CONSIGNEE'S ACCOUNT NUMBER <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		<p>Received in good order and condition at 20 on 21 22</p> <p style="font-size: x-small;">Place Date/Time</p> <p>Signature of Consignee or his agent 23</p>																									
ISSUING CARRIER'S AGENT NAME AND CITY <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		ALSO NOTIFY NAME AND ADDRESS (OPTIONAL ACCOUNTING INFORMATION) <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>																											
AGENT'S IATA CODE <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>		ACCOUNT NO. <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>																											
AIRPORT OF DEPARTURE (ADDRESS OF FIRST CARRIER) AND REQUESTED ROUTING <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="6" style="text-align: center;">ROUTING AND DESTINATION</td> <td style="text-align: center;">CURRENCY</td> <td style="text-align: center;">PKGS CODE</td> <td style="text-align: center;">WT/VAL</td> <td style="text-align: center;">OTHER</td> <td style="text-align: center;">DECLARED VALUE FOR CARRIAGE</td> <td style="text-align: center;">DECLARED VALUE FOR CUSTOMS</td> </tr> <tr> <td style="width: 10%;">TO</td> <td style="width: 20%;">BY FIRST CARRIER</td> <td style="width: 10%;">TO</td> <td style="width: 10%;">BY</td> <td style="width: 10%;">TO</td> <td style="width: 10%;">BY</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> </tr> </table>						ROUTING AND DESTINATION						CURRENCY	PKGS CODE	WT/VAL	OTHER	DECLARED VALUE FOR CARRIAGE	DECLARED VALUE FOR CUSTOMS	TO	BY FIRST CARRIER	TO	BY	TO	BY					5	6
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HANDLING INFORMATION <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div>		<p style="font-size: small;">INSURANCE - If shipper requests insurance in accordance with conditions on reverse hereof, indicate amount to be insured in figures in box marked amount of insurance.</p>																											

Please Keep Cool +2 °C to +8 °C

The shipper certifies that these commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

NO. OF PIECES	GROSS WEIGHT	kg	RATE CLASS	CHARGEABLE WEIGHT	RATE / CHARGE	TOTAL	NATURE AND QUANTITY OF GOODS (INCL. DIMENSIONS OR VOLUME)
RCP		lb	COMMODITY ITEM NO.				

In Accordance with IATA PCR Manual

- The statements in IATA PCR (Perishable Cargo Regulations) Chapter 7.1 - Air Waybill should be applied;



Under no circumstances are air waybills to be completed with unreasonable instructions or specific temperature conditions. Entries such as “Keep Under Refrigeration at all Times” and “Maintain at below 5 C” are **NOT** acceptable, unless agreed to by the airline

Perishable Cargo – Loading Requirements

- Shall be accepted **only** if properly packed in order to avoid damage and/or contamination to other loads, ULDs or compartments
- Perishable cargo, refrigerated with wet ice or containing fluids which could leak (e.g. meat, fish or other sea food) shall be treated as "**Wet Cargo**" –
 - Some airlines have prohibited usage of Wet Ice
- Perishable cargo, refrigerated with **DRY ICE** shall be handled according to the respective DG regulations.

Usage of Refrigerants

- Dry Ice

- for frozen items

- Gel Coolants

- refrigerating products between +0 °C to +15 °C





Usage of Dry Ice

- Dry ice is **Frozen Carbon Dioxide** (Carbon Dioxide Solid)
- A block of dry ice has a surface temperature $-78.5\text{ }^{\circ}\text{C}$
- It's called 'dry ice' because it doesn't melt into a wet liquid
- Dry ice sublimates, which means it goes from its solid form directly to its gaseous form
- The super-cold temperature and the sublimation feature

Dry Ice – Regulations for usage

- The biggest drawback to using dry ice is the level of regulations that govern its use → **Dry Ice = Dangerous Goods**
- **Dry Ice – IMO Class 9 / UN 1845**
- The potential hazards of dry ice during transportation
 - explosion,
 - suffocation
 - contact hazards
- Risks can be addressed with proper planning and preparation

Packaging Perishable Shipments With Dry Ice

Insulated container lid

Dry ice blocks

Product

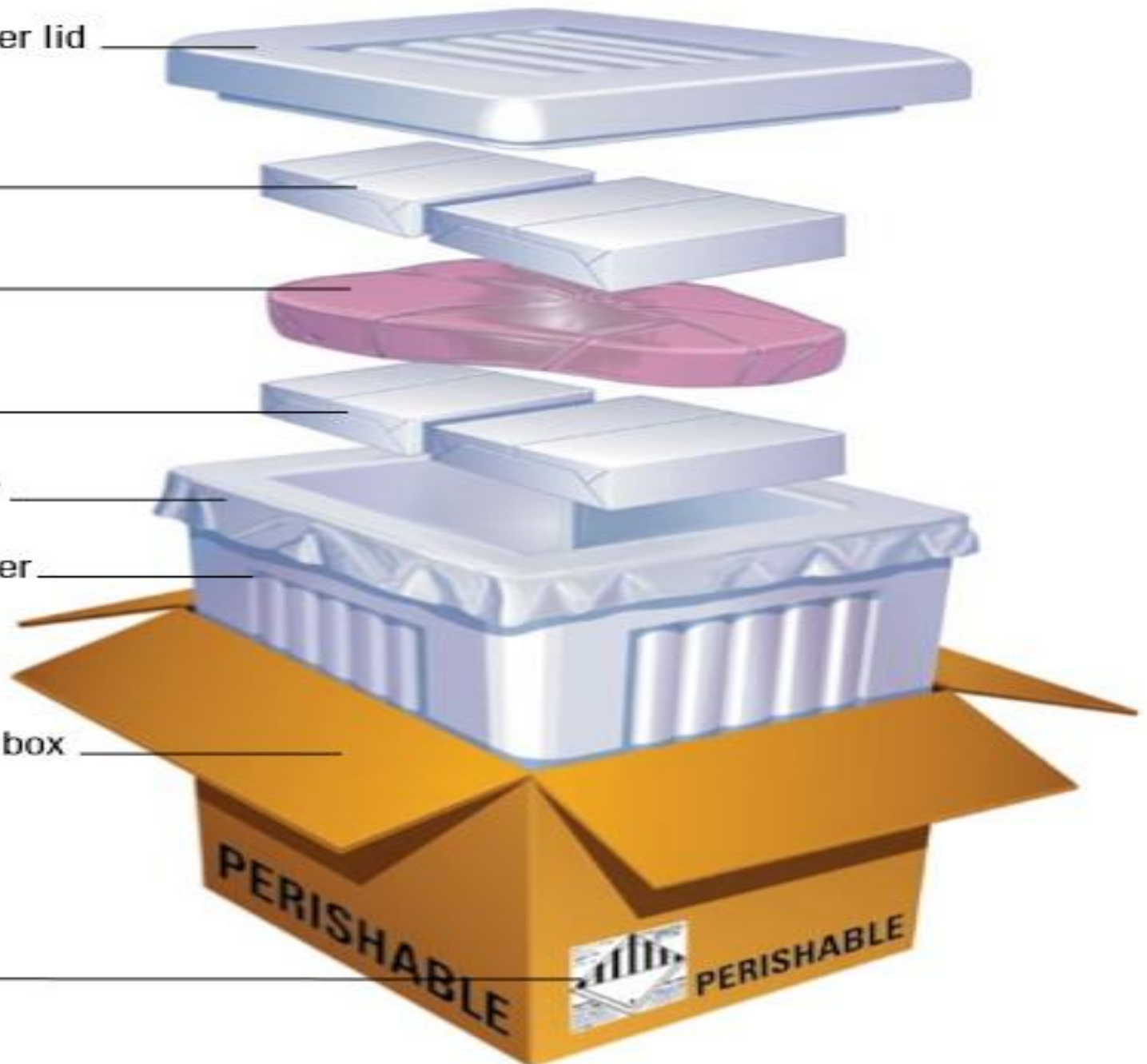
Dry ice blocks

2-mil plastic liner

Insulated container

Outer corrugated box

Dry ice label



Packaging Frozen Seafood Shipments With Dry Ice



Expanded polystyrene foam cooler top

Dry ice

Proper fold-over bag closure

Seafood

2-mil sealed plastic bag (double-bagged)

Dry ice

Absorbent pads

Expanded polystyrene foam cooler bottom

Outer corrugated box

Dry ice label

PERISHABLE

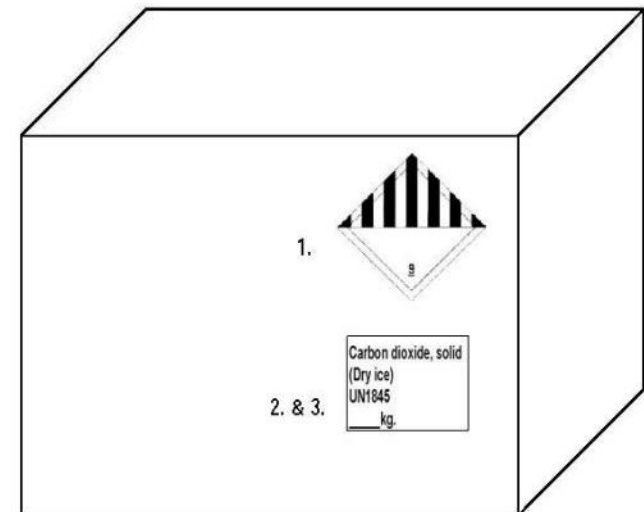
Usage of Dry Ice - Regulations

- For loads of 100 kg meat no more than 2 Kg dry ice shall be used for cooling
- For larger quantities of meat the quantity of dry ice shall be increased in proportion



Usage of Dry Ice - Regulations

- Labeling: the outer most container must be labeled with a hazard class 9 label, UN 1845, and total weight of dry ice in kilograms
- Name/Address/contact details of the Shipper and Consignee must be mentioned
- The label should be affixed to a vertical side of the box (not the top or bottom)



Usage of Dry Ice - Regulations

Dry Ice
UN 1845

Airbills must have the following:

1. Dry Ice; UN 1845
2. _____ x _____ kg.
(Number (wt)
pkgs)

_____ kg
2 lb = 1 kg

Shipper:

Recipient:

9

106426 9/11 RRD

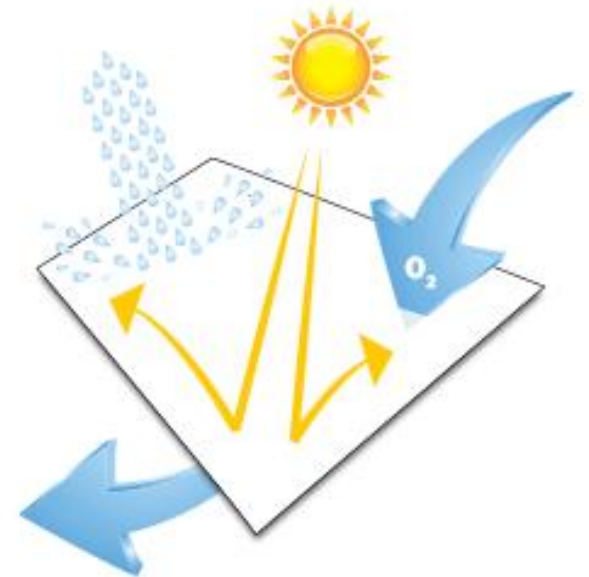
Usage of Gel Coolants

- Gel coolants are preferable to wet ice
- Gel Coolants contains non-toxic substances
- Freeze the Gel Coolants before packaging
- Precool the insulated container if possible



Thermal Blankets / White Covers

- Thermal blankets to protect sensitive cargo from extreme temperature variations
- Check with the Airlines for this service! (at an extra cost)





Active Temperature Controlled ULDs / Containers – for Health Care cargo

- Active temperature controlled containers (ULDs)
- Electrical heating and compressor cooling system
- Rechargeable batteries that can be charged at standard AC-power connection points
- Enhanced air circulation system inside the container

Active Temperature Controlled Containers – for Pharmaceuticals





Further Options in Air Transportation

- Prioritized ground handling
- Cool dollies used for tarmac transportation
 - to transport temperature sensitive units from Ramp to Cool area and vice versa.
 - As a temporarily storage unit at ramp for quick transfer cargo (connecting onward flight in 1-3hrs time)
- Temperature controlled handling and storage

Perishable Cargo – Cargo Cut-offs

	Commodity Type	Cut Off Time
1.	General cargo	07 Hours - STD
2.	Perishable / Fruits / Vegetables	05 Hours - STD
3.	Tuna fish / Live fish / Edible fish	04 Hours - STD
4.	Live human organs (LHO)	02 Hours - STD

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Thank you

School of Business for Global Commerce & Logistics