



# Cargo Tips: Machinery Shipments

Multimodal Moves

CHUBB®

# What is Multimodal Transport?

Multimodal transport is when more than one mode or conveyance type will be used to move your shipment to its destination. This can mean using any combination of truck, rail, ocean or air carriers.

Thoughtful decisions on how to package, handle and transport your machinery can make all the difference in ensuring that it arrives at its destination safely. Chubb's Marine Risk Management Specialists are pleased to provide you with the following tips for packaging, handling and transporting your machinery in multimodal transportation.

## Packaging

- When securing the machine atop a skid, ensure the skid is well constructed of lumber that is clean, dry and free of knots, and robust enough to withstand the weight of the machine without bending or breaking. The lumber should be ISPM 15 (pest-free) compliant. The skid should be built to allow for mechanical (crane and/or forklift) handling. Consider having a professional export packer or crater involved.
- Bolt machines positioned atop skids to the skid, with the bolts extending into, or preferably through, the skid runners.
- When the machine's center of gravity is above mid-height, consider using a wider skid base to increase its stability and prevent tipping during handling and transport.
- Make sure none of the machine's parts extend beyond the footprint of the skid as this exposes the machine to damage through contact with adjacent cargo or structural members of the transport conveyance.
- Secure movable or loose parts of the machine.
- If the machinery is sensitive to damage by shock or vibration, consider using rubber blocks or a foam supported floating deck. Shock and tip indicating devices should be used in order to validate whether or not the machine has been subjected to acceleration (expressed in G force) or tipped/tilted during transit in excess of allowable thresholds. Affix these devices to both the interior and exterior of the package since they are prone to tampering or accidental removal.
  - The tilt and shock indicating devices should be placed on a rigid surface, with tilt devices preferably at/near the upper corner. As tilt indicating devices are designed to activate ("trigger") in one dimension, install two devices, one each on two adjacent machinery sides. There should be instructions to immediately inspect for damage if these devices have been activated or an external one is missing.
- Coat bare metal and machined surfaces with a corrosion inhibitor spray.
- Cover machines sensitive to wetting in plastic. Alternatively, the machine can be enclosed in a wood case with plastic/waterproof cover installed over the top of the case and banded in place around the upper sides. We recommend this even for containerized, door-to-door shipments, due to the possibility of 'container rain.'
- If the machine is sensitive to condensation related corrosion, it should be fully encapsulated in a vapor barrier bag with desiccants inside. Alternatively, you can use a VCI (Volatile Corrosion Inhibitor) wrap.
- If the machine will be handled at some point after it leaves your site (for example, at a Container Freight Station at/near the port of loading or at a deconsolidation facility at the port of discharge), apply international handling symbols to the exterior of the packaging (on at least 2 sides) which



clearly indicates how the machine is to be handled and stored. Examples include but are not limited to: Handle with Care, Keep Dry, Do Not Stack, Lift/Sling Here and Center of Gravity. Other shipping data such as the delivery address and weight should also be clearly marked on the exterior of the case or crate.

### **Loading/Securement**

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- If you are loading an ocean container at your site, ensure that the container is in clean and suitable condition to carry your shipment. The door seals (gaskets) should be in good serviceable condition. Make sure there are no visible holes in the container roof, sides or floor. (This should be confirmed with a light test by entering the “box”, closing the doors and looking for any light entering). Make sure all cargo securing devices, lashing rings and corner posts are present and in good condition.

- Before loading the container, check the floor load rating on the container and make sure that the load of your forklift and cargo does not exceed this amount. Avoid concentrated floor loading.
- If you are loading an ocean container at your door, ensure that the weight of the machine shipment is either centered or evenly distributed over the floor of the container as far as practical.
- Depending on the modes of transportation used, the cargo must be secured to Federal Motor Carrier Safety Administration ([FMCSA](#)), Association of American Railroads (AAR) and International Maritime Organization (IMO) Standards. Only container structural members should be used for cargo bracing/securement, not side or roof panels. When securing the cargo, remember that the container lashing rings and corner posts are only rated for 2,205lbs. Factor this in when determining how best to secure your cargo for transit. Guidance on this can be provided by Chubb’s Marine Risk Management team. FMCSA cargo restraint standards can be found at [www.fmcsa.dot.gov](http://www.fmcsa.dot.gov).

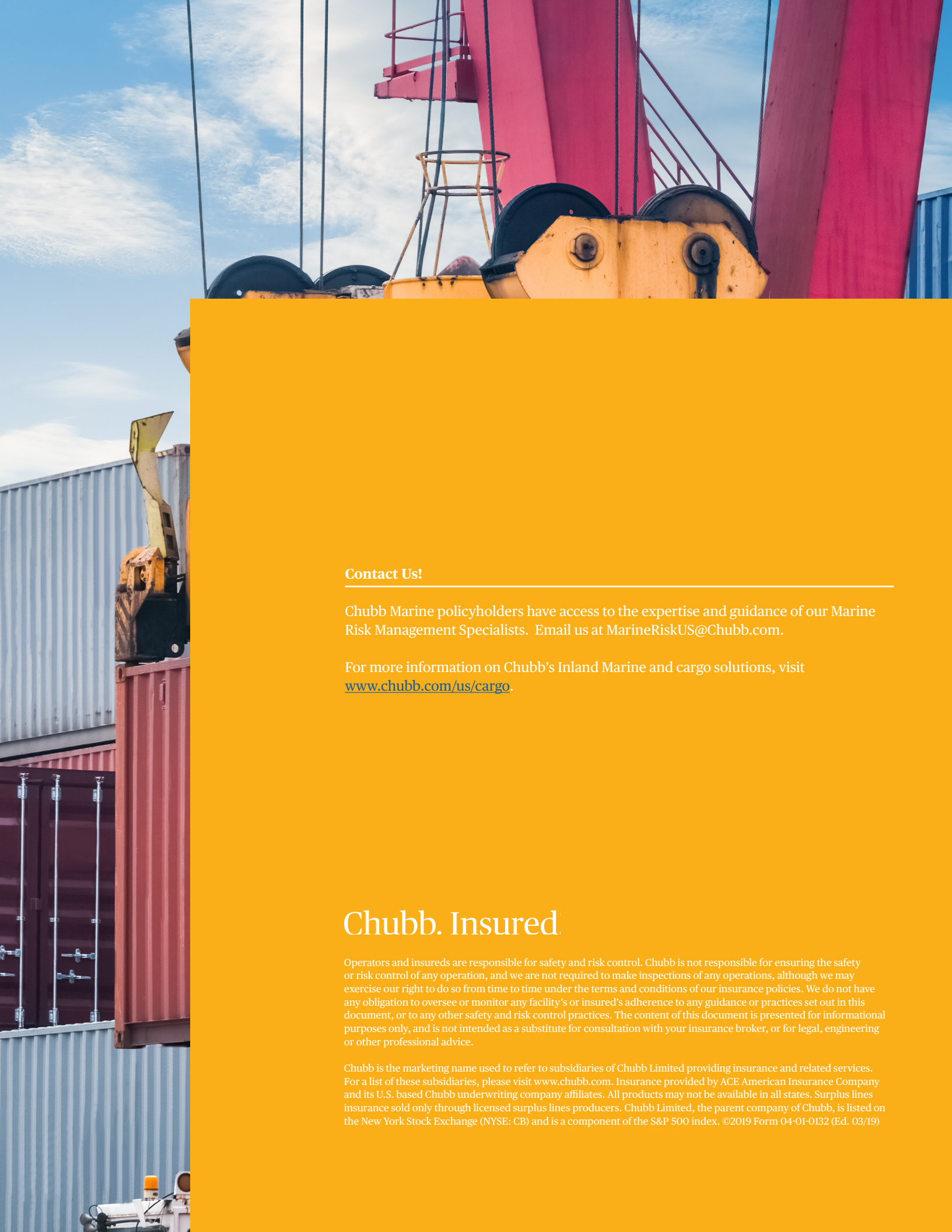
- For moisture sensitive shipments being transported in an ocean container, consider taping over the container vents and placing desiccants inside the container.
- If your machine is being picked up by a domestic trucking company for transport to a port terminal or airport, ensure the equipment used is based on the size and weight (low boy or drop deck flatbed) and sensitivities (dry van or air ride suspension) of the machine.
- For domestic truck segment, ensure that the trailer has a valid DOT/FMCSA inspection tag and appears to be in good serviceable condition for the transport.
- For domestic truck segment, if machinery sensitive to wetting is being carried on an open trailer, even if it has been covered in plastic, require tarping of the load by the carrier.

### **Handling/Transport**

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- From initial pick up to the final destination, use a reliable transportation partner. Chubb Marine Risk Management Specialists can provide you with safety performance data for all trucking companies registered by the U.S. DOT for your use in identifying a suitable road carrier. We may also be able to provide some guidance on vessel selection.
- When practical, arrange for direct, door-to-door shipments to avoid transfers and transshipments that result in extra handling.
- Provide your transportation partner with specific shipping instructions pertaining to any special handling, transport or storage requirements for the machine.
- If the machine is susceptible to water damage, consider requesting underdeck stowage on the ship.





## Contact Us!

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Chubb Marine policyholders have access to the expertise and guidance of our Marine Risk Management Specialists. Email us at [MarineRiskUS@Chubb.com](mailto:MarineRiskUS@Chubb.com).

For more information on Chubb's Inland Marine and cargo solutions, visit [www.chubb.com/us/cargo](http://www.chubb.com/us/cargo).

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