



# Cold Chain Transportation

## Pharmaceuticals and Other Medicinal Products

This publication offers insights into potential challenges to cold chain management of High Value Theft Targeted (HVT) Level 1 pharmaceutical and other medicinal products with considerations to help reduce risk for shippers and carriers and help to ensure shipment in a safe & secure manner. HVT Level 1 is considered to have the highest level of theft risk thus cargo is at constant theft risk while in transit. Medicinal products can include pharmaceutical drugs, blood products e.g. plasma, vaccines and active ingredients that form these and other similarly classified products. This bulletin supplements AIG Marine Risk Consulting's (MRC) publication on High Value Theft Targeted (HVT) Level 1 Security.

### Distribution Challenges:

The distribution of high end medicinal products is primarily seen to be via air and commercial trucking, involving complex challenges. These can include:

- Cargo Security:** Potential warehouse and in-transit theft and/or seizures by governmental agencies, riot and acts of civil unrest. Risk can increase as governments issue prioritization schedules. A comprehensive list of recommendations for HVT Level 1 cargo security is available through AIG MRC.
- Cold Chain Transportation Requirements:** Temperature ranges/thresholds, which are handled hereinafter in this document.
- Fear of Loss:** This is potentially caused if there is fear, suspicion, or possibility that a product has been compromised in any way during transit.
- Natural Catastrophe Exposures:** Windstorm, earthquake, flooding or other extreme weather. Data for specific locations can be obtained through AIG MRC.

### Cold Chain Transportation Requirements:

An increasing number of medicinal products require cold chain monitoring and handling. To protect the integrity of these temperature-sensitive medicinal products e.g. vaccines, glaucoma drops, insulin and other biologicals, a controlled temperature environment throughout transit and at storage locations is required.

Typical temperature ranges are:

- |                      |                |                         |
|----------------------|----------------|-------------------------|
| - Controlled ambient | +15°C to +25°C | or 59F to 77F,          |
| - Refrigerated       | +2°C to +8°C   | or 35F to 47F,          |
| - Frozen             | -20°C          | or -4F,                 |
| - Deep frozen        | -80°C          | or -112F,               |
| - Liquid nitrogen    | -196°C         | or -320F or even lower. |

AIG MRC recommended best practices for Cold Chain shipments include:

1. For air transport, use packaging that can maintain required temperatures for at least 24 hours longer than the expected transit time. The use of the va-Q-Tainer Twinx product (see this [link](#)) or similar advanced design containers are recommended.
2. Ensure there are pre-notice/pre-alert notifications in place for outgoing and incoming shipments.

3. Use real time tracking/temperature monitoring for high value (USD\$500,000+) shipments throughout the course of transit e.g. with third party services offering immediate carrier remediation contact in the event of a detected temperature deviation, or delay in transit.

For further recommendations on the logistics security we recommend consultation with AIG Marine Risk Consulting and ask for the security level 1, 2 and/or 3 recommendations.

[For more information, please contact your local Marine Risk Consultant.](#)

The information, suggestions and recommendations contained herein are for general informational purposes only. This information has been compiled from sources believed to be reliable. Risk Consulting Services do not address every possible loss potential, law, rule, regulation, practice or procedure. No warranty, guarantee, or representation, either expressed or implied, is made as to the correctness or sufficiency of any such service. Reliance upon, or compliance with, any recommendation in no way guarantees any result, including without limitation the fulfillment of your obligations under your insurance policy or as may otherwise be required by any laws, rules or regulations. No responsibility is assumed for the discovery and/or elimination of any hazards that could cause accidents, injury or damage. The information contained herein should not be construed as financial, accounting, tax or legal advice and does not create an attorney-client relationship.

American International Group, Inc. (AIG) is a leading global insurance organization. AIG member companies provide a wide range of property casualty insurance, life insurance, retirement solutions and other financial services to customers in more than 80 countries and jurisdictions. These diverse offerings include products and services that help businesses and individuals protect their assets, manage risks and provide for retirement security. AIG common stock is listed on the New York Stock Exchange.

Additional information about AIG can be found at [www.aig.com](http://www.aig.com) | YouTube: [www.youtube.com/aig](http://www.youtube.com/aig) | Twitter: [@AIGinsurance](https://twitter.com/AIGinsurance) [www.twitter.com/AIGinsurance](https://www.twitter.com/AIGinsurance) | LinkedIn: [www.linkedin.com/company/aig](http://www.linkedin.com/company/aig). These references with additional information about AIG have been provided as a convenience, and the information contained on such websites is not incorporated by reference herein.

AIG is the marketing name for the worldwide property-casualty, life and retirement and general insurance operations of American International Group, Inc. For additional information, please visit our website at [www.aig.com](http://www.aig.com). All products and services are written or provided by subsidiaries or affiliates of American International Group, Inc. Products or services may not be available in all countries and jurisdictions, and coverage is subject to underwriting requirements and actual policy language. Non-insurance products and services may be provided by independent third parties. Certain property-casualty coverages may be provided by a surplus lines insurer. Surplus lines insurers do not generally participate in state guaranty funds, and insureds are therefore not protected by such funds.

Copyright © American International Group, Inc. All rights reserved.

MRC 10/10/2023