

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°	or 59F to 77F
Refrigerated	+2°C to +8°	or 35F to 47F
Frozen	-20°	or -4F
Deep frozen	-80°	or -112F
Liquid nitrogen	-196°	or -320For 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.



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