Hazardous Materials Shipping

Risk Areas, Trips, Traps, and Common Mistakes

How Employers Can Minimize Liability

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Douglas Graham, CHMM-
Sr. EH&S Consultant & External Training Manager

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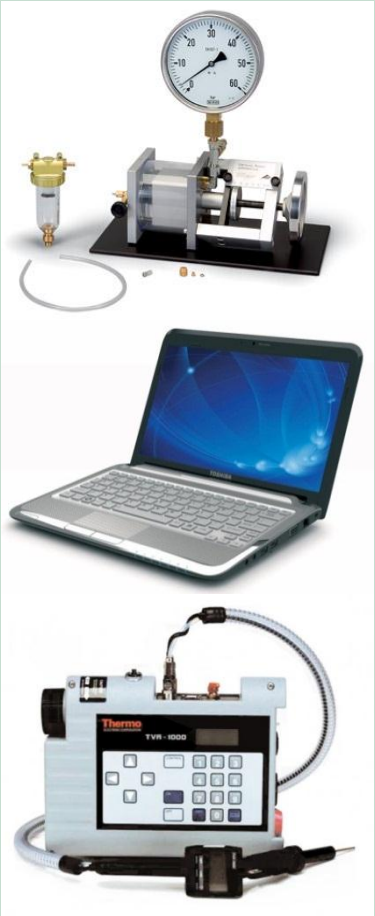
Common Mis-Steps

1. Offering electronics, batteries, and instruments mistakenly as non-hazardous
2. Improperly preparing of packages for return to suppliers
3. Assuming the competency and MSDS reliability of original suppliers
4. Not controlling access to shipping accounts to only trained employees
5. Inadvertently creating inspection and enforcement triggers
6. Increasing regulatory burden and liability by shipping by air when not necessary
7. Improperly preparing hazardous materials for self-transport or hiring of untrained couriers to move hazardous materials
8. Not obtaining the correct software, pre-approval and/or contract to ship hazmats

1. Offering electronics, batteries, and instruments mistakenly as non-hazardous



EXAMPLES

Equipment with compressed air chambers or pistons

Electronics with lithium ion (rechargeable) or lithium metal (primary) batteries installed

Instruments with compressed gas cartridges/ canisters/ cylinders

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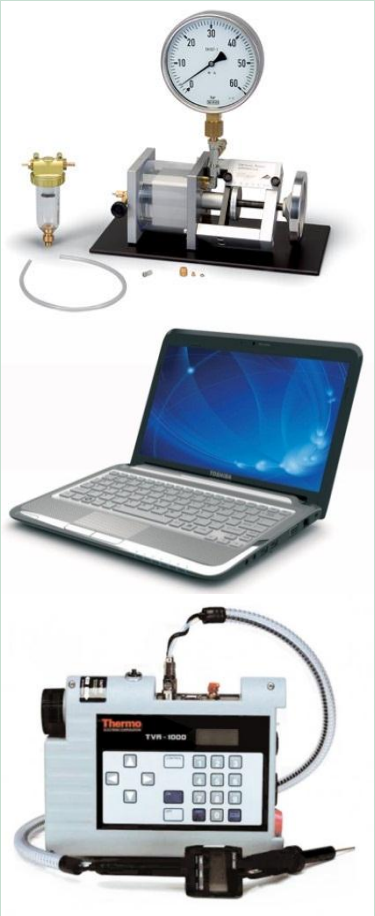
1. Offering electronics, batteries, and instruments mistakenly as non-hazardous



These materials are often offered for transport by employees not traditionally thought of as "hazmat employees." They may be flying under the radar of the environmental, health and safety department/manager, and if so, likely have not been trained.

"I've shipped laptops with the battery installed to colleagues in the field perhaps 100 times in the past year, and had no idea they were regulated."

- Anonymous

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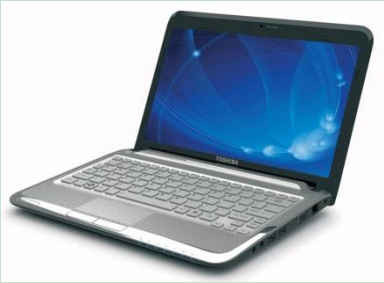
1. Offering electronics, batteries, and instruments mistakenly as non-hazardous



Equipment with lithium batteries packed with, or installed in the equipment, are one of the most common offenders.

- Lithium batteries are regulated by 49 CFR as a hazardous material for both ground and air
- Also regulated by IATA as Dangerous Goods
- FedEx requires special permission before offering lithium batteries for transport.

1. Offering electronics, batteries, and instruments mistakenly as non-hazardous

Send a notice to all employees that there are special procedures for shipping batteries, scientific instruments, and electronics.

Explain that due to the presence of certain battery types, charged capacitors, compressed gases, fuel sources, or pressurized components, they may be considered "hazardous materials" and are strictly regulated. Failure to identify these materials and offering them for shipment can result in severe penalties or serious safety problems during transport, especially by air.

2. Improperly preparing of packages for return to suppliers

Most commonly, employers only train those employees who are expected to be shipping hazardous materials.

Employees may receive leaking or damaged hazmats, may need to return them, or may need to sort or handle the materials without proper knowledge of the repercussions of doing those things incorrectly.

2. Improperly preparing of packages for return to suppliers

EXAMPLE

The article or substance is not what was ordered and was mistakenly accepted. The shipping department employees, who normally do not ship hazardous material, do not have the training to identify the material as hazardous, let alone properly prepare it for transport back to the supplier.

The employer is now responsible for all the compliance issues related to preparing the return.

2. Improperly preparing of packages for return to suppliers

Train all such shipping and receiving staff, at least to the awareness level, in the hazardous materials regulations and focus in on those situations where only fully trained "hazmat employees" should step in.

3. Assuming the competency and MSDS reliability of original suppliers

Many companies receive hazardous materials from a supplier and then re-offer them for transport at a later time. It is temping to rely solely on the transportation section of the MSDS for proper classification, packing group, and shipping name.

HOWEVER it's not uncommon for that information to be inaccurate, for a number of reasons.

3. Assuming the competency and MSDS reliability of original suppliers

EXAMPLE

UN2320 is the correct ID#, not UN1760

TRANSPORT INFORMATION

DOT NON BULD SHIPPING NAME:	Tetraethylenepentamine solution; 8; Un1760; PG III
IMO SHIPPING DATA:	Tetraethylenepentamine solution; 8; UN 1760 ; III ; IMDG PAGE 8234 ; F. P. 141.1 C ; Placarded Corrosive; HazMat STCC= 4935216 ; Ems No
ICAO/IATA SHIPPING DATA:	

***Note*: In a recent survey conducted by Triumvirate, out of 38 maintenance products' MSDS reviewed, 11 identified the incorrect hazard class, ID#, and/or shipping name- a 29% error rate.**

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3. Assuming the competency and MSDS reliability of original suppliers

Follow the same steps every time a material is offered for transport- look at the hazard criteria and compare to the properties of the material. Don't take shortcuts and rely on suppliers' determinations. The new offeror is responsible for all aspects of compliance, including classification, naming, etc.

4. Not controlling access to shipping accounts to only trained employees

Some companies may have several shipping accounts with different vendors, potentially unknown to EH&S staff. Such cases open the door for untrained employees to offer hazardous materials undeclared through traditional shipping methods.

4. Not controlling access to shipping accounts to only trained employees

EXAMPLE

Possible Scenario:

An employee ships a document along with a small tube of hobby airplane glue in a FedEx overnight envelope to a customer.

Result- the glue tube leaks at the airport, a solvent odor is detected, and FAA investigates and determines the glue is flammable. FAA then issues a $55,000 penalty for offering an undeclared hazardous material.

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4. Not controlling access to shipping accounts to only trained employees

Determine the vendors (UPS, FedEx, freight services, etc) used by employees and which individual accounts exist. Put in place a system to ensure awareness of hazardous materials and that none are inadvertently offered. Potentially centralize shipping through a single account with EH&S oversight.

5. Inadvertently creating inspection and enforcement triggers

The best way to get noticed by a regulating agency when you ship a hazardous material, is to ship it **by air**.

Air shipments are scrutinized by FAA, virtually all passing through some degree of screening, possibly up to and including, internal inspection.

Even small mistakes can lead to visits by FAA, on-site inspections, and potentially significant enforcement actions.

6. Increasing regulatory burden and liability by shipping by air when not necessary

Shipping hazardous material by air involves the need for additional training (e.g., IATA), populating a more complicated shipping paper, and meeting more stringent packaging, marking, and labeling requirements.

The potential safety and enforcement consequences of a non-compliant shipment are far greater for air than by highway.

Employers often overlook this significant liability difference.

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5. and 6. Increasing regulatory burden, liability, and likelihood of inspection and enforcement by shipping by air when not necessary

The solution to all of this is quite simple: If it's not absolutely necessary to ship the hazardous article or substance by air . . . . . **THEN DON'T**!

Simply asking as to the necessity of the requesed delivery time request, may open up ground transport as an option.

Just the dramatic increase in the shipper's liability alone, makes it often worth investigating ways in which to avoid air shipments of hazardous material.

7. Self-transporting hazardous materials improperly

Unless an exception is used, such as the "Materials of Trade" rule of 173.6, employers must prepare hazardous material the same way they would if offering it to a commercial carrier, plus follow the additional carrier requirements of Part 177.

Not uncommonly, employers feel such situations are "non-commercial" and don't comply with 49 CFR, or do not fully comply with the Materials of Trade exception.

Hiring untrained couriers to transport hazardous materials is another common error.

7. Self-transporting hazardous materials improperly

Read and understand the Materials of Trade exception of 49 CFR 173.6, including applicability, driver training, restrictions, and specific requirements.

If not applicable, the additional carrier requirements of 49 CFR Part 177 must be met.

Federal Motor Carrier Safety regulations, including commercial drivers licensing may also apply, and therefore must be investigated.

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8. Not obtaining the correct software, pre-approval and/or contract to ship hazmats

Employers may not realize that certain transporters require error-checking software to prepare shipping papers, and even signed contracts (e.g., UPS Dangerous Goods Agreement).

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8. Not obtaining the correct software, pre-approval and/or contract to ship hazmats

Determine the current software and approvals required of vendors (UPS, FedEx), especially if shipping infrequently.

2011 marked significant changes within Federal Express as to how Dangerous Goods Declarations (air) and Forms OP-900 (ground) must be generated by approved, error-checking software.

THANK YOU