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ENVIRONMENT, ENERGY SECURITY & SUSTAINABILITY SYMPOSIUM & EXHIBITION

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European Command Hazardous Material Management Program

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Report Documentation Page

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Overview

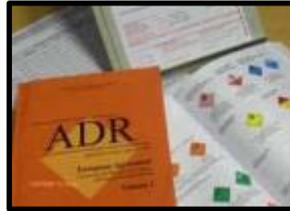
- Mission
- Deliverables and Program Support Requirements
- Strategic Plan EUCOM Hazardous Material Management Program
- Sample



Mission

- Review Compliance with Dangerous Goods requirements in transportation and the movement control system
- Achieve standardization of compliance requirements within the theater to include international standards as applicable
- Analyze impact to the EUCOM mission upon implementation of requirements set forth in the European Program on Registration, Evaluation, and Authorization of Chemicals (REACH) as identified in the DOD Strategic Plan on REACH, and other applicable programs, i.e. the Globally Harmonized System (GHS), the European Version of GHS which is Classification, Labeling and Packaging (CLP) of hazardous material, the European Waste system (preparation of hazardous/clinical waste for movement and disposal), or IAEA rules for hazard class 7 items





Movement

Training



Procurement

Environment



Safety & Security

Health



Employer duty → risk management



1 Maßnahmen der Schutzstufe 1
Allgemeine Lüftung
100

2 Maßnahmen der Schutzstufe 2
Befüllen von Säcken
200

3 Maßnahmen der Schutzstufe 3
Geschlossenes System
300

www.baua.de/emkg



General ventilation

Sack filling

Containment

www.coshh-essentials.org.uk



ILO Toolkit Control Sheet 100 Control Approach 1
General Ventilation General Principles

ILO TOOLKIT CONTROL SHEET 200 CONTROL APPROACH 2
ENGINEERING CONTROL
SACK FILLING

ILO Toolkit Control Sheet 300 Control approach 3
Containment
General Principles of Containment

www.ilo.org/legacy/english/protection/safework/ctrl_banding/toolkit/icct/index.htm

www.baua.de/emkg

http://www.coshh-essentials.org.uk/

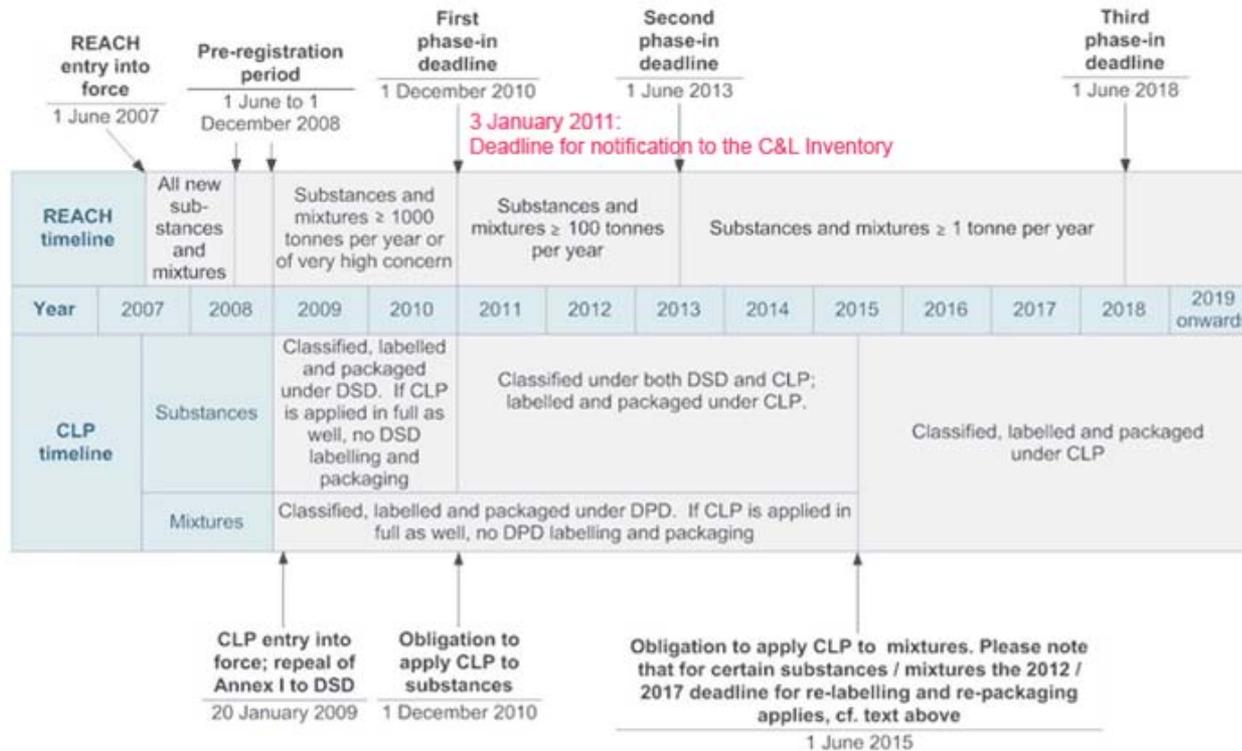
http://www.ilo.org/legacy/english/protection/safework/ctrl_banding/toolkit/icct/index.htm



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The obligations that are due by these dates, including changes to the Safety Data Sheets, as well as their relationship to the REACH deadlines are illustrated in the figure below.



Background 1

DOD operations in EUCOM area are based on treaties

- North Atlantic Treaty from 1949 and NATO Status of Forces Agreement from 1951 -- 28 countries; 21 of those are European Community Members
- Partnership for Peace Program – Allows bi-lateral agreements between members of the North Atlantic Treaty and individual non-NATO partner countries -- 22 countries; 12 former members are now NATO members
- European Community members 27 countries – 21 countries are NATO member;



Background 2

DOD operations in EUCOM area are based on treaties

- North Atlantic Treaty from 1949 and NATO Status of Forces Agreement from 1951 -- 28 countries; 21 of those are European Community Members
 - Regulates conditions between sending state and receiving state for
 - ✓ Military members → privileges
 - ✓ Civilian components → privileges
 - ✓ All others (local labor/civilian contractors) → no privileges

A challenge for military business processes!



Background 3

DOD operations in EUCOM area are based on treaties

- Partnership for Peace Program – Allows bi-lateral agreements between members of the North Atlantic Treaty and individual non-NATO partner countries -- 22 countries; 12 former members are NATO members
 - Bi-lateral agreements between PfP and NATO member
 - ✓ Military members → privileges
 - ✓ Civilian components → privileges
 - ✓ All others (local labor/civilian contractors) → no privileges

A challenge for military business processes!



Background 4

DOD operations in EUCOM area are based on treaties

- European Community members 27 countries – 21 countries are NATO member; PfP members are recognized
 - EC regulations for market to be respected or applied by military organizations
 - ✓ Military forces of EC countries → additional privileges
 - ✓ Military members of NATO countries → privileges recognized
 - ✓ Civilian components of NATO countries → privileges recognized
 - ✓ PfP members → limited privileges
 - ✓ All others (local labor/civilian contractors) → no privileges

A challenge for military business processes!



Background 5

DOD Strategic Plan REACH

- Describes threat to DOD mission for stationed or transiting units
- Has consequences for suppliers
- Has two major task to EUCOM
 - Ensure the DOD supply chain is not disrupted!
 - ✓ Ensure waivers are in place if logistics industry is used!
 - Facilitate and resolve Defense –Exemption issues in Europe related to REACH

A challenge for military business processes!



Strategic Plan Title

Management of Hazardous Material and Hazard Communication in the EUCOM AOR

Structure:

- Executive Summary
- Table of Goals and Objectives
 - Two Goals
 - Seven Objectives
- Description of Goal
- Description of Objectives
- Proponent, Support, Funding, Deliverable, Metric
- Explanation



Goal 1

Establish EUCOM Command Hazardous Material Management Program to respect Host Nation and meet DOD requirements - 67 countries (GHS implementation)

• Objective 1.1: Hazardous Material Management

□ Why?

- Provide a standard for US Forces in Europe
- Comply with Article II, Status of Forces Agreement (SOFA), 19 Jun 1951
 - Respect the law of the receiving State
 - The sending State agrees to take necessary of measures to that end.

But:

- Military regulations cannot be applied to civilian contractors/industry.
- Military regulations protect locally hired labor.
- SOFA privileges for contractors/industry providing logistics services require approval (granted very seldom)



Goal 1 (cont)

Establish EUCOM Command Hazardous Material Management Program to respect Host Nation and meet DOD requirements - 67 countries (GHS implementation)

• Objective 1.1: Hazardous Material Management

□ How?

- Review and confirm technical requirements
- Establish or improve the network of formal contacts to Competent Authorities
- Ensure training and qualified resources
- Ensure proper systems
- Ensure deviations are authorized or notified
- Ensure proper statements of work for civilian contractors/industry



Goal 1

Establish EUCOM Hazardous Material Management Program to meet Host Nation and DOD requirements – 67 countries (GHS implementation)

• Objective 1.2: Hazard Communication 1

UN Based Globally Harmonized System (GHS) → European Version EC 1272/2008 Classification, Packaging and Labeling (CLP) - Sample



GHS 01

Unstable explosives
Explosives of Divisions 1.1, 1.2, 1.3, 1.4
Self reactive substances and mixtures, Types A, B
Organic peroxides, Types A, B



GHS 03

Oxidizing gases, hazard category 1
Oxidizing liquids, hazard categories 1, 2, 3
Oxidizing solids, hazard categories 1, 2, 3



GHS 02

Flammable gases, hazard category 1
Flammable aerosols, hazard categories 1, 2
Flammable liquids, hazard categories 1, 2, 3
Flammable solids, hazard categories 1, 2
Self-reactive substances and mixtures, Types B, C, D, E, F
Pyrophoric liquids, hazard category 1
Pyrophoric solids, hazard category 1
Self-heating substances and mixtures, hazard categories 1, 2
Substances and mixtures, which in contact with water, emit flammable gases, hazard categories 1, 3
Organic peroxides, Types B, C, D, E, F



GHS 04

Gases under pressure:
Compressed gases;
Liquefied gases;
Refrigerated liquefied gases;
Dissolved gases



GHS 05

Corrosive to metals, hazard category 1
Skin corrosion, hazard categories 1A, 1B, 1C
Serious eye damage, hazard category 1



Goal 1

Establish EUCOM Command Dangerous Goods Program Policy to meet Host Nation and DOD requirements – 67 countries (GHS implementation)

• Objective 1.2: Hazard Communication 2

UN Based Globally Harmonized System (GHS) → European Version EC 1272/2008 Classification, Packaging and Labeling (CLP) - Sample



GHS06

Acute toxicity (oral, dermal, inhalation), hazard categories 1, 2, 3



GHS08

Respiratory sensitization, hazard category 1
Germ cell mutagenicity, hazard categories 1A, 1B, 2
Carcinogenicity, hazard categories 1A, 1B, 2
Reproductive toxicity, hazard categories 1A, 1B, 2
Specific Target Organ Toxicity — Single exposure, hazard categories 1, 2
Specific Target Organ Toxicity — Repeated exposure, hazard categories 1, 2
Aspiration hazard, hazard category 1



GHS07

Acute toxicity (oral, dermal, inhalation), hazard category 4
Skin irritation, hazard category 2
Eye irritation, hazard category 2
Skin sensitization, hazard category 1
Organ Toxicity — Single exposure, hazard category 3
Respiratory tract irritation
Narcotic effects



GHS09

Hazardous to the aquatic environment
— Acute hazard category 1
— Chronic hazard categories 1, 2



Goal 1

Establish EUCOM Hazardous Material Management Program to meet Host Nation and DOD requirements – 67 countries (GHS implementation)

• Objective 1.2: Hazard Communication 3

UN Based Globally Harmonized System (GHS) → European Version EC 1272/2008 Classification, Packaging and Labeling (CLP) - Sample

- Classification criteria is changing – change of primary hazard class possible
- More differentiation of hazards (28 instead of 15 classes)
- Transferring of old symbols to the new symbols is normally not possible

	Physical Hazards --- Safety Office	Health Hazards/Bioenvironmental engineering/Health Monitoring	Environment
Old	  	  	
New	    	   	



Goal 1

Establish EUCOM Hazardous Material Management Program to meet Host Nation and DOD requirements – 47 countries (ADR members only)

- **Objective 1.3: Dangerous Goods Vehicle, tank vehicle, demountable tank registration and inspection program**

Goal 1

Establish EUCOM Hazardous Material Management Program to meet Host Nation and DOD requirements - 67 countries (GHS implementation)

- **Objective 1.4: Training - certified and un-certified**

Goal 2. Establish EUCOM Dangerous Goods Movement Control System (EID CONOPS Priority; DOD Strategic Plan on REACH Goal 3.3 and 4.1) - 51 countries in the AOR

- **Objective 2.1 War Weapon Control**
- **Objective 2.2 Border Crossing**
- **Objective 2.3 Systems; Business Architecture Requirements**



Goal 2. Establish EUCOM Dangerous Goods Movement Control System (EID CONOPS Priority; DOD Strategic Plan on REACH Goal 3.3 and 4.1) - 51 countries in the AOR

- **Objective 2.1 War Weapon Control Acts/Arms Control Regulation**
 - similar to US 22 CFR, 120-130, International Traffic in Arms Regulation
- **Objective 2.2 Border Crossing**
 - Enforcement at the border and within European countries, i.e. rules on REACH, CLP, Dangerous Goods, Security
- **Objective 2.3 Systems; Business Architecture Requirements**
 - Information for users of hazmat – SDS format, additional European HAZCOM
 - Information for waste generators – HW profile; transboundary movement; statement of work for disposal contracts;
 - Information for movement preparation - classification, packing, traffic procurement, security, restrictions
 - Information for clearances through borders – diplomatic, dangerous goods routing, host nation escort, controlled items (US and Host nation), authorized carriers, advance notification and approval processes, standing clearances;
 - Emergency response - online tracking, link to host nation emergency response center,



Labeling according to CLP

The CLP Regulation defines the content of the label and the way the various labeling elements should be organized. Transitional provisions set out when there is the obligation to label in accordance with the CLP rules and when the labeling according to DSD or DPD is still applicable.

The information required on the CLP label includes

the **name, address and telephone number** of the supplier/s of the substance or mixture;
the **nominal quantity** of substance or mixture in the packages made available to the general public (unless this quantity is specified elsewhere on the package);
product identifiers; and

where applicable, **hazard pictograms, signal words, hazard statements, precautionary statements and supplemental information** which may consist of information required by other legislation, for example the legislation concerning biocides, pesticides or detergents.

As the classification of a substance or mixture can result in duplication or redundancy of labeling elements such as signal words, hazard pictograms and hazard and precautionary statements, **precedence rules** have been created to limit such duplication or redundancies.

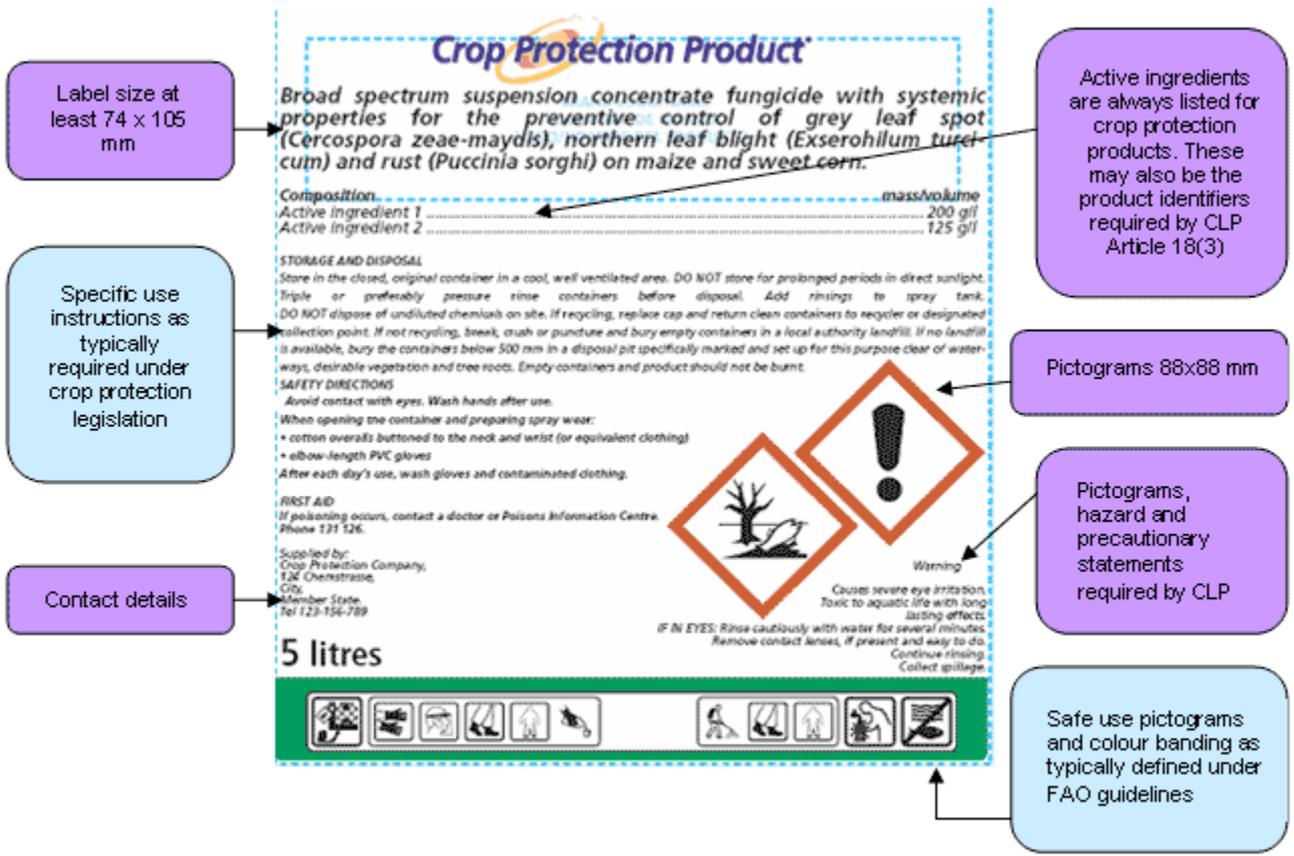
US EUCOM Policy:

Mil Std 129 applies

Only additional hazard communication is required, i.e. **pictograms, signal word, hazard and precautionary statements and supplemental information.**



Sample of Industry label



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Sample:

Federal Stock Class 6850 -- Silica Gel, Product No S7625, Sigma-Aldrich, St. Louis MO 63103

Process: humidity control in packages containing items sensitive to humidity

Information from MSDS of US manufacturer; MSDS date: 06/24/2010

Content: 1. Silica-Amorphous, precipitated; CAS No: 112926-00-8; 97%
2. Cobalt dichloride; CAS No 7646-79-9; EC No: 231-589-4; >=1%

This substance is on the ECHA candidate list!

Hazard identification:

OSHA hazards: carcinogen, target organ effect, toxic by ingestion, respiratory sensitizer

Target Organ: Thyroid, Heart, Male reproductive system, Blood, Kidney, Pancreas, Lungs

HMIS and NFPA classification: Health Hazard 2

Potential Health Effects:

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: Toxic if swallowed.

Chronic Exposure: IARC 2b-Group 2B: Possibly carcinogenic to humans (cobalt dichloride)

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment



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Disposal information:

Observe all federal, state, and local environmental regulations.....

Transport information:

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods



EUCOM Downstream User responsibility:

add European requirements to complete MSDS information based on EC 1272/2008

Index No	International chemical identification	EC No	CAS No	Classification		Labeling			Specific Conc. Limits; M-factors	Notes
				Hazard Class and Category Code (S)	Hazard Statement Code (s)	Pictogram and Signal Word	Hazard Statement Code(s)	Suppl. Hazard Statement Code(s)		
027-004-00-5	Cobalt Dichloride	231-589-4	7646-79-9	Carc 1B Acute Tox 4 Resp. Sens 1 Skin Sens 1 Aquatic Acute 1 Aquatic Chronic 1	H350 H302 H334 H317 H400 H410	GHS08 GHS07 GHS09 Danger			Carc 1B, H350 C _≥ 0.01 %	1

- H350: May cause cancer <state route of exposure if it is conclusively proven that no other Routes of exposure cause the hazard>
- H302: Harmful if swallowed.
- H317: May cause allergic skin reaction
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.



GHS08/07/09 Pictograms and labels communicating the H statements must be placed on the outside box for movement!

But Not dangerous IAW European regulations for movement of hazardous material!

EUCOM Downstream User responsibility (cont):

add European requirements to complete MSDS information based on EC 1272/2008

Translation into native language of employees is made easy; translation of code explanation and pictogram description is published in 27 languages, i.e. Spanish:

H350: May cause cancer *<state route of exposure if it is conclusively proven that no other Routes of exposure cause the hazard>*; **ES: Puede provocar cáncer *<indíquese la vía de exposición si se ha demostrado concluyentemente que el peligro no se produce por ninguna otra vía>*.**

H302: Harmful if swallowed; **ES: Nocivo en caso de ingestión.**

H317: May cause allergic skin reaction; **ES: Puede provocar una reacción alérgica en la piel.**

H400: Very toxic to aquatic life; **ES: Muy tóxico para los organismos acuáticos.**

H410: Very toxic to aquatic life with long lasting effects; **ES: Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.**



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Sample: Federal Stock Class 6850 -- Silica Gel (cont. 5)

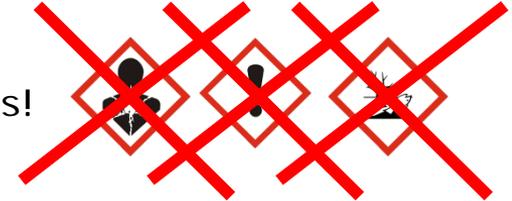
Marking requirements for disposal IAW EC 1272-2008:

If dangerous to the environment ADR 2.2.9.1.10.5 applies. The waste is treated as Dangerous goods!

UN 3077, Waste, Environmentally Hazardous Substance, Solid, N.O.S. (containing Cobalt Dichloride), 9, PG III,



Transport labels on outer box supersede GHS labels!



Precautionary Statements must be labeled onto the outer box!

If unitized: the inner boxes must be labeled also!

H350: May cause cancer *<state route of exposure if it is conclusively proven that no other Routes of exposure cause the hazard>*; **ES: Puede provocar cáncer <indíquese la vía de exposición si se ha demostrado concluyentemente que el peligro no se produce por ninguna otra vía>**.

H302: Harmful if swallowed; **ES: Nocivo en caso de ingestión.**

H317: May cause allergic skin reaction; **ES: Puede provocar una reacción alérgica en la piel.**

H400: Very toxic to aquatic life; **ES: Muy tóxico para los organismos acuáticos.**

H410: Very toxic to aquatic life with long lasting effects; **ES: Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.**



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Conclusion:

- **DOD is not a market player in Europe → Industry is when selling/ supporting DOD in Europe! (free on board delivery)**
 - **DOD privileges cannot be transferred to industry → Enforcement for industry IAW EC/ADR member/GHS member rules**
- **DOD must implement steering mechanisms in line with Treaty Provisions to ensure the DOD supply chain for hazardous material is not disrupted!**
 - **Material is purchased by DLA or GSA in CONUS and delivered to a domestic consolidation point!**
 - **Final destination not transparent to industry!**
 - **Supplier may not operate globally!**
 - **Open Issues:**
 - ❑ **Downstream user duties in the DOD Supply Chain → proper hazard communication**
 - ❑ **Movement control → controlled hazmat to certain countries can only move by military conveyance**
 - ❑ **Employer duties IAW European OSHA**
- **Industry needs to be aware of restrictions for hazmat in Europe**
 - **Industry with EC market experience should assist DOD Supply Chain Management to properly identify substance/articles and preparations which are on the ECHA candidate list.**



Discussion

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