Physical and Health Hazards Cross-Walk for EPCRA Tier II Reporting

EPA developed a cross-walk in coordination with the Occupational Safety and Health Administration (OSHA) to assist facilities in comparing OSHA's original physical and health hazards and the new physical and health hazards adopted from the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). EPA published a final rule on June 13, 2016 (81 FR 38104) to adopt OSHA's new physical and health hazards for facilities to report hazardous chemicals present on-site on the Tier II form. A correction notice was published on July 21, 2016 (81 FR 47311).

Most facilities received the Safety Data Sheets (SDSs) containing the new physical and health hazards with the new shipment of their chemicals. However, EPA was informed that some facilities still have Material Safety Data Sheets (MSDSs) containing OSHA's original physical and health hazards. These facilities did not receive any new shipment of chemicals since OSHA established the June 1, 2015, compliance deadline for manufacturers and importers to develop or modify SDSs for their chemicals with the new physical and health hazards.

This cross-walk may help facilities that have MSDSs with the old physical and health hazards to report their chemicals on the Tier II inventory form or the Tier2 Submit software.

The first column on the cross-walk is OSHA's original physical and health hazards, which EPA consolidated into five physical and health hazard groups (the middle column). Until the 2016 reporting year, all facilities were using these five groups to report on the Tier II inventory form or the Tier2 Submit. The third column is the new physical and health hazards that EPA adopted from OSHA in 2016.

The new physical and health hazards are more descriptive, but basically the same as OSHA's original physical and health hazards. To further assist facilities, EPA used a color scheme to identify hazards with similar descriptions.

For example, if the MSDS for chemical "A" shows that it is a flammable liquid, most likely the SDS for chemical "A" would also show that it is a flammable liquid, but in addition it may show a sub-division (ex: category 1 or 2). For reporting years 2017 and on, the facility may check off flammable (gases, aerosols, liquids, or solids) hazard for chemical "A" on the Tier II inventory form or the Tier2 Submit electronic reporting system. If your facility receives an SDS with any new shipment of chemicals, you should revise the hazards on your Tier II form or the Tier2 Submit software in the following reporting year. You should check with your state for any specific requirements for Tier II revisions.

EPA modified the Tier II inventory form and the Tier2 Submit software with the new physical and health hazards. These are available on our website at:

- https://www.epa.gov/epcra/tier-ii-forms-and-instructions
- https://www.epa.gov/epcra/tier2-submit-software

Facilities should contact their state for any specific reporting requirements. Please see: https://www.epa.gov/epcra/state-tier-ii-reporting-requirements-and-procedures

Cross-Walk: Old and New Physical and Health Hazards

Physical Hazards (OSHA original - prior to adopting GHS in 2012)	**Physical Hazards (Reporting Years 1987 – 2016)** (OSHA's original physical hazards consolidated into three physical hazard categories for EPA use)	**Physical Hazards (Reporting Years 2017 and beyond)** (OSHA's 2012 physical hazards that EPA adopted in 2016)
Combustible liquid	**Fire** - (Flammable; Combustible liquid; Pyrophoric; Oxidizer)	Flammable (gases, aerosols, liquids, or solids)
Flammable		Pyrophoric (liquid or solid)
Oxidizer		Pyrophoric gas
Pyrophoric		Oxidizer (liquid, solid or gas)
Compressed Gas	**Sudden Release of Pressure** – (Explosive; Compressed Gas)	Explosive
Explosive		Gas under pressure
		Combustible Dust
Corrosive	**Reactive – (**Unstable Reactive; Organic Peroxide; Water Reactive)	Self-reactive
Organic Peroxide		Organic Peroxide
Unstable Reactive		Self-heating
Water Reactive		Corrosive to metal
		In contact with water emits flammable gas
		Hazard Not Otherwise Classified (HNOC)
Health Hazards (OSHA original - prior to adopting GHS in 2012)	**Health Hazards (Reporting Years 1987 – 2016)** (OSHA's original health hazards consolidated into two health hazard categories for EPA use)	**Health Hazards Reporting Year 2017 and beyond)** (OSHA's 2012 health hazards that EPA adopted in 2016)
	Health Hazard (Immediate-Acute)	
Highly Toxic	Highly Toxic; Toxic; Irritant; Sensitizer; Corrosives & other hazardous chemicals that cause an adverse effect to a target organ and which effect usually occurs rapidly as a result of a short term exposure and is of short duration**.**	Skin Corrosion or Irritation
Irritant		Acute Toxicity (any route of exposure
Sensitizer		Respiratory or Skin Sensitization
Toxic		Serious eye damage or eye irritation
Eye Hazard		Simple Asphyxiant
Skin Hazard		Aspiration Hazard
	Health Hazard (Delayed-Chronic)	
Kidney Toxin	Carcinogens & other hazardous chemicals that cause an adverse effect to a target organ and which effect generally occurs as a result of long term exposure and is of long duration.	Specific target organ toxicity (single or repeated exposure)
Liver Toxin		Reproductive Toxicity
Lung Toxin		Germ Cell Mutagenicity
Nervous System Toxin		Carcinogenicity