

## UNO CHEMICAL SAFETY MANUAL

### GLOSSARY

**Absorption**

The passing of a substance into the circulatory system of the body. Also used specifically to refer to entry of toxins through the skin.

**Acute Exposure**

An exposure to a toxic substance produced by a single short-term exposure.

**Acute Toxicity**

Any poisonous effect produced by a single short-term exposure. The LD<sub>50</sub> of a substance (the lethal dose at which 50 percent of test animals succumb to the toxicity of the chemicals) is typically used as a measure of its acute toxicity.

**Additive Effect**

A biological response to exposure to multiple chemicals which is equal to the **sum** of the effects of the individual agents.

**Adsorption**

The bonding of chemicals to soil particles or other surfaces.

**Asphyxiant**

Chemicals that starve the cells of an individual from the life-giving oxygen needed to sustain metabolism.

**Authorized User**

Faculty and Staff who during the course of work or studies, use chemicals or hazardous materials, or supervise persons that use chemicals or hazardous materials.

**Biodegradable**

Capable of decomposing quickly through the action of microorganisms.

**Biohazardous Substance**

See Infectious Substance.

**Biomagnification**

The tendency of certain chemicals to become concentrated as they move into and up the food chain.

**Bloodborne Pathogens**

Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

**Carcinogen**

A chemical or physical agent that encourages cells to develop cancer.

**Central Nervous System Depressant**

Toxins that deaden the central nervous system (CNS), diminishing sensation.

**CERCLA**

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 - the Federal statute that authorized "Superfund." Administered by EPA, the law provides funding for cleanups and emergency response actions for hazardous substances at the worst hazardous waste sites in the United States. CERCLA is also significant because it sets the first criteria for notification of emergencies involving hazardous substances. Superfund regulates abandoned waste disposal sites; for **active** disposal site regulation, see RCRA.

**Chemical Collection Container (CCC)**

Any of several containers approved by EHS for storing chemical waste.

**Chemical Collection Tag (CCT)**

A tag developed by EHS to track individual Chemical Collection Containers (CCCs).

**Chemical/Hazardous Material Worker**

An individual at UNO who handles chemicals or hazardous materials.

**CHEMTREC**

Chemical Transportation Emergency Center, a service operated by the Chemical Manufacturers Association to provide information and other assistance to emergency responders.

**Chronic Exposure**

Process by which small amounts of toxic substances are taken into the body over an extended period.

**Corrosive**

A chemical that destroys or irreversibly alters living tissue by direct chemical action at the site of contact.

**Decontamination**

The process of removing or neutralizing contaminants that have accumulated on personnel and equipment. This process is critical to health and safety at hazardous waste incidents.

**Emergency Coordinator**

The person in charge of on-scene coordination of a response to an incident, usually a senior officer in a fire department.

**UNO Emergency Coordinator (EC)**

The UNO person in charge of on-scene coordination of a response to an incident, usually an EHS professional or a senior officer in campus security. The UNO EC will usually yield on-scene

coordination to the fire department, upon their arrival, and assume coordination after initial response, to affect mitigation.

### **Emergency Response Plan (E-Plan)**

The E-Plan outlines the criteria for responding to and mitigating hazardous material emergency incidents, protecting University equipment, protecting the health and safety of University personnel and members of the general public, and protecting the environment.

### **Employee Right-to-Know**

Legislation mandating communicating of chemical information to employees. A regulatory initiative by OSHA, and an antecedent to Community Right-to-Know.

### **Environmental Protection Agency (EPA)**

A federal agency whose primary mission is to protect and enhance our environment.

### **Epidemiology Studies**

Investigation of factors contributing to disease or toxic effects in the general population.

### **Explosive**

A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure, or high temperature.

### **Extremely Hazardous Substance (EHS)**

Any one of over 300 hazardous chemicals on a list compiled by EPA to provide a focus for State and local emergency planning activities.

### **Fate**

The transportation and transformation of a pollutant.

### **Hazard Class**

A group of materials, as designated by the Department of Transportation, that share a common major hazardous property such as radioactivity or flammability.

### **Spill Response Team (SRT)**

A team of specially trained personnel who respond to a hazardous materials incident. The team performs various response actions including assessment, firefighting, rescue, and containment; they are **not** responsible for cleanup operations following the incident.

### **UNMC Spill Response Team (SRT)**

A team of specially trained personnel (from the Chemical and Radiation Safety Office), who respond to a hazardous materials incident at UNO when requested. The team performs various response actions including assessment, rescue, and containment; they will also help mitigate the incident, under the direction of the UNO EC.

### **Infectious Substance**

Infectious substance means any organism (such as a virus or a bacteria) that is capable of being

communicated by invasion and multiplication in body tissues and capable of causing disease or adverse health impacts in humans.

**NOTE:** See UNO/UNMC Biosafety Committee and UNO Bloodborne Pathogen Exposure Control Committee Guidelines.

**Irritant**

Chemicals which inflame living tissue by chemical action at the site of contact, causing pain or swelling.

**LD<sub>50</sub>**

The calculated dosage of a material that would be fatal to 50% of an exposed population (Lethal Dose 50%).

**Leachate**

Material that pollutes water as it seeps through solid waste.

**Leaching**

The process by which water dissolves nutrient chemicals or contaminants and carries them away, or moves them to a lower layer.

**LEPC**

Local Emergency Planning Committee

**Medium**

The environmental vehicle by which a pollutant is carried to the receptor (e.g., air, surface water, soil, or groundwater).

**MSDS (Material Safety Data Sheet)**

A worksheet required by the U.S. Occupational Safety and Health Administration (OSHA) containing information about hazardous chemicals in the workplace. MSDSs are used to fulfill part of the hazardous chemical inventory reporting requirements under the Emergency Planning and Community Right-to-Know Act.

**Mutagen**

A chemical or physical agent that induces a permanent change in the genetic material.

**Nebraska Department of Environmental Quality (NDEQ)**

A state regulatory agency whose primary mission is to protect and enhance the environment within Nebraska.

**Nebraska Department of Labor (NDOL)**

The state regulatory agency given authority to manage and enforce OSHA regulations within Nebraska.

**NOAEL**

No Observable Adverse Effect Level.

**OSHA**

The Occupational Safety and Health Administration, part of the Department of Labor.

**Pathway**

A history of the flow of a pollutant from source to receptor, including qualitative descriptions of emission type, transport, medium, and exposure route.

**PEL**

Permissible Exposure Limits set by OSHA as a guide to acceptable levels of chemical exposure.

**pH**

The pH is a measure of how acidic or caustic a chemical is, based on a scale of 0 to 14. A pH of 0 means the chemical is very acidic. Pure water has a pH of 7. A pH of 14 means the chemical is very caustic. Both acidic and caustic substances are dangerous to skin and other valuable surfaces.

**Poison**

A chemical that, in relatively small amounts, is able to produce injury by chemical action when it comes in contact with a susceptible tissue.

**RCRA**

The Resource Conservation and Recovery Act (of 1976). A Federal statute which establishes a framework for proper management and disposal of all wastes. Generation, transportation, storage, treatment, and disposal of hazardous wastes are all regulated under this Act.

**SARA**

Superfund Amendments and Reauthorization Act of 1986.

**Superfund** See "CERCLA".

**Synergistic Effect**

A biological response to exposure to multiple chemicals which is greater than the sum of the effects of the individual agents.

**Systemic Toxins**

Chemical compounds that affect entire organ systems, often operating far from the original site of entry.

**Teratogen**

A material that produces a physical defect in a developing embryo.

**Threshold**

The lowest dose of a chemical at which a specific measurable effect is observed. Below this dose, the effect is not observed.

**Title III**

The third part of SARA, also known as the Emergency Planning and Community Right-to-Know Act of 1986.

**TLV**

Threshold Limit Values, which are the calculated airborne concentrations of a substance to which all workers could be repeatedly exposed day after day without adverse health effects. (Note: TLVs are not absolutes - due to individual susceptibility).

**Toxicity**

The degree of danger posed by a substance to animal or plant life.

**Transport**

Hydrological, atmospheric, or other physical processes that convey pollutants through and across media from source or receptor.