

# Key Terms - HazCom

TNEC FALL SAFETY SERIES

# Key Chemical Concepts

- **Exposure** - The amount of chemical that is in the air around your body, on surfaces, etc.
- **Dose** – amount that gets into body through routes of entry.
- **Duration** – how much time the worker is exposed to the hazard.
- **Permissible exposure limit (PEL)**- a regulatory limit on the amount or concentration of a substance in the air.
- **Time-weighted average (TWA)**- a method of calculating a worker's daily exposure to hazardous substances. It is averaged to an 8-hour workday or 40-hour week, along with the average levels of exposure to the hazardous substance and the time spent in that area.
- **Short-term exposure limit (STEL)**- the acceptable average exposure over a short period of time, usually 15 minutes as long as the time-weighted average is not exceeded.

# Acute / Chronic Effects

## *Acute Effect:*

- Physiological reaction resulting in serious symptoms that develop rapidly during short-term (acute) exposure to toxic chemicals or substances.
- Symptoms are dangerous and severe but often subside after the exposure stops.

## *Chronic Effect:*

- Adverse health effect resulting from long-term exposure to a substance.
- Can also apply to a persistent (months, years or permanent) adverse health effect resulting from a short-term (acute) exposure.

# Health and Physical Hazards

## *Health hazards:*

- Acute toxicity (any route of exposure)
- Skin corrosion or irritation; serious eye damage or eye irritation
- Respiratory or skin sensitization
- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity (single or repeated exposure)
- Aspiration hazard

## *Physical hazards:*

- Explosive
- Flammable (gases, aerosols, liquids, or solids)
- Oxidizer (liquid, solid or gas); self-reactive
- Pyrophoric (liquid or solid)
- Self-heating
- Organic peroxide
- Corrosive to metal or skin
- Gas under pressure
- Or when in contact with water emits flammable gas

# Routes of Entry

*Route Of Entry May Include:*

- ❑ Inhalation
- ❑ Ingestion
- ❑ Injection
- ❑ Absorption

Skin contact may cause physical or health hazards but is technically not a route of entry.

