Two Types of Chemical Hazards

Physical Hazards	
Flammable Liquids and **Combustible Liquids**	
Any liquid having a flashpoint below 100 deg. F (37.8 deg. C°), except any mixture having components with flashpoints of 100 deg. F° (37.8 deg. C°) or higher, the total of which make up 99 percent or more of the total volume of the mixture	**Examples**: Ethanol, Acetone
Compressed Gases	
There are three major groups of compressed gases stored in cylinders: • Liquefied: gases which can become liquids at normal temperatures when they are inside cylinders under pressure. • Non-liquefied gas: do not become liquid when they are compressed at normal temperatures, even at very high pressures • Dissolved gases: A nonliquefied compressed gas that is dissolved in a solvent.	**Examples:** • Liquefied gas (e.g. Chlorine, propane, anhydrous ammonia) • Non-liquefied gas (e.g. oxygen, nitrogen, helium, argon) • Dissolved gas (e.g., acetylene)
Explosives	
A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature	**Examples**: Nitroglycerin, dry picric acid
Organic peroxides	
An organic peroxide is any organic compound having two oxygen atoms joined (-O-O-). Organic peroxides can be severe fire and explosion hazard.	**Example**: Benzoyl peroxide
Reactives	
A chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature	**Examples**: Alkali metals, some hydrides, phosphorus, sodium
Oxidizers	
A chemical that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases	**Examples**: Potassium permanganate, sodium nitrate, nitrites, chlorates
Pyrophorics	
Pyrophoric materials are substances that ignite instantly upon exposure to oxygen	Examples: Finely divided metal powders, alkyllithiums, white phosphorus

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Health Hazards	
Carcinogens	
A chemical is considered to be a carcinogen if: • it has been evaluated by the International Agency for Research on Cancer (IARC), and found to be a carcinogen or potential carcinogen; or • it is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or, • it is regulated by OSHA as a carcinogen.	**Examples**: Benzene, Carbon tetrachloride
Reproductive Toxins	
Chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis)	**Examples**: Ethylene oxide, lead
Irritants	
A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact	**Examples**: Sodium hydroxide, Potassium hydroxide, Hydrochloric acid
Corrosives	
A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. Corrosives can also damage or even destroy metal.	**Examples**: sulfuric acid, bromine, Acetyl bromide, ammonia, Sulfur chlorides,
Sensitizers	
A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical	**Example**: Formaldehyde (CH_2O), latex, toluene
Hepatotoxin	
Hepatotoxin is a chemical that damages the liver	**Examples**: carbon tetrachloride arsenic, acetylene tetrachloride, Ethylene bromide
Nephrotoxins	
A chemical that damages or destroys the cells and/or tissues of the kidneys	**Example**: Naproxen Sodium (Ibuprofen), sulphonamides, lithium salts Uranium