

## GLOSSARY

### A

**ABSORPTION** - Taking material into the body.

**ABSORPTION** - process of picking up hazardous substance with an absorbent material such as powdered lime, soil, or kitty litter

**ACCIDENT INVESTIGATION** - a plan followed after each accident to determine the causes.

**ACGIH** - American Conference of Governmental Industrial Hygienists: An organization of professional personnel in governmental agencies or educational institutions engaged in occupational safety and health programs. ACGIH develops and publishes recommended occupational exposure limits (SEE TLV) for hundreds of chemical substances and physical agents.

**ACID** - Any chemical with a low pH that in water solution can burn the skin or eyes. (See also pH.)

**ACUTE TOXICITY** - The effects from a single exposure.

**ACUTE EFFECT** - A health effect which develops rapidly. Exposure to carbon monoxide may cause a person to pass out, an acute effect.

**ACUTE DOSE** - One which happens once or over a very short time.

**ADDITIVE EFFECT** - One in which the combined effect of two chemicals is equal to the sum of the agents acting alone.

**ADMINISTRATION CONTROLS** - practices which the employer uses to assure that workers remain healthy. These include training and education and the setting of work schedules.

**ABSORPTION** - When a chemical becomes attached to another material, for example soil.

**AEROSOL** - Liquid or solid particles in the air. Aerosols include dust, mists, fog and fumes.

**ALKALI** - Any chemical with a high pH that in water solution is bitter, more or less irritating, or caustic to the skin. Strong alkalis in solution are corrosive to the skin and mucous membranes. (See also pH.)

**ALVEOLI** - The small air spaces deep in the lung where oxygen goes into the blood.

**ANHYDROUS** - Free from water.

**ANSI - American National Standards Institute**; a privately funded, voluntary membership organization that identifies industrial and public needs for national consensus standards and coordinates development of such standards.

**ANTAGONISM** - The situation in which two chemicals, when given together, interfere with each other's actions, or when one chemical interferes with the action of the other.

**AQUIFER** - The part of the earth containing ground water.

**AQTX** - Aquatic Toxicity.

**ASPHYXIANTS** - A vapor or gas which can cause unconsciousness or death by suffocation (lack of oxygen). Asphyxiation is one of the principal potential Hazards of working in confined spaces.

**ASTM** - American Society for Testing and Materials; voluntary membership organization with members from broad spectrum of individuals, agencies, and industries concerned with materials. The world's largest source of voluntary consensus standards for materials, products, systems, and services. ASTM is a resource for sampling and testing methods, health and safety aspects of materials, safe performance guidelines, effects of physical and biological agents and chemicals.

**AUTONOMIC NERVOUS SYSTEM** - Part of the nervous system that controls most organs and muscles (for example: liver, stomach).

## **B**

**BACKPACK PUMP** - portable hand pumps with tanks worn as backpacks or vests

**BEI - Biologic Exposure Index**. A measure of how much chemical was taken into the body.

**BIOTRANSFORMATION** - When a chemical is changed after being taken in by a living thing.

**BLEVE** - Boiling Liquid Expanding Vapor Explosion. In addition to its technical meaning, this term in common usage means any rupture of a tank of liquid or liquefied compressed gas and includes all vapor explosions. (the technical definition of BLEVE presents the hypothesis that rapid depressurization of a hot, saturated liquid may result in an explosion. The temperature of the hot liquid must be above the superheat limit temperature at one atmosphere, and

the drop in tank pressure must be very liquid. This phenomenon had NOT been observed as the cause of failure of a transportation container).

**BOILING POINT** - Temperature at which a liquid changes to a vapor. Flammable materials with low boiling points generally present special hazards.

**BRAINSTEM** - The part of the brain that controls acts such as swallowing and vomiting.

## **C**

**Ca** - (circa) about.

**CAR** - Carcinogenic effects.

**CARCINOGEN** - A substance which can cause cancer.

**CAS** - Chemical Abstract Service.

**CAS Number** - A unique number assigned to a chemical by the Chemical Abstract Service.

**CATALYST** - A substance that speeds up a chemical reaction but is not itself changed.

**cc** - Cubic centimeter.

**CC** - Closed Cup.

**"C" or CEILING** - The maximum allowable exposure limit for an airborne substance is not to be exceeded during the shift. (C) - Ceiling concentration.

**CENTER FOR DISEASE CONTROL** - federal agency responsible for health activities under the EPA Superfund for cleaning up hazardous wastes. Located in Atlanta, GA offers advice on decontamination and treatment of contaminated victims. Also maintains hot line: (404) 329-3311, 8:00 a.m.. to 5 p.m.. Eastern time and (404) 329-2888, evenings and weekends.

**CEREBELLUM** - The part of the brain that controls muscles.

**CEREBRAL CORTEX** -.The part of the brain that controls visual, hearing, smelling and motor functions.

**CFR - Code of Federal Regulations**. Where you find OSHA and other laws.

**CGI - Combustible Gas Indicator**. Used to measure the concentration of combustible gases or vapors.

**CHEMICAL ANTAGANISM** - (See Inactivation).

**CHEMICAL FAMILY** - A group of chemical with a common general name. Methanol and ethanol are both from the alcohol.

**CHEMTREC** - Chemical Transportation Emergency Center sponsored by the Chemical Manufacturers Association, Washington D.C. Chemtrec assists emergency response teams in identifying hazardous substances involved in transportation incidents: (800) 424-9300.

**CLEAN ZONE** - an area of no contamination  
**Chronic Toxicity** - The effects resulting from many exposures over a period of months or years.

**CHRONIC EFFECT** - A health effect which develops slowly over a long period of time.

**CNS** - Central nervous system - the part of the nervous system protected by the skull and the spinal column.

**CLASS III LIQUIDS** - are subdivided into two subclasses:

Class I C - those having flash points at or above 73°F and below 100°F.

Class I A - those having flash points below 73°F. and having a boiling point below 100 °F.

Class II – Those liquids having flash points at or above 100 F. but below 140°F.

Class III A - Those having flash points at or above 140°F. but below 200°F.

Class III B - Those having flash points at or above 200°F.

**COMBUSTIBLE LIQUIDS** - A term used by NFPA DOT, and' others to classify certain liquids that will burn, on the basis of flash points. Both NFPA and DOT generally define "combustible liquids" as having a flash point of 100F. (37.8°C) or higher. They do not ignite as easily as flammable liquids; however, they can be ignited under certain circumstances, and must be handled with caution.

**CONC.** - Concentration.

**CONCENTRATION** - The amount of one material in another.

**CONFINED SPACE** - any space having a limited exit in which toxic or flammable gases or vapors may build up or where the oxygen content may fall below 19.5%. Confined spaces include but are not limited to storage tanks, process

vessels, bins, boilers, ventilation ducts, sewers, tunnels, open topped spaces more than 4 feet in depth.

**CONTAMINANT** - harmful substance in forms of liquids, solids, vapors, gases, mists or particulates in the air.

**CONTAMINATION REDUCTION ZONE** – the area decontamination takes place.

**CONTROL POINT** - point where workers enter the contaminated area

**CORROSIVE** - A liquid or solid that eats away a material when it touches it.

**CP** - Centipoise viscosity measurement:

**cstk or cStk** - Centistoke, viscosity measurement.

**cu m or m<sup>3</sup>** - Cubic meter.

**Coetaneous Toxicity** - See "Dermal Toxicity".

**CWA** - Clean Water Act.

## D

**DECOMP** - decompose or decomposition.

**DECOMPOSITION** - Breakdown of a material (by heat, chemical reaction, electrolysis, decay, or thermal processes) into smaller parts.

**DECONTAMINATION AREA** - area where hazardous material is removed from personnel, equipment and supplies. This usually involves cleaning and disposal of contaminated clothing and supplies.

**DECONTAMINATION PLAN** - program detailing the decontamination stations, equipment, decontamination and disposal Methods.

**DECONTAMINATION LINE** - a line set up with stations for decontamination procedures between the exclusion zone and the support zone

**DECONTAMINATION OFFICER (DO)** – person in charge of the decontamination process

**DECONTAMINATION** - The chemical and/or physical process of reducing and preventing the spread of contamination from persons and equipment used at a hazardous materials incident.

**DEFENSIVE STRATEGY** - decision made in hazardous materials emergencies such as staying upwind and well back from the hazard, evacuating

surrounding areas as necessary; usually implemented when there is no rescue requirement, the hazardous substance is unknown, or when insufficient personnel and resources are available to control and terminate the incident.

**DEGRADATION** - method of decontamination in which the chemical structure of the hazardous material is altered by mixing with another reactive chemical to lessen the danger of the hazardous material.

**DERMAL** - Used on or applied to the skin.

**DERMAL TOXICITY** - Adverse effects resulting from skin exposure to a substance.

**DERMATITIS** --Redness (or inflammation) of the skin.

**DEVELOPMENT TOXICOLOGY** - The science of adverse effects on humans up to the time of puberty.

**DILUTION** - method of reducing the concentration of a contaminant to a safe level

**DISPOSAL** - The discharge, deposits dumping or placing of any waste to land or water.

**DOSE** - The quantity of a chemical taken into the body.

**DISPOSAL** – decontamination method used for removal of exposed materials which cannot be fully decontaminated

**DOSE RESPONSE** - The relationship between the dose of the chemical and the response in humans or animals.

**DOSE RESPONSE CURVE** - A graph that shows how much of the chemical (dose) causes an observed effect.

**DOT, DEPARTMENT OF TRANSPORTATION** - Regulates shipments of hazardous materials.

**DPS - DISINTEGRATIONS PER SECOND** - a unit of measure relating to the breakdown of a radioactive material.

**DUST** - Solid particles in the air, generated by handling, crushing or grinding

**DYSPNEA** - Shortness of breath.

## **E**

**ED50** The dose which produces the effect (Effective Dose) in 50% of the population.

**EPA** - Environmental Protection Agency.

**EPIDEMIOLOGY** - The science that deals with the study of disease in a population.

**EVAPORATION RATE** - How fast a liquid enters the air when\_ compared with a known material. The evaporation rate can be useful in evaluating the health and fire hazards of a material. The known material is usually normal butyl acetate, with a vaporization rate designated as 1.0. Vaporization rates of other solvents or materials are then classified as:

FAST evaporating if greater than 3.0

MEDIUM evaporating of 0.8 to 3.0

SLOW evaporating if less than 0.8

**EXCLUSION ZONE (HOT ZONE)** –contaminated area

**EXIT POINT** - where workers leave the decontamination area

**EXPOSURE** - The concentration of a material in the air. Usually, exposure is measured near the nose of the worker.

## **E**

**°F** - Temperature Fahrenheit

**FATE** - Transfer and transformation

**FEV** - Forced expiratory volume measure at one second- -test of pulmonary function used for routine-monitoring.

**FLAMMABLE** - A liquid with a flash point below 100 °F. (37.8°F).

**FLAMMABLE LIQUIDS** - designated as: Class I liquids and may be subdivided as follows:

Class I A - those having flash points below 73° F and having a boiling point below 100°F.

Class I B - those having flash points below 73° F and having a boiling point at or above 100° F.

Class I C - those having flash points at or above 73° and below 1000 F

**FLASH POINT** - The temperature at which a liquid will give off enough flammable vapor to burn. There are several flash point test methods, and flash points may vary for the same material depending on the method used, so the test method is indicated when the flash point is given. FR - Federal Register. The 'newspaper' of Congress.

**FULL TERM TWA** - Same as full shift or 8-hour.

**TWA** - Same as full shift or 8-hour.

**FVC** - Forced vital capacity test of pulmonary function used for routine monitoring.

**FY** - Fiscal Year.

## G

**g or gm** - gram; a metric unit of weight. One US. ounce is about 28.4 grams.

**g/kg** - grams per kilogram; an expression of dose used in oral and dermal toxicology testing to indicate the grams of substance dosed per kilogram of animal body weight . Also see 'kg' (kilogram). More commonly mg/kg.

**G.I. or GI** - Refers to the stomach or other organs active in digesting (Gastrointestinal).

**GENERAL EXHAUST** - A system for taking air containing contaminants from a general work area. Also see local exhaust.

**GENERIC NAME** - The name used to identify a material. regardless of which company manufactures it. For example, crank case oil.

## H

**H or Hr(s)** - Hour(s).

**HAZARD COMMUNICATION PROGRAM** - training program required of some industries to inform employees of hazards at the work site.

**HAZARDS** - the inherent characteristics of a material that may cause incapacitation. Injury or mortality by contact, inhalation, or ingestion.

**HAZARDOUS MATERIALS** - Any substance capable of producing unwanted effects on health or safety.

**HAZARDOUS WASTE** - A legal term. (To be considered hazardous, a waste must be on the list of specific hazardous waste streams or chemicals, or else it must exhibit one or more of certain specific characteristics including



ignitability, corrosivity, reactivity, and toxicity. The definition excludes household waste, agricultural waste returned to the soil, and mining overburden returned to the mine site. It also excludes all wastewater returned directly or indirectly to surface waters. However, hazardous waste may physically be in the liquid state.)

**HEAVY METALS** - The major toxic metals.

**HEMATOTOXIN** - Toxic to the blood or organs where the blood is made.

**HEPATOTOXIN** - Toxic to the liver.

**HW** - Hazardous Waste under RCRA.

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**I** - Intermittent.

**IARC** - International Agency for Research on Cancer.

**ICS** - Incident Command System. The unit which manages response to an emergency.

**IDLH** - Immediately Dangerous to Life and Health. Any condition which may result in damage to health which cannot be repaired, IDLH situations include explosive and oxygen deficient environments and the presence of Class A poisons or substances which can be absorbed through the skin

**IMO** - International Maritime Organization.

**IMPERVIOUS** - Something a chemical cannot go through. Frequently used to describe gloves.

**IN SITU** - In the natural or normal place.

**IN VITRO** - Not in a whole animal.

**IN VIVO** - Within a living animal.

**INACTIVATION** - A reaction between two chemicals to produce a less toxic product.

**INCIDENT COMMANDER** - person in charge of on-site management of all activities at a hazardous materials emergency.

**INCOMPATIBLE** - Materials which could cause dangerous reactions from direct contact with one another.

**INDUSTRIAL HYGIENIST** - person with special training and experience in hazardous substances and actions taken to eliminate the substances or reduce their effects.

**INGESTION** - Taking a substance in through the mouth.

**INHALATION** - Breathing in a substance in the form of a gas, vapor, fume, mist, or dust through the mouth or nose.

**INHIBITOR** - A chemical which is added to another substance to prevent an unwanted chemical change from occurring.

**INHL** - Inhalation.

**INSOL** - Insoluble.

**IRRITANT** - When a substance touches the eye, skin or respiratory system and causes it to get red (inflammatory response).

**ISOLATION** - method of decontamination in which contaminated equipment and materials are bagged or covered and set aside, usually for subsequent shipment to an approved landfill for disposal.

## J

**J** - Joule.

## K

**kg** - Kilogram; a metric unit of weight, about 2.2 US. pounds.

## L

**L** - Liter.

**LATENCY** - The time interval between exposure and the development of a disease.

**LC50** - Lethal Concentration to 50% of those tested.

**LCLO** - Lowest published Lethal Concentration.

**LD50** - Lethal Dose to 50% of those tested.

**LDLO** - Lowest published lethal dose

**LEL, or LFL** - Lower Explosive Limit or Lower Flammable Limit of a vapor or gas; the lowest concentration (lowest percentage of the substance in air) that will

produce a flash of fire when an ignition source (heat, arc, or flame) is present. At concentrations lower than the LEL, the mixture is too 'lean' to burn. Also see 'UEL'.

**LETHAL** - Can cause death.

**LFM** - Linear Feet per minute

**LOAEL** - "The Lowest-Observed-Adverse - Effect -Level", the lowest dose which produces an observable adverse effect.

**LOCAL EXHAUST** - A system for capturing and exhausting contaminants from the air at the point where the contaminants are Produced. Also see "general exhaust".

**LOCAL INFORMATION TEAM** - group of experts organized for the jurisdiction to provide assistance and advice at hazardous materials incidents; may include industrial hygienists, waste water management personnel, medic personnel, manufacturing specialists, scientists academic settings, and public health personnel.

**LDLO** - Lowest published Lethal Dose.

**LEACHATE** - Liquid released into soil from a land disposal facility. Leachate is generated when water enters a landfill, migrates through it picking up soluble materials, and seeps into the soil.

## **M**

**M** - Meter.

**M min** - Minute.

**M3** - Cubic Meter

**MATRIX CONTAMINATION** - situation where chemicals absorbed in the fabric of ppm continue to permeate the ppe and diffuse toward the inside, even after surface decon procedures have been carried out.

**MEDICAL SURVEILLANCE** - a program to monitor the health of workers. This may include a preplacement exam before the job assignment is made, routine examinations conducted at specified time intervals and special exam required because of unusual exposures.

**MELTING POINT** - The temperature at which a solid substance changes to a liquid state. For mixtures the melting range may be given.

**METABOLISM** - The chemical reactions that go in the body to maintain life.

**mg** - Milligram.

**mg/kg** - Milligrams per kilogram. See also g/kg.

**mg/m<sup>3</sup>** - Milligrams per cubic meter.

**MITIGATION** - actions to stop a release

**ml** - Millimeter.

**mm** - Millions of particles per foot of air, a measure of dust in the air.

**MPPCF** - Millions of particles per foot of air, a measure of dust in the air

**mm Hg** - Millimeters of Mercury.

**MONITORING** - Measuring concentrations of substances in the work place.

**MORBIDITY** - Non-fatal disease from an exposure.

**MORTALITY** - Death from an exposure.

**MOS** - Margin of Safety.

**MSDS** - Material Safety Data Sheet.

**MUTAGENS** - A substance which can change the genetic material In a living cell.

**MW** - Molecular weight.

## **N**

**n** - Normal.

**N/A or NA** - Not Applicable. NCI – National Cancer Institute.

**NEL** - The no-effect level.

**NEO** - Neoplastic effects. N/O or ND – Not Determine.

**MEPHROTOXIM** - Toxic to the kidney.

**NEUROTOXIN** - Toxic to the brain and nerves.

**NFPA** - National Fire Protection Association produces many standards, including four color diamond used on labels to indicate hazard. Health, fire, and reactivity hazards are rated from 0 (none) to 4 (extreme). The Health rating is in the blue section, Fire in red and Reactivity in yellow. A white

section is reserved for other Specific Hazards (for example, radiation, do not use water on fire).

**Ng** - Nanogram.

**NIOSH** - National Institute for Occupational Safety and Health.

**NOAEL** - No Observed Adverse Effect Level.

**NOx** - Oxides of Nitrogen.

**NTIS** - National Technical Information Service.

**NTP** - National Toxicology Program.

## O

**OLFACTORY** - Relating to the nose or sense of smell.

**ORAL TOXICITY** - Adverse effects resulting from taking a substance into the body through the mouth.

**ORAL** - Taken into the body through the mouth.

**ORM** - Other Regulated Material.

**OSHA** - Occupational Safety and Health Administration.

**OXIDATION** - A reaction in which a substance combines with oxygen the oxygen is provided by an oxidizer or oxidizing agent. A more general definition is a reaction transferring electrons from the substance to other agents, including fluorine, chlorine, etc..

**OXIDIZER** - A substance that gives up oxygen readily to stimulate the combustion of organic matter.

## P

**PEL** - Permissible Exposure Limit (OSHA). The most a person can be exposed to.

**PPM** - Parts per million.

**PPB** - Parts per billion (1,000 million).

**PPT** - Parts per trillion

**PERCENT VOLATILE** - Percent volatile by volume; the percentage of liquid or solid (by volume) that will evaporate at an ambient temperature of 70°F. (Unless some other temperature is stated).

**PERCATANEOUS ABSORPTION** – Absorption Into the skin.

**PERMEATION** - process by which a chemical dissolves in or move through a protective clothing material on a molecular level.

**PESTICIDE** - A chemical that kills pests.

**PH** - Applies to liquids: pH less than 7 is an acid; pH=7 is neutral; pH greater than 7 is caustic (alkali).

**PHYSICAL AGENT** - Heat, noise, radiation vibration.

**POLYMERIZATION** - A chemical reaction in which one or more small molecules combine to form larger molecules.

**POROUS** - any substance capable of being permeated by a chemical such as wood, leather, and fabric.

**POTENTIATION** - The effect of a non-toxic or relatively non-toxic substance increasing the effect of another toxic substance.

**PO<sub>x</sub>** - Oxides of Phosphorus.

**PREVALENCE** - The number of cases of disease in a population at a specific.

**PUL** - Pulmonary systems effects.

**PULMONARY TOXIN** - Toxic to the lungs..

## **R**

**RAD** - A measure of radiation energy absorbed by the body.

**RCRA** - Resources, Conservation and Recovery Act.

**REACTION** - The chemical change in two or more substances to form a new substance.

**REACTIVITY** - A description of the tendency of a substance to undergo chemical reaction with the release of energy. Undesirable effects-such as pressure Buildup, temperature increase, formation of noxious, toxic or corrosive by-products may occur because of the reactivity of a substance to heating, burning, direct contact with other materials, or other conditions in use or in storage

**REM** - A measure of radiation dose from Roentgen Equivalent Man.

**RENAL** - Pertaining to the kidney.

**RISK** - exposure to the chance of injury or loss.

**RISK CHARACTERIZATION** - The exposure assessment and the dose-response assessment are combined to estimate some measure of the risk of developmental toxicity. As part of risk characterization, a summary of the strengths and weaknesses in each component of the assessment are presented along with major assumptions, scientific judgments, and to the extent possible, estimates of the uncertainties.

**ROENTGEN** - A measure of the charge produced as the rays pass through air.

**ROUTE OF ENTRY** - How material gets into body - inhale, ingest, skin (dermal), eye.

**RQ** - Reportable Quantity.

**RV** - Residual volume- -the amount of air remaining in the lung after maximum expiratory effort.

## **S**

**SCBA** - Self-contained breathing apparatus.

**SEGREGATED EQUIPMENT DROP** - a location identified before the control point where contaminated tools and equipment are left to be picked up for re-use when re-entering the exclusion (hot) zone, or for subsequent disposal.

**SENSITIZER** - A substance which on first exposure causes little or no reaction but which on repeated exposure may cause a marked response not necessarily at the contact site. Skin sensitization is the most common form of sensitization in the industrial setting.

**SIC** - Standard Industrial Classification.

**SITE SAFETY PLAN** - the overall plan developed by the employer to ensure worker protection at a hazardous waste site. Parts include the list of who is in charge of each activity, safety procedures, employee training requirements, methods to control site entry, and monitoring procedures.

**SKIN** - A notation, sometimes, used with PEL or TLV exposure limit; indicates that the stated substance may also be absorbed by the skin.

**SKN** - Skin effects.

**SOLN** - Solution.

**SOLUBILITY IN WATER** - A measure of how much of a material will dissolve in water.

**SOP** - Standard Operating Procedures

**SO<sub>x</sub>** - oxides of Sulfur.

**SPECIALLY DESIGNATED LANDFILL** – a disposal area which offers complete, long term protection for the quality of surface and sub-surface waters from hazardous wastes, and against hazard to the public and environment.

**SPECIES** - A biological type; on MSDS's, species refers to the test animals-usually rats, mice, or rabbits-which were used to obtain the toxicity test data reported.

**SPECIFIC GRAVITY** - The weight of a material compared to the weight of an equal volume of water; an expression of the density (or heaviness) of the material. Example: If a volume of a material weighs 8 pounds, and an equal volume of water weighs 10 pounds, the material is said to have a specific gravity of 0.8: Insoluble materials with specific gravity of less than 1.0 will float in water. Insoluble materials with most specific gravity greater than 1.0 will sink in water. Most (but not all) flammable liquids have a specific gravity less than 1.0 and, If not soluble, will float on water. This is an important consideration for fire suppression.

**SSO** - Site Safety officer

**STABILITY** - An expression of the ability of a material to remain unchanged. For MSDS purposes, a material is stable if it remains in the same form under expected and reasonable conditions of storage or use. Conditions which may cause instability (dangerous change) are stated. Examples are temperatures above 150°F., shock from dropping.

**STEL** - Short Term Exposure limit (ACGIH).

**SYNERGISTIC EFFECT** - A combined effect of two or more substances which is greater than the sum of the effect of each.

**SYNONYM** - Another name or names by which a material is known. Methyl alcohol, for example, is also known as methanol, or wood alcohol. All have the same CAS number.

**SYS** - Systemic effects.

**SYSTEMIC** - Relating to whole body, rather than its individual parts.



## I

**TCC** - Tag Closed Cup.

**TCLo** - Lowest published Toxic Concentration.

**TDL<sub>o</sub>** - Lowest published Toxic Dose.

**TEMP** - Temperature

**TER** - Teratogenic effects.

**TERATOGEN** - A substance or agent to which exposure of a pregnant female can result in changes in the fetus.

**THRESHOLD** - The lowest dose or exposure to a chemical at which a specific effect is observed.

**TLV** - Threshold Limit Value; a term used by ACGIH to express the airborne concentration of a material to which nearly all persons can be exposed day after day, without adverse effects in most individuals. ACGIH expresses TLV's in three ways:

**TLV-TWA** - The allowable Time Weighted Average concentration for a normal 8-hour workday.

**TLV-STEL**: The Short- Term Exposure Limit, or maximum concentration for a continuous 15- minute exposure period (maximum of four such periods per day, with at least 60 minutes between exposure periods, and provided that the daily TLV-TWA is not exceeded).

**TLV-C**: The Ceiling exposure limit of the concentration that should not be exceeded during any part of the working exposure - a 15- minute period- except for those substances which may cause immediate irritation.

**TOC** - Tag open cup.

**Torr** - mm Hg pressure.

**TOXICITY** - The adverse effects from exposure.

**TRADE NAME** - The trademark name or commercial trade name for a material.

**TRANSFORMATION** - The chemical alteration on a compound by processes such as biodegradation, hydrolysis, photo degradation, reaction with other compounds, etc..

**TSCA** - Toxic Substances Control Act.

**TUMORIGENICITY** - The ability of a cell to produce a tumor.

**TWA** - Time Weighted Average.

## U

**UEL or UFL** - Upper Explosive Limit or Upper Flammable Limit of a vapor or gas, the highest concentration (highest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, arc, or flame) is present. At higher concentration, the mixture is too 'rich' to burn. Also see LEL

**UG** - Microgram

**UN NUMBER** - United Nations Identification Number. A number used internationally throughout the world to identify a hazardous material.

**UNSTABLE** - Tending to undergo unwanted chemical changes during normal handling or storage. Material heavier than air have vapor densities greater than 1.0. All vapor and gases will mix with air, but the lighter material will tend to rise and mix (unless confined). Heavier vapor and gases are likely to concentrate in low places - along or under floor, in sumps, sewers, and manholes, trenches and ditches, where they may create fire or health hazard.

## V

**VAPOR** - Gaseous form of a substance normally in the liquid or solid state at room temperature.

**VAPOR PRESSURE** - Indicate the tendency of a liquid to evaporate into the air. The pressure exerted by a saturated vapor above it. Own liquid in a closed container. When quality control tests are performed on product, the test temperature is usually 100 F. and the vapor pressure is expressed as a pound per square inch (psig or psia) - but vapor pressures reported on MSDS's are in millimeter of mercury (mmHg) at 68°F (20°C) unless stated otherwise. Three facts are important to remember: 1. Vapor pressure of a substance at 100°F. will always be higher than the vapor pressure of the substance at 68°F.

**VENTILATION** See "general exhausts" and "local exhausts".

**VOLATILE** - % Volatile - Percent volatile by volume; the percentage of a liquid or solid (by volume) that will evaporate at an ambient temperature of 70°F. (Unless some other temperature is stated).

## W

**W**- Week

**WIPE SAMPLING** - possible contamination is determined by wiping a surface with a cloth or paper material and analyzing it in the laboratory for the presence of hazardous material..

**Y**

**Y**- Year

**Misc.**

**>**- Greater than.

**<**- Less than