

	Glossary of MSDS Terms	Effective:	23 January, 2006
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Policy and Procedure document

1. Purpose:

1.1 The purpose of this Document is to provide information on the meaning of various terms that may be detailed on various MSDS sheets, accompanying hazardous material products.

2. Scope:

2.1. This document is intended to be helpful in understanding various terms as used in MSDS sheets. To aid in understanding the dangers of using these hazardous products and emphasize the need for care to be taken when using them.

3. Terms

Terms Beginning with A

ACGIH---American Conference of Governmental Industrial Hygienists, Inc.: 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.

Acute Toxicity---The adverse (acute) effects resulting from a single dose of, or exposure to, a substance. Ordinarily this is a term used to denote effects in experimental animals.

Alopecia---Loss of hair.

Analgesia---Loss of sensitivity to pain.

Anesthesia---Loss of sensation or feeling.

Anhydride---An oxide or compound that, when combined with water, gives an acid or base.

Anhydrous---Free of water.

Anorexia---Loss of appetite.

Anosmia---Loss of the sense of smell.

Anoxia---A lack of oxygen from inspired air (literally without oxygen). See Hypoxia.

Aqueous---A water-based solution.

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Asphyxia---Lack of oxygen and thus interference with the oxygenation of the blood. Can lead to unconsciousness.

Asphyxiant---A vapor or gas that can cause unconsciousness or death by suffocation (lack of oxygen). Most simple asphyxiants are harmful to the body only when they become so concentrated that they reduce oxygen in the air (normally about 21%) to dangerous levels (18% or lower). Asphyxiation is one of the principal potential hazards of working in confined spaces.

Asphyxiation---A condition that causes asphyxia; suffocation.

Asthma---A disease characterized by recurrent attacks of dyspnea, wheezing, and perhaps coughing due to spasmodic contraction of the bronchioles.

Asymptomatic---Neither causing nor exhibiting symptoms.

Ataxia---A loss of muscular coordination.

Atrophy---A wasting or diminution in the size of tissues, organs, or the entire body.

Autoignition Temperature---The minimum temperature to which a substance must be heated without application of a flame or spark in order to cause that substance to ignite.

Terms Beginning with B

BEI---Biological Exposure Indices: reference values for chemicals which may be identified in blood, urine or exhaled air intended to be used as guidelines for evaluation of potential health hazards by industrial hygienists.

Bradycardia---A slow heartbeat. Pulse rate below 60.

Bronchitis---Inflammation of the bronchial tubes in the lungs.

Terms Beginning with C

Carcinogen---A substance determined to be cancer-producing or potentially cancer-producing by OSHA, the International Agency for Research on Cancer, or the National Toxicology Program.

Carcinoma---A malignant tumor or cancer; a new growth made up of epithelial cells, tending to infiltrate other tissue and give rise to metastases.

Cataract---A loss of transparency of the lens of the eye or of its capsule.

Chronic Health Effect---An adverse health effect with symptoms that develop slowly over a long period of time or that recur frequently.

Chronic---Lasting a long time, or recurring.

Combustible---A term used by NFPA, DOT, and others to classify certain liquids that will burn, on a basis of flash points. Both NFPA and DOT generally define combustible liquids as having a flash point of 100°F (37.8°C) or higher. See also Flammable. Non-liquid substances such as wood and paper are classified as ordinary combustibles by NFPA.

Conjunctivitis---Inflammation of the conjunctiva, the delicate membrane that lines the eyelids and covers the eyeballs.

Corrosive---A chemical that has a pH less than 2, or greater than 12.5 or that causes visible

destruction of, or irreversible alternations in, living tissue by chemical action at the site of contact; or in the case of leakage from its packaging, a liquid that has a severe corrosion rate on steel. A solid or liquid waste that exhibits a "characteristic of corrosivity," as defined by RCRA, may be regulated (by EPA) as a hazardous waste.

Cutaneous---Pertaining to the skin.

Cyanosis---A dark purplish coloration of the skin and the mucous membrane due to the deficient oxygenation of the blood.

Terms Beginning with D

Decomposition---Breakdown of a material or substance (by heat, chemical reaction, electrolysis, decay, or other processes) into parts or elements or simpler compounds.

Dermal---Used on or applied to the skin.

Dermal Toxicity---Adverse effects resulting from the skin's exposure to a substance.

Dermatitis---Inflammation of the skin.

Diaphoresis---Perspiration.

Dyspnea---A sense of difficulty in breathing; shortness of breath.

Terms Beginning with E

Edema---An abnormal accumulation of fluid in the tissues.

Electrolyte---Any substance that conducts an electric current in solution.

Embolism---Obstruction of a blood vessel by a transported clot, a mass of bacteria, or other foreign material.

Emphysema---A disease of the lungs in which the air sacs become distended and lose elasticity.

Epistaxis---Nosebleed; hemorrhage from the nose.

Evaporation Rate---The rate at which a particular material will vaporize (evaporate) when compared to the rate of vaporization of a known material. The known material is usually normal butyl acetate (NBUAC or n-BuAc), 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 if 0.8 to 3.0. SLOW evaporating if less than 0.8.

Explosive---A material that can undergo a rapid violent change such as a sudden, almost instantaneous release of pressure, gas, and heat.

Terms Beginning with F

Fibrosis---Formation of fibrous tissue, as in a reparative or reactive process, in excess of amounts normally present.

Flammable---Describes any solid, liquid, vapor, or gas that will ignite easily and burn rapidly. A

flammable liquid is defined by NFPA and DOT as a liquid with a flash point below 100°F (37.8°C).

Flammable Aerosol---An aerosol that yields a flame projection of 18 inches at the full valve opening, or a flashback at any degree of valve opening when tested per 16 CFR 1500.45.

Flammable Solids---Solids that will ignite readily or are liable to cause fires under ordinary conditions or transportation through friction or retained heat from manufacturing or processing, and that burn so vigorously and persistently as to create a serious transportation hazard, are classified by DOT as Flammable Solids. See also Combustible.

Flammable Limits---The minimum and maximum concentrations of a flammable gas or vapor between which ignition can occur. Concentrations below the lower flammable limit (LFL) are too lean to burn, while concentrations above the upper flammable limit (UFL) are too rich. All concentrations between LFL and UFL are in the flammable range, and special precautions are needed to prevent ignition or explosion.

Flash Point---Lowest temperature at which a flammable liquid gives off sufficient vapors to form a flammable mixture with air.

Terms Beginning with G

Gangrene---Death of tissue combined with putrefaction.

Gastroenteritis---Inflammation of the stomach and intestines.

Gingivitis---Inflammation of the gums.

Terms Beginning with H

Hematuria---The presence of blood in the urine.

Hepatic---Pertaining to the liver.

Highly Toxic---Having (a) an LD50 of 50 mg/kg or less when administered to albino rats weighing 200-300 grams each, (b) an LD50 of 200 mg/kg or less when administered by continuous contact for 24 hours with the bare skin of albino rabbits weighing 2-3 kilograms, or (c) an LC50 in air of 200 ppm or less (gas or vapor) or 2 mg/l or less (mist, fume, or dust) when administered by continuous inhalation for one hour to albino rats weighing 200-300 grams each.

Hygroscopic---Readily absorbs moisture.

Hyperbolic---Describing rocket fuel or propellant that consists of combinations of fuels and oxidizers that ignite spontaneously on contact.

Hypoxia---Insufficient oxygen, especially applied to body cells.

Terms Beginning with I

IDLH---Immediately Dangerous to Life and Health- means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Inflammation---A series of reactions produced in the tissues by an irritant, injury, or infection

characterized by redness and swelling caused by an influx of blood and fluids.

Ingestion---The taking in of a substance through the mouth.

Inhalation---The breathing in of a substance in the form of a gas, vapor, fume, mist, or dust.

Iridocyclitis---Inflammation of both iris and ciliary body.

Irritant---A chemical that causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Terms Beginning with J

Jaundice---Yellowish discoloration of tissues (skin), whites of eyes (sclerae), and bodily fluids with bile pigment (bilirubin) caused by any of several pathological conditions that interrupt liver function.

Terms Beginning with K

Ketosis---The condition marked by excessive production or accumulation of ketone bodies in the body.

Terms Beginning with L

Lacrimation---Secretion and discharge of tears.

LC50---Lethal Concentration 50: The concentration of a material in air that, on the basis of laboratory tests, is expected to kill 50% of a group of test animals when administered as a single exposure (usually 1 or 4 hours). The LC50 is expressed as parts of material per million parts of air, by volume (ppm) for gases and vapors, or as micrograms of material per liter of air ($\mu\text{g/L}$) or milligrams of material per cubic meter of air (mg/m^3) for dusts and mists, as well as for gases and vapors.

LD50---Lethal Dose 50: A single dose of a material that, on the basis of laboratory tests, is expected to kill 50% of a group of test animals. The LD50 dose is usually expressed as milligrams or grams of material per kilogram of animal weight (mg/kg or g/kg).

Lesion---Abnormal change, injury, or damage to tissue or to an organ.

Leukemia---A progressive, malignant disease of the blood-forming organs.

Terms Beginning with M

Malaise---A feeling of general discomfort, distress, or uneasiness; an out-of-sorts feeling.

Mutagen---A chemical or physical agent that induces genetic mutations.

Terms Beginning with N

Narcosis---Stupor or unconsciousness produced by a narcotic drug.

Nausea---Tendency to vomit, feeling of sickness at the stomach.

Necrosis---Local death of tissue.

Neoplasm---A new or abnormal growth of tissue in which the growth is uncontrolled and progressive.

Nystagmus---Spastic, involuntary motion of the eyeballs in a horizontal, rotary, or vertical direction.

Terms Beginning with O

Oliguria---Scanty or low volume of urine.

Oxidation---A reaction in which a substance combines with oxygen or a reaction in which electrons are transferred (as in an oxidation-reduction reaction).

Terms Beginning with P

Palpitation---Irregular, rapid heartbeat.

PEL---Permissible Exposure Limit: An exposure limit established by OSHA. May be a time-weighted average (TWA) limit or a maximum concentration exposure limit.

pH---The value that represents the acidity or alkalinity of an aqueous solution. Pure water has a pH of 7. The strongest acids have an excess of H⁺ and OH⁻ ions. For example, the strongest acids have an excess of H⁺ ions and a pH of 1 to 3 (HCl, pH=1). The strongest bases have an excess of OH⁻ ions and a pH of 11 to 13 (NaOH, pH = 12).

Phlegm---Thick mucous from the respiratory passages.

Pneumoconiosis---The accumulation of dust in the lungs and the tissue reaction to its presence.

Polymerization---A chemical reaction in which one or more small molecules combine to form larger molecules. A hazardous polymerization is such a reaction that takes place at a rate that releases large amounts of energy.

Prostration---Physical exhaustion and incapacitation.

Pulmonary Edema---Fluid in the lungs.

Terms Beginning with Q

No entries

Terms Beginning with R

Respiratory System---The lungs and air passages (trachea or "windpipe", larynx, mouth, and nose), as well as the associated nervous and circulatory supply.

Terms Beginning with S

Sclerae---The tough, white, fibrous covering of the eyeball.

Sensitization---An immune response in which initial exposure causes little or no response but subsequent exposure elicits elevated response due to an immune or allergic response.

Sensitizer---A substance that, on first exposure, causes little or no reaction in man or test animals, but which on repeated exposure may cause a marked response not necessarily limited to the contact site. Skin sensitization is the most common form of sensitization in the industrial setting, although respiratory sensitization to a few chemicals is also known to occur.

"Skin"---Notation used to indicate possible significant contribution to overall exposure to a chemical by way of absorption through the skin, mucous membranes, and eyes by direct or airborne contact.

Spasm---An involuntary, convulsive muscular contraction.

STEL---Short-Term Exposure Limit: ACGIH terminology. See TLV-STEL.

Stupor---Partial or nearly complete unconsciousness.

Subcutaneous---Beneath the skin.

Systemic---Affecting the entire body.

Terms Beginning with T

Tachycardia---Excessively rapid heartbeat. Pulse rate above 100.

Target Organ Effects---Chemically caused effects upon organs and systems such as the liver, kidneys, nervous system, lungs, skin, and eyes from exposure to a material.

Teratogen---An agent or substance that causes physical defects in the developing embryo.

Tinnitus---A ringing sound in the ears.

TLV---Threshold Limit Value: A term used by ACGIH to express the airborne exposure level to a chemical or physical hazard to which nearly all persons can be exposed day after day without adverse effects. ACGIH expresses TLVs in three ways:

TLV-TWA: The allowable Time-Weighted Average level for a normal 8-hour workday or 40-hour week.

TLV-STEL: The Short-Term Exposure Limit or maximum level 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 - the level that should not be exceeded during any part of the working exposure.

Toxic--Having (a) an LD50 of 50-500 mg/kg when administered orally to albino rats weighing 200-300 grams each, (b) an LD50 of 200-1000 mg/kg when administered by continuous contact for 24 hours with the bare skin of albino rabbits weighing 2-3 kilograms each, or (c) an LC50 of 200-2000 ppm (gas or vapor) or 2-20 mg/1 (mist, fume or dust) when administered by continuous inhalation for one hour to albino rats weighing 200-300 grams each.

Terms Beginning with U

Urticaria---Nettle-rash; hives; elevated, itching, white patches.

Terms Beginning with V

Vertigo---A feeling of revolving in space; dizziness, giddiness.

Viscosity---The internal resistance to flow exhibited by a fluid.

Terms Beginning with W, X, Y, Z

No entries