



Right to Know Hazardous Substance Fact Sheet

DESCRIPTION OF A HAZARDOUS SUBSTANCE FACT SHEET (New Format)

A hazardous substance is a chemical that can be dangerous to your health or is a physical hazard such as a flammable or reactive substance. A substance can be dangerous to a person's health depending on the length of time of exposure, the amount of chemical to which the person is exposed, the way the chemical enters the body (through the skin, by breathing it in or by accidentally getting it into the mouth), and the hazardous properties of the substance.

Hazardous Substance Fact Sheets are written only for pure substances. Hazardous chemicals in pure form may have different health effects than the same substance in a mixture. A chemical's concentration and the presence of other substances (such as water or solvents) should be considered when evaluating the hazards of a mixture. A manufacturer's Material Safety Data Sheet may give helpful information on the hazardous substances contained in a mixture and the health hazards of the mixture.

Hazardous Substance Fact Sheets are primarily prepared for workers and emergency responders who handle a specific substance. Health care providers and community residents may also find the information helpful.

Common Name:

This is the common chemical name for the hazardous substance. It is not a trade name.

Synonyms:

This section lists other names which are commonly used for this substance.

Chemical Name:

This is the scientific name of the substance assigned by the Chemical Abstracts Service (CAS).

Date:

This is the date of the previous version of the Fact Sheet.

Revision:

This is the most recent date that the Fact Sheet was revised.

Description and Use:

This section lists the physical characteristics of the substance, such as solid or liquid, color, and odor, along with its major uses. If applicable, the odor threshold for the chemical is given.

Reason For Citation:

This section specifies why this substance is on the New Jersey Right to Know Hazardous Substance

List by listing those agencies and organizations that consider the chemical to be hazardous. This section also states if a substance is on the Special Health Hazard Substance List.

First Aid:

This section lists first aid procedures for exposures involving eye contact, skin contact, and inhalation. Helpful emergency numbers are also listed.

CAS Number:

This is the unique number assigned to every chemical by the Chemical Abstracts Service (CAS) of the American Chemical Society.

RTK Substance Number:

This is a number assigned by the New Jersey Department of Health and Senior Services to this substance.

DOT Number:

This four-digit number is assigned to a substance by the United States Department of Transportation (DOT). United Nations and North American DOT classification systems are designated by the symbols UN and NA.

Hazard Summary:

The box contains hazard ratings (0 to 4) assigned by the New Jersey Department of Health and Senior Services and the National Fire Protection Association. It also states important health, fire and safety information about the substance.

The hazard summary section below the box describes the possible routes of entry of the chemical into the body and the major health effects that may result from exposure. Important safety information may also be listed.

Workplace Exposure Limits:

When applicable, this section includes legally enforceable airborne Permissible Exposure Limits (from OSHA), recommended airborne exposure limits (from NIOSH or ACGIH), and additional warnings when the chemical is a Carcinogen, Mutagen or Teratogen.

Determining Your Exposure:

Federal and state laws give workers the right to obtain information on hazardous substances. This section details where to obtain health and safety information and describes employee rights under the New Jersey Right to Know Act and the federal OSHA and New Jersey PEOSHA Hazard Communication Standards.

Health Hazard Information:

This section contains a description of the acute (immediate) and chronic (long-term) health effects of the chemical, including whether it causes cancer or birth defects.

Acute Health Effects:

Acute health effects are short term health effects which occur immediately or shortly after exposure to the substance and, in some cases, could cause permanent injury.

Chronic Health Effects:

Chronic or long-term health effects are delayed responses from exposure to the substance. Adverse health effects may not occur for many years.

Medical:

This section provides recommendations on medical testing and evaluation for health care providers. An individual review of the patient and the exposure may indicate that no testing or additional testing is needed. The consequences of being exposed to this substance along with other hazardous substances are mentioned. Medical conditions which may be aggravated by exposure to this substance are also included when applicable.

Workplace Controls And Practices:

This section recommends general workplace practices and good hygiene techniques to reduce exposure. Workplace practices specific to the hazardous substance may also be listed.

Personal Protective Equipment:

Recommendations for appropriate eye protection, gloves, protective clothing and respiratory protection equipment are listed.

Fire Hazards:

This section includes important information for anyone who is responsible for firefighting activities.

Spills And Emergencies:

This section lists the steps to be taken in the case of a spill or leak. Disposal of the substance as a hazardous waste is also discussed.

Handling And Storage:

This section lists safe practices that should be followed when handling and storing the hazardous substance. Other substances which react with or are not compatible with this chemical are listed.

Occupational Health Information Resources:

This section describes the resources and services available through the New Jersey Department of Health and Senior Services Occupational Health Service.

Page Six:

The last page of the Fact Sheet (page 6) is for emergency responders. It is a summary of most of the health and safety information contained in the Fact Sheet. It also contains more technical chemical information which may be useful during an emergency situation.

Internet:

The Right to Know Program periodically posts new and revised Hazardous Substance Fact Sheets in English and Spanish on the New Jersey Department of Health and Senior Services' Internet Web site. Over 1,600 Fact Sheets are currently available for download from the Department's Web site.

Web Address: www.nj.gov/health/eoh/rtkweb

GLOSSARY

ACGIH is the American Conference of Governmental Industrial Hygienists. They publish guidelines called Threshold Limit Values (TLVs) for exposure to workplace chemicals.

Acute Exposure Guideline Levels (AEGs) are established by the EPA. They describe the risk to humans resulting from once-in-a-lifetime, or rare, exposure to airborne chemicals.

Boiling point is the temperature at which a substance can change its physical state from a liquid to a gas.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is a unique, identifying number, assigned by the Chemical Abstracts Service, to a specific chemical.

CFR is the Code of Federal Regulations, which are the regulations of the United States government.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes destruction of human skin or severe corrosion of containers.

The **critical temperature** is the temperature above which a gas cannot be liquefied, regardless of the pressure applied.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

ERG is the Emergency Response Guidebook. It is a guide for emergency responders for transportation emergencies involving hazardous substances.

Emergency Response Planning Guideline (ERPG) values provide estimates of concentration ranges where one reasonably might anticipate observing adverse effects.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

IARC is the International Agency for Research on Cancer, a scientific group.

Ionization Potential is the amount of energy needed to remove an electron from an atom or molecule. It is measured in electron volts.

IRIS is the Integrated Risk Information System database on human health effects that may result from exposure to various chemicals, maintained by federal EPA.

LEL or **Lower Explosive Limit**, is the lowest concentration of a combustible substance (gas or vapor) in the air capable of continuing an explosion.

mg/m³ means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the federal Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSH is the New Jersey Public Employees Occupational Safety and Health Act, which adopts and enforces health and safety standards in public workplaces.

Permeated is the movement of chemicals through protective materials.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

Protective Action Criteria (PAC) are values established by the Department of Energy and are based on AEGs and ERPGs. They are used for emergency planning of chemical release events.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

STEL is a Short Term Exposure Limit which is usually a 15-minute exposure that should not be exceeded at any time during a work day.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

UEL or **Upper Explosive Limit** is the highest concentration in air above which there is too much fuel (gas or vapor) to begin a reaction or explosion.

Vapor Density is the ratio of the weight of a given volume of one gas to the weight of another (usually *Air*), at the same temperature and pressure.

The **vapor pressure** is a force exerted by the vapor in equilibrium with the solid or liquid phase of the same substance. The higher the vapor pressure the higher concentration of the substance in air.



Right to Know Hazardous Substance Fact

**Emergency
Responders
Quick Reference**

Common Name:

Synonyms:

CAS No:

Molecular Formula:

RTK Substance No:

Description:

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
- Health - Fire - Reactivity DOT#: ERG Guide #: Hazard Class:		

SPILL/LEAKS

Isolation Distance:

PHYSICAL PROPERTIES

Odor Threshold:

Flash Point:

LEL:

UEL:

Vapor Density:

Vapor Pressure:

Water Solubility:

Boiling Point:

Ionization Potential:

EXPOSURE LIMITS

OSHA:

NIOSH:

ACGIH:

IDLH LEVEL:

PROTECTIVE EQUIPMENT

Gloves:

Coveralls:

Boots:

Respirator:

HEALTH EFFECTS

Eyes:

Skin:

Acute:

Chronic:

FIRST AID AND DECONTAMINATION