



# Coffee Break Training - Hazardous Materials

## Commonly Used Abbreviations

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**Learning Objective:** The student shall be able to recognize common abbreviations used in the National Institute of Occupational Safety and Health (NIOSH) NIOSH Pocket Guide to Chemical Hazards to identify physical and chemical properties of various chemicals.

The Federal NIOSH publishes a variety of resources for hazardous materials reference. The NIOSH Pocket Guide to Chemical Hazards is a commonly used document to evaluate the properties of hazardous materials.

As one browses through the Guide to evaluate chemical hazards, it is essential to know the common abbreviations and units that are used in the text. The following abbreviations are used in the NIOSH Pocket Guide to Chemical Hazards for the physical and chemical properties given for each chemical. If there is an “NA” in an entry, it indicates that a property is not applicable, and a question mark (?) indicates that the data is unknown.

- **MW**—Molecular weight.
- **BP**—Boiling point at 1 atmosphere in °F.
- **Sol**—Solubility in water at 68 °F (20 °C) (unless a different temperature is noted), measured in percent by weight (i.e., g (gram)/100 mL (milliliter)).
- **FL.P**—Flash point in °F (i.e., the temperature at which the liquid phase gives off enough vapor to flash when exposed to an external ignition source), as tested in a closed cup apparatus (unless annotated “(oc)” for open cup).
- **IP**—Ionization potential, eV (electron volts). Ionization potentials are given as a guideline for the selection of photoionization detector lamps used in some direct-reading instruments.
- **VP**—Vapor pressure at 68 °F (20 °C) (unless a different temperature is noted), in mm (millimeter) of mercury (chemical symbol Hg). “Approx” indicates an approximate amount.
- **MLT**—Melting point for solids, in °F.
- **FRZ**—Freezing point for liquids and gases, in °F.
- **UEL**—Upper Explosive Level (flammable) limit in air, in percent by volume (at room temperature unless otherwise noted).
- **LEL**—Lower Explosive Level (flammable) limit in air, in percent by volume (at room temperature unless otherwise noted).
- **MEC**—Minimum explosive concentration, in g/m<sup>3</sup> (cubic meter) (when available).
- **Sp.Gr**—Specific gravity at 68 °F (20 °C) (unless a different temperature is noted) referenced to water at 39.2 °F (4 °C).
- **RGasD**—Relative density of gases referenced to air = 1. This indicates how many times a gas is heavier than air at the same temperature.

For additional information and resources, visit NIOSH at [www.cdc.gov/niosh](http://www.cdc.gov/niosh)



Knowing the physical and chemical characteristics of materials like liquid nitrogen is an essential part of evaluating its hazards to people and property.

For archived downloads, go to:

[www.usfa.fema.gov/nfa/coffee-break/](http://www.usfa.fema.gov/nfa/coffee-break/)