

## FOSS Mixtures and Solutions Module

### Glossary

3<sup>rd</sup> Edition © 2012

**atmosphere** the layer of gases surrounding Earth (air) (SRB)

**baking soda** a solid material in the form of a white powder; also called sodium bicarbonate (IG)

**bends** a condition that causes pain in deep-sea divers' arms and legs after returning to the surface (SRB)

**boiling point** the temperature at which liquid turns to gas. The boiling point of water is 100°C. (SRB)

**caisson** a large box with no bottom. These boxes were used to provide environments for workers underwater. (SRB)

**calcium carbonate (CaCO<sub>3</sub>)** a solid material; powdered chalk (IG)

**calcium chloride (CaCl<sub>2</sub>)** a white solid material that absorbs water from the air (IG)

**carbon dioxide (CO<sub>2</sub>)** a compound made from carbon and oxygen (SRB, IG)

**chalk** a solid material; one form of calcium carbonate (IG)

**chemical reaction** the process in which two or more substances combine to make one or more new substances that have different properties from the original ones (SRB, IG)

**chemist** a person trained in chemistry (SRB)

**citric acid** a white, crystalline solid acid found in citrus fruits (SRB, IG)

**climate** the average or typical weather conditions in a region of the world (SRB)

**compress** to reduce in volume by applying pressure (SRB)

**concentrated** a solution containing a lot of solute (SRB, IG)

**concentration** the ratio of solute to solvent in a solution (SRB, IG)

**condensation** the change of state from gas to liquid (SRB)

**crystal** a natural form of a substance. Crystal shape is also a physical property that helps to identify a substance. (SRB, IG)

**decompression** the change from higher pressure to lower pressure (SRB)

**density** mass per unit volume (SRB, IG)

**diatomaceous earth** the skeletal remains of microscopic aquatic organisms (diatoms) (SRB, IG)

**dilute** a solution containing little solute (SRB, IG)

**dissolve** the process of a substance becoming incorporated uniformly into another (SRB, IG)

**energy** the ability to make things happen. Energy can take a number of forms, such as heat and light. (SRB)

**Epsom salts** a white, crystalline solid used for medical or healing purposes (IG)

**equal volumes** comparing equivalent amounts of two solutions to determine which is more concentrated (IG)

**evaporation** the change of state from a liquid to a gas (SRB, IG)

**explosion** a fast reaction that produces heat, light, and sound energies, and a lot of gas (SRB)

**extract** a solution of substances dissolved out of organic material (SRB, IG)

**filter** a tool used to separate small particles and water (IG)

**fossil fuels** the preserved remains of organisms that lived long ago and changed into oil, coal, and natural gas (SRB)

**freezing** change of state from liquid to solid. The freezing point of water is 0°C. (SRB)

**gas** a state of matter that is shapeless and expands to fill any closed container it is placed in (SRB, IG)

**gaseous** existing in the gas state (not a solid or liquid) (SRB)

**gravel** rocks that are smaller than pebbles (IG)

**greenhouse gas** a gas, such as carbon dioxide, that contributes to the warming of the atmosphere (SRB)

**herbicide** a poison intended to kill plants (SRB)

**insoluble** incapable of being dissolved. Calcium carbonate is insoluble in water. (IG)

**layer** a single thickness of a material (IG)

**less dense** less mass per unit volume (IG)

**liquid** a state of matter that flows and takes the shape of the container it is in (SRB)

**magnet** an object that sticks to or attracts iron or steel (IG)

**magnetism** the ability to attract iron (SRB)

**mass** a quantity of matter (SRB, IG)

**matter** anything that has mass and takes up space (SRB)

**methane** the main ingredient in natural gas (SRB)

**mixture** two or more substances together (SRB, IG)

**more dense** more mass per unit volume (IG)

**nitrogen** a colorless, odorless gas that makes up about 78 percent of Earth's atmosphere (air) (SRB)

**oxygen** a colorless, odorless gas that makes up about 21 percent of Earth's atmosphere (air) (SRB)

**particle** a very small piece or part (SRB)

**physical property** a characteristic that describes a substance, such as color, size, shape, and texture (SRB)

**powder** a solid material made up of tiny granules (IG)

**precipitate** a new substance that forms and settles out of a liquid (IG)

**product** the substance(s) produced in a chemical reaction (SRB, IG)

**property** a characteristic that describes a substance, such as color, size, shape, or texture (SRB, IG)

**ratio** the comparison of two (or more) parts of a whole (SRB)

**reactant** one of the starting substance(s) in a chemical reaction (SRB, IG)

**room temperature** how hot or cold it is in an indoor space. Room temperature is 22°C. (SRB)

**salt** table salt. A white crystalline solid that dissolves in water. Its chemical name is sodium chloride. (SRB, IG)

**saturated** when the solvent cannot dissolve any more solute (SRB)

**saturated solution** a solution where the solvent cannot dissolve any more solute (IG)

**screen** wire mesh used to separate large and small objects (IG)

**separate** to take apart (IG)

**sodium chloride** the chemical name for table salt (SRB)

**solid** a state of matter that has a definite shape (SRB)

**solubility** the property a substance has of dissolving solvents, such as the solubility of salt in water (IG)

**soluble** capable of being dissolved. Table salt is soluble in water. (SRB, IG)

**solute** a substance that dissolves in a solvent to form a solution (SRB, IG)

**solution** a mixture formed when one or more substances dissolve in another (SRB, IG)

**solvent** a substance in which a solute dissolves to form a solution (SRB, IG)

**substance** a pure material that is not a mixture (SRB, IG)

**supersaturated** when a solution contains more solute than it normally would at a given temperature or pressure (SRB, IG)

**transparent** clear; describes something through which you can see an image clearly (SRB, IG)

**volume** three-dimensional space (SRB)

**water vapor** water in its gas state (SRB)