

ENERGY The capacity for doing work. Various forms include chemical energy, nuclear energy, kinetic energy and others.

ESTERS Organic compounds which may be made by interaction between an alcohol and an acid, and by other means. Esters are nonionic compounds, including solvents and natural fats.

ETHANE C_2H_6 A paraffinic hydrocarbon derived from petroleum or natural gas, important for organic synthesis. Ethylene is derived from it.

ETHYL ALCOHOL OR ETHANOL C_2H_5OH Organic compound synthesized either from petroleum or natural gas or derived by a fermentation process. Wide use as a solvent and for chemical synthesis.

ETHYLENE C_2H_4 Gaseous olefinic compound resulting from the cracking of either selected petroleum fractions or natural gas. Wide use as starting material for numerous chemical reactions, notably manufacture of polyethylene and related plastics materials.

ETHYLENE GLYCOL Clear, colorless, liquid. Useful as humectant because it absorbs approximately twice its weight of water at room temperature and 100 per cent humidity. A major use antifreeze. Among many other uses: dye solvent, solvent for resins, drugs, other organic chemicals. Highly toxic if ingested.

FERTILIZER Plant food usually sold in mixed formula containing basic plant nutrients: compounds of nitrogen, potassium, phosphorus, sulfur, and sometimes other minerals.

FLOTATION REAGENT Chemical used in flotation separation of minerals. Added to pulverized mixture of solids and water and oil, it causes *preferential nonwetting by water* of certain solid particles, making possible the flotation and separation of unwet particles.

GAS A state of matter in which the material has very low density and viscosity, can

expand and contract greatly in response to changes in temperature and pressure, easily diffuses into other gases, readily and uniformly distributes itself throughout any container.

GLYCEROL A clear, sweet, colorless, syrup-like liquid (solid at lower temperatures) derived in various ways: by-product of soap manufacture, by fermentation or synthesis. Used in medicines, soaps, antifreeze, as a solvent, or reagent and as humectant in foods and tobacco, to make explosives.

HIGH ENERGY FUEL or (HEF) Liquid or solid chemical propellant providing more energy than conventional fuels. Various chemical fuels used in U.S. rocket and missile programs, e.g., hydrocarbons, hydrogen, hydrazine, aniline, etc.

HYDROCARBONS Organic compounds, composed solely of carbon and hydrogen. Several hundred thousand molecular combinations of C and H are known to exist. Basic building blocks of all organic chemicals. Main chemical industry sources of hydrocarbons are petroleum, natural gas and coal.

HYDROMETALLURGY Science of metal recovery by a process involving treatment of ores in an aqueous medium, such as acid or cyanide solution.

INHIBITOR An agent which arrests or slows chemical action or a material used to prevent or retard rust or corrosion.

INORGANIC Term used to designate compounds that generally do not contain carbon. Source matter, other than vegetable or animal. Examples: sulfuric acid and salt. Exceptions are carbon monoxide, carbon dioxide.

INTERMEDIATE A chemical formed as a "middle-step" in a series of chemical reactions, especially in the manufacture of organic dyes and pigments. In many cases, it may be isolated and used to form a variety of desired products. In other cases, the intermediate may be unstable or used up at once.