

# Glossary of Terms

## A

**ABRASION:** External damage to a hose assembly caused by it being rubbed on a foreign object; a wearing away by friction.

**ADHESION:** The strength of bond between cured rubber surfaces or between a cured rubber surface and a non-rubber surface.

**AMBIENT/ATMOSPHERIC CONDITIONS:** The surrounding conditions, such as temperature, pressure, and corrosion, to which a hose assembly is exposed.

**ANSI:** American National Standards Institute.

**ASSEMBLY:** A general term referring to any hose coupled with end fittings of any style attached to one or both ends.

**ASTM:** American Society for Testing and Materials.

## B

**BEND RADIUS:** The radius of a bent section of hose measured to the innermost surface of the curved portion.

**BLISTER:** A raised spot on the surface or a separation between layers, usually forming a void or air-filled space.

**BRAID:** The woven portion of a hose used as reinforcement to increase pressure rating and add hoop strength. Various materials such as polyester, cotton or metal wire are used. A hose may have one or more braids, outside or between layers of hose material.

**BRAND:** A mark or symbol identifying or describing a product and/or manufacturer, that is embossed, inlaid or printed.

**BURST PRESSURE:** Pressure at which a hose will fail and burst. Most hoses are rated with working pressures of 4 times the minimum burst pressure.

## C

**CHEMICAL COMPATIBILITY:** The relative degree to which a chemical material may contact a plastic compound without corrosion, degradation or adverse change of properties.

**COLD FLEXIBILITY:** Relative ease of bending while being exposed to specified low temperature.

**COMBUSTIBLE LIQUID:** A combustible liquid is one having a flash point at or above +100°F (37.8°C).

**COMPOUND:** The mixture of rubber or plastic and other materials, which are combined to give the desired properties when used in the manufacture of a product.

**CONDUCTIVE:** The ability to transfer electrical potential.

**CORE:** the inner portion of a hose, usually referring to the material in contact with the medium.

**CORROSION:** The process of material degradation by chemical or electrochemical means.

**COUPLED LENGTHS:** Individual lengths of hose with couplings attached. This may be, as specified, either the length of exposed hose or the overall length including couplings.

**COVER:** The outer component usually intended to protect the carcass of a product.

**CRIMP/CRIMPING:** A hose end fitting attachment method utilizing a number of dies mounted in a radial configuration. The dies close perpendicular to the hose and fitting axis, compressing the collar, ferrule, or sleeve around the hose.

## D

**DATE CODE:** Any combination of numbers, letters, symbols or other methods used by a manufacturer to identify the time of manufacture of a product.

**DESIGN FACTOR:** A ratio used to establish the working pressure of the hose, based on the burst strength of the hose.

**DUROMETER:** The hardness of rubber and plastic compounds.

## E

**ELASTOMER:** Any one of a group of polymeric materials, usually designated thermoset, such as natural rubber, or thermoplastic, which will soften with application of heat.

**ELONGATION:** The increase in length expressed numerically as a percentage of the initial length.

**EXTRUDE/EXTRUDED/EXTRUSION:** Forced through the shaping die of an extruder; extrusion may have a solid or hollow cross section.

## F

**FDA:** United States Food and Drug Administration.

**FLOW RATE:** A volume of media being conveyed in a given time period.

## H

**HEAT RESISTANCE:** The property or ability to resist the deteriorating effects of elevated temperatures.

**HELIX:** A shape formed by spiraling a wire or other reinforcement around the cylindrical body of a hose; typically used in suction hose.

**HOSE:** A flexible conduit consisting of a tube, reinforcement, and usually an outer cover.

**HYDROSTATIC TESTING:** the use of liquid pressure to test a hose or hose assembly for leakage, twisting, and/or hose change-in length.

## I

**I.D.:** The abbreviation for inside diameter.

**INNERTUBE:** The innermost layer of a hose; the hose material in contact with the medium.

**ISO:** International Organization for Standardization.

## K

**KINKING:** A temporary or permanent distortion of the hose induced by bending beyond the minimum

## L

**LAYLINE:** The line of printed information that runs parallel on the side of a manufactured hose giving details such as part number, PSI rating, hose size and manufacturing data.

## M

**MEDIA, MEDIUM:** The substance(s) being conveyed through a system.

**MINIMUM BEND RADIUS (MBR):** Minimum radius to which a hose may be bent without compromising the integrity of construction.

**MSDS:** Material Safety Data Sheet.

**MSHA:** Mine Safety and Health Administration.

## N

**NON-CONDUCTIVE:** The inability to transfer an electrical charge.

**NSF:** National Sanitation Foundation.

**NYLON:** a family of polyamide materials.

## O

**O.D.:** The abbreviation for outside diameter.

**OIL RESISTANCE:** The ability of the materials to withstand exposure to oil.

**OPERATING CONDITIONS:** The pressure, temperature, motion, and environment to which a hose assembly is subjected.

**OZONE RESISTANCE:** The ability to withstand the deteriorating effects of ozone (generally cracking).

## P

**PERMEATION:** The process of migration of a substance into and through another, usually the movement of a gas into and through a hose material; the rate of permeation is specific to the substance, temperature, pressure and the material being permeated.

**PIN PRICKED:** Perforations through the cover of a hose to vent permeating gases.

PSI: pounds of pressure per square inch of area (lb<sup>2</sup>/in).

**PVC:** Polyvinyl chloride. A low cost thermoplastic material typically used in the manufacture of industrial hoses. The operating temperature range is -500°F to +1750°F (-295.5°C to +954.4°C).

## R

**RMA:** The Rubber Manufacturers Association, Inc.

## S

**SAE:** Society of Automotive Engineers.

**SAFETY FACTOR:** Divisor of burst pressure used to determine working pressure.

**SPECIFICATION:** A document setting forth pertinent details of a product.

**SPIRAL:** A method of applying reinforcement in which there is not interlacing between individual strands of the reinforcement.

**STATIC WIRE:** A wire incorporated in a hose to give quality or additional power to conducting or transmitting static electricity.

## T

**TUBE:** The innermost continuous all-rubber or plastic element of a hose.

**TUBING:** A non-reinforced, homogeneous conduit, generally of circular cross-section.

## U

**UL:** Underwriters' Laboratories, Inc.

## V

**VACUUM:** Full vacuum is 29.92 in Hg.

## W

**WORKING PRESSURE (WP):** Maximum pressure at which a hose is designed to operate.

**WORKING TEMPERATURE:** The temperature range of the application, may include the temperature of the fluid conveyed or the environmental conditions the assembly is exposed to in use.

## Y

**VARN:** A generic term for a continuous strand of textile fibers or filaments in a form suitable for knitting, weaving, or otherwise intertwining to form a textile fabric. It may comprise (a) a number of fibers twisted together, (b) a number of filaments laid together without twist (a sertwist yarn), (c) a number of filaments laid together with more or less twist, or (d) a single filament with or without twist (a monofilament).