

ADDITIVE: A substance or agent added in small amounts to a basic ingredient of a mixture prior to mixing. (AASHO)

ADMIXTURE: A substance or agent added in small amounts to the basic ingredients of a mixture during the mixing process. (AASHO)

AGGREGATE: Any hard, inert, mineral material used for mixing in graduated fragments. It includes sand, gravel, crushed stone and slag. (AI)

AGGREGATE, COARSE: That retained on the No. 8 sieve. (AI)

AGGREGATE, FINE: That passing the No. 8 sieve. (AI)

AGGREGATE COARSE-GRADED: One having a continuous grading in sizes of particles from coarse through fine with a predominance of coarse sizes. (AI)

Dense-graded aggregate: A well-graded aggregate to proportional as to contain a relatively small percentage of voids. (AASHO)

AGGREGATE, FINE-GRADED: One having a continuous grading in sizes of particles from coarse through fine with a predominance of fine sizes. (AI)

Open-graded aggregate: A well-graded aggregate containing little or no fines, with a relatively large percentage of voids. (AASHO)

Skip-graded aggregate: Aggregate possessing proportionate distribution of successive particle sizes. (AASHO)

ASPHALT; A dark brown to black cementitious material in which the predominating constituents are bitumens which occur in nature or are obtained in petroleum processing. Asphalt is a constituent in varying proportions of most crude petroleum. (AI)

ASPHALT CEMENT: Asphalt that is refined to meet specifications for paving, individual and special purposes. Its penetration is usually between 40 and 300. The term is often abbreviated A.C. (AI)

ASPHALT CONCRETE: High quality, thoroughly controlled hot mixture of asphalt cement and well-graded, high-quality aggregate, thoroughly compacted into a uniform dense mass typified by ASTM Specification D 1663, Mix Designations 3A through 6A. (AI)

(ASPHALT) EMULSION SLURRY SEAL: A mixture of slow-setting emulsified asphalt, fine aggregate and mineral filler, with water added to produce slurry consistency. (AI)

ASPHALT LIQUID: An asphaltic material having a soft of fluid consistency that is beyond the range of measurement by the normal penetration test, the limit of which is 300 maximum. Liquid asphalts include (1) cutback asphalts and (2) emulsified asphalts. (AI)

Cutback asphalt: Asphalt cement which has been liquified by blending with petroleum solvents (also called diluents), as for the atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function.

1. **Rapid-curing (RC) asphalt-liquid asphalt** composed of asphalt cement and a naphtha or gasoline-type diluent of high volatility.

2. **Medium-curing (MC) asphalt-liquid asphalt** composed of asphalt cement and a kerosene-type diluent of medium volatility.

3. **Slow-curing (SC) asphalt-liquid asphalt** composed of asphalt cement and oils of low volatility.

4. **Road-oil:** A heavy petroleum oil, usually one of the slow-curing (SC) grades of liquid asphalt.

Emulsified asphalt: An emulsion of asphalt cement and water which contains a small amount of an emulsifying agent, a heterogeneous system containing two normally immiscible phases (asphalt and water) in which the water forms the continuous phase of the emulsion, and minute globules of asphalt form the discontinuous phase. Emulsified asphalts may be of either the anionic, electro-negatively charged asphalt globules, or cationic, electro-positively charged asphalt globule types, depending upon the emulsifying agent. An emulsified asphalt in which the continuous phase is asphalt, usually an RC or MC liquid asphalt, and the discontinuous phase is minute globules of water in relatively small quantities is called an inverted emulsified asphalt. This type emulsion may also be either anionic or cationic.

ASPHALT, NATURAL (NATIVE): Asphalt occurring in nature which has been derived from petroleum by natural processes of evaporation of volatile fractions leaving the asphalt fractions. The native asphalts of most importance are found in the Trinidad and Bermudez Lake deposits. Asphalt from these sources often is called Lake Asphalt. (AI)

ASPHALT PAVEMENTS: Pavements consisting of a surface course of mineral aggregate coated and cemented together with asphalt cement on supporting courses such as asphalt bases, crushed stone, slag or gravel; or on portland cement concrete, brick or block pavement. (AI)

AXLE LOAD: The total load transmitted by all wheels the centers of which may be included

between two parallel transverse vertical plans 40 inches apart, extending across the full width of the vehicle. (AASHO)

Tandem axle load: The total load transmitted by two or more consecutive axles the centers of which may be included between parallel transverse vertical planes spaced more than 40 inches and not more than 96 inches apart, extending across the full width of the vehicle.

BASE COURSE: The layer of material immediately beneath the surface of intermediate course. It may be composed of crushed stone, crushed slag, crushed or uncrushed gravel and sand, or combinations of these materials. It also may be bound with asphalt. (AI)

BINDER COURSE: A plant mix of graded aggregates (generally open graded) and bituminous material which constitutes the lower layer of the surface course. (AASHO)

BITUMEN: A mixture of hydrocarbons of natural or pyrogenous origin, or a combination of both; frequently accompanied by nonmetallic derivatives which may be gaseous, liquid, semisolid or solid; and which are completely soluble in carbon disulfide. (AI)

BITUMINOUS COATING:

Prime coat: An application of a low viscosity liquid bituminous material to coat and bind mineral particles preparatory to placing a base or surface course.

Seal coat: A thin treatment consisting of bituminous material, usually with cover aggregate, applied to a surface course. The term includes but is not limited to sand-seal, chip seal, slurry seal, contrast seal and fog seal.

Contrast seal: A seal coat designed primarily to provide color or texture contrast with an adjacent surface.

Fog seal: A thin application of bituminous material without cover aggregate.

Slurry seal: A seal coat consisting of a semi-fluid mixture of asphaltic emulsion and fine aggregate.

Tack coat: An application of bituminous material to an existing surface to provide bond with a superimposed course. (AASHO)

BITUMINOUS CONCRETE: A designed combination of dense graded mineral aggregate filler and bituminous cement mixed in a central plant, laid and compacted while hot. (AASHO)

COLD-LAID PLANT MIXTURE: Plant mixes that may be spread and compacted at atmospheric temperature. (AI)

CRACK: A fissure or open seam not necessarily extending through the body of a material. (AASHO)

Reflection crack: A crack appearing in a resurface or overlay caused by movement at joints or cracks in underlying base or surface.

CURB LOADING ZONE: Roadway space adjacent to a curb and reserved for exclusive use of vehicles during loading or unloading of passengers or property. (AASHO)

DEEP-LIFT ASPHALT CONSTRUCTION: A construction practice in which the asphalt course is placed in one or more lifts of 4 or more inches (10 or more cm) compacted thickness. (The form "DEEP-LIFT" is registered by the Asphalt Institute with the U.S. Patent Office). (AIA)

DEEP-STRENGTH ASPHALT PAVEMENT: The term deep-strength (registered by the Asphalt Institute with the U.S. Patent Office) certified that the pavement is constructed of asphalt with an asphalt surface on an asphalt base and in accordance with design concepts established by the Institute. (See latest edition of Thickness Design manual (MS-1). (AI)

EMULSION SLURRY SEAL (ASPHALT): A mixture of slow-setting emulsified asphalt, fine aggregate and mineral filler, with water added to produce slurry consistency. (AI)

EXPRESSWAY: A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections. (AASHO)

FAULTING: Differential vertical displacement of rigid slabs at a joint or crack. (AASHO)

FLEXIBLE PAVEMENT: A pavement structure which maintains intimate contact with and distributes loads to the subgrade and depends upon aggregate interlock, particle friction and cohesion for stability. (AASHO)

FREEWAY: An expressway with full control of access. (AASHO)

FULL-DEPTH^R ASPHALT PAVEMENT: The term "Full-Depth" (registered by The Asphalt Institute with the U.S. Patent Office) certifies that the pavement is one in which asphalt mixtures are employed for all courses above the subgrade or improved subgrade. A "full-depth" asphalt pavement is laid directly on the prepared subgrade. (The mathematical symbol T_A denotes Full-Depth or Total Asphalt). (AI)

GORE: The area immediately beyond the divergence of two roadways, bounded by the edges of those roadways. (AASHO)

GRADE SEPARATION: A crossing of two highways, or a highway and a railroad, at different levels. (AASHO)

Overpass: A grade separation where the subject highway passes over an intersecting highway or railroad; also called Overcrossing.

Underpass: A grade separation where the subject highway passes under an intersecting highway or railroad; also called Undercrossing.

HIGHWAY, STREET OR ROAD: A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

(Recommended usage: in urban areas - highway or street; in rural areas - highway or road) (AASHO)

Arterial highway: A general term denoting a highway primarily for through traffic, usually on a continuous route.

Belt highway: An arterial highway for carrying traffic around an urban area or portion thereof.

Bypass: An arterial highway that permits traffic to avoid part or all of an urban area.

Divided highway: A highway with separated roadways for traffic in opposite directions.

Major highway: An arterial highway with intersections at grade and direct access to abutting property, and on which geometric design and traffic control measures are used to expedite the safe movement of through traffic.

Radial highway: An arterial highway leading to or from an urban center.

Through highway: Every highway or portion thereof on which vehicular traffic is given preferential right-of-way, and at the entrances to which vehicular traffic from intersecting highways is required by law to yield right-of-way to vehicles on such through highway in obedience to either a stop sign or a yield sign, when such signs are erected.

INTERCHANGE: A system of interconnecting roadways in conjunction with one or more grade separations, providing for the movement of traffic between two or more roadways on different levels. (AASHO)

INTERCHANGE ELEMENTS:

Direct connection: A one-way turning roadway which does not deviate greatly from the intended direction of travel.

Interchange ramp: A turning roadway at an interchange for travel between inter-section legs.

Loop: A one-way turning roadway that curves about 270 degrees to the right to accommodate a left-turning movement. It may include provision for a left turn at a terminal to accommodate another turning movement.

Outer connection: A one-way turning roadway primarily for a right-turning movement. It may include provision for a left turn at a terminal to accommodate another turning movement.

Two-way ramp: A ramp for travel in two directions. At a cloverleaf it serves as both an outer connection and a loop. (AASHO)

INTERCHANGE TYPES:

Cloverleaf: A 4-leg interchange with loops for left turns and outer connections for right turns or two-way ramps for these turns. A full cloverleaf has ramps for two turning movements in each quadrant.

Diamond interchange: A 4-leg interchange with a single one-way ramp in each quadrant. All left turns are made directly on the minor highway.

Directional interchange: An interchange generally having more than one highway grade separation, with direct connections for the major left-turning movements. (AASHO)

INTERSECTION: The general area where two or more highways join or cross, within which are included the roadway and roadside facilities for traffic movements in that area. (AASHO)

INTERSECTION ELEMENTS:

Angle of turn: Angle through which a vehicle travels in making a turn.

Intersection angle: Angle between two intersection legs.

Intersection entrance: That part of an intersection leg for traffic entering the intersection.

Intersection exit: That part of an intersection leg for traffic leaving the intersection.

Intersection leg: Any one of the highways radiating from and forming part of an intersection. The common intersection of two highways crossing each other has four legs.

Island: A defined area between traffic lanes for control of vehicle movements or for pedestrian refuge. Within an intersection a median or an outer separation is considered an island.

Median opening: A gap in a median provided for crossing and turning traffic.

Merging end: An end of an island, or area between converging roadways, beyond which traffic merges.

Minimum turning path: The path of a designated point on a vehicle making its sharpest turn.

Minimum turning radius: The radius of the minimum turning path of the outside of the outer front tire. (Vehicle manufacturers' data books give minimum turning radius to the centerline of the outer front tire).

Turning movement: The traffic making a designated turn at an intersection.

Turning path: The path of a designated point on a vehicle making a specified turn.

Turning roadway: A connecting roadway for traffic turning between two intersection legs.

Turning roadway terminal: The general area where a turning roadway connects with a through traffic roadway. "Exit" used as a modifier refers to leaving the through traffic lanes and "entrance" refers to entering the through traffic lanes.

Turning track width: The radial distance between the turning paths of the outside of the outer front tire and the outside of the rear tire which is nearest the center of the turn. (AASHO)

INTERSECTION TYPES:

At-grade intersection: An intersection where all roadways join or cross at the same level.

Channelized intersection: An at-grade intersection in which traffic is directed into definite paths by islands.

Flared intersection: An unchannelized intersection, or a divided highway intersection without islands other than medians, where the traveled way of any intersection leg is widened or an auxiliary lane added.

Four-leg intersection: An intersection with four legs as where two highways cross.

Multileg intersection: Intersection with five or more legs.

Rotary intersection: A confluence of three or more intersection legs at which traffic merges into and emerges from a one-way roadway in a counterclockwise direction around a central area.

T intersection: A three-leg intersection in the general form of a "T".

Three-leg intersection: An intersection with three legs, where two highways join.

Unchannelized intersection: An at-grade intersection without islands for directing traffic into definite paths.

Y intersection: A three-leg intersection in the general form of a "Y". (AASHO)

JOINT: A designed vertical plane of separation or weakness. (AASHO)

Construction joint: A joint made necessary by a prolonged interruption in the placing of concrete.

Contraction joint: A joint at the ends of a rigid slab to control the location of transverse cracks.

Expansion joint: A joint located to provide for expansion of a rigid slab, without damage to itself, adjacent slabs, or structures.

Longitudinal joint: A joint normally placed between traffic lanes to control longitudinal cracking.

Warping or hinged joint: A joint in which flexure is permitted but separation and vertical displacement of abutting rigid slabs are prevented by metal ties and mechanical or aggregate interlock.

LANE:

Auxiliary lane: The portion of the roadway adjoining the traveled way for parking, speed change, turning, storage for turning, weaving, truck climbing or for other purposes supplementary to through traffic movement.

Median lane: A speed-change lane within the median to accommodate left-turning vehicles.

Parking lane: An auxiliary lane primarily for the parking of vehicles.

Speed-change lane: An auxiliary lane, including tapered areas, primarily for the acceleration or deceleration of vehicles entering or leaving the through traffic lanes.

Traffic lane: The portion of the traveled way for the movement of a single line of vehicles. (AASHO)

LEVELING COURSE: The layer of material placed on an existing surface to eliminate irregularities prior to placing an overlaying course. (AASHO)

LOAD TRANSFER DEVICE: A mechanical means designed to carry loads across a joint. (AASHO)

- Dowel:** A load transfer element usually consisting of a plain round steel bar.
- MACADAM:** A layer of coarse, graded, angular mineral aggregate with a filler of fine aggregate, interlocked by compaction. (AASHO)
- MEDIAN:** The portion of a divided highway separating the traveled ways for traffic in opposite directions. (AASHO)
- OUTER SEPARATION:** The portion of an arterial highway between the traveled ways of a roadway for through traffic and a frontage street or road. (AASHO)
- PARKWAY:** An arterial highway for noncommercial traffic, with full or partial control of access, and usually located within a park or a ribbon of parklike developments. (AASHO)
- PAVEMENT STRUCTURE:** The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed. (AASHO)
- Base course:** The layer or layers of specified or selected material of designed thickness placed on a subbase or a subgrade to support a surface course.
- Subbase:** The layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course.
- Subgrade:** The top surface of a roadbed upon which the pavement structure and shoulders including curbs are constructed.
- Subgrade treatment:** Modification of roadbed material by stabilization.
- Surface course:** One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which rests skidding, traffic abrasion and the disintegrating effects of climate. The top layer sometimes called "Wearing Course". (AASHO)
- PUMPING:** The ejection of foundation material, either wet or dry, through joints or cracks or along the edges of rigid slabs, due to vertical movements of the slab under traffic. (AASHO)
- REPROCESSING:** The renewal of an existing surface by sacrificing, remixing with or without additional material and relaying. (AASHO)
- RESURFACING:** The placing of one or more new courses on an existing surface. (AASHO)
- REINFORCEMENT:** Steel imbedded in a rigid slab to resist tensile stresses and detrimental opening of cracks. (AASHO)
- RIGID PAVEMENT:** A pavement structure which distributes loads to the subgrade having as one course a portland cement concrete slab of relatively high bending resistance. (AASHO)
- RIGID SLAB:** A section of portland cement concrete pavement bounded by joints and edges, designed for continuity of tensile stress. (AASHO)
- ROAD:** A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way. (Recommended usage: in urban areas: highway or street; in rural areas: highway or road). (AASHO)
- Frontage road:** A local street or road auxiliary to and located on the side of an arterial highway for service to abutting property and adjacent areas and for control of access.
- Local road:** A street or road primarily used for access to residence, business, or other abutting property.
- Toll road or Roll tunnel:** A highway or tunnel open to traffic only upon payment of a direct toll or fee.
- ROADBED:** The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulder. (AASHO)
- Roadbed material:** The material below the subgrade in cuts and embankments and in embankment foundations extending to such depths as affects the support of the pavement structure.
- ROADSIDE:** A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside. (AASHO)
- ROADWAY:** (General) The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways. (In construction specifications). The portion of a highway within limits of construction. (AASHO)
- RUMBLE SURFACE:** A rough textured surface constructed for the purpose of causing the tires of a motor vehicle driven over it to vibrate audibly as a warning to drivers. (AASHO)
- SAND ASPHALT:** A mixture of sand and asphalt, either plant mixed or road mixed. (AASHO)
- SHOULDER:** The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles for emergency use, and for lateral support of base and surface courses. (AASHO)
- STABILIZATION:** Modification of soils or aggregates by incorporating materials that will increase load bearing capacity, firmness and resistance to weathering or displacement. (AASHO)

STREET: A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

(Recommended usage: in urban areas: highway or street; in rural areas: highway or road.)

Cul-de-sac street: A local street open at one end only and with special provision for turning around.

Dead-end street: A local street open at one end only without special provision for turning around.

Frontage street: A local street or road auxiliary to and located on the side of an arterial highway for service to abutting property and adjacent areas and for control of access.

Local street: A street or road primarily for access to residence, business or other abutting property.

Major Street: An arterial highway with intersections at grade and direct access to abutting property, and on which geometric design and traffic control measures are used to expedite the safe movement of through traffic.

Through street: Every highway or portion thereof on which vehicular traffic is given preferential right-of-way and at the entrances to which vehicular traffic from intersecting highways is required by law to yield right-of-way to vehicles on such through highway in obedience to either a stop sign or a yield sign, when such signs are erected. (AASHO)

SURFACE TREATMENT: One or more applications of bituminous material and cover aggregate or thin plant mix on an old pavement or any element of a new pavement structure. (AASHO)

SURFACING:

Plant mixed surfacing: A designed combination of mineral aggregate and bituminous material mixed in a central plant.

Road-mixed surfacing: A designed combination of material components of a flexible pavement mixed on the roadbed or in a travelling plant.

Sheet asphalt surfacing: A designed mixture of well graded sand, mineral filler and asphaltic cement processed in a central plant, laid and compacted while hot. (AASHO)

TIE BAR: A deformed steel bar or connector imbedded in the concrete across a joint to prevent separation of abutting slabs. (AASHO)

TRAVELED WAY: The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes. (AASHO)

- ABSORPTION:** This term applies to immersion in a fluid for a definite period of time. It is usually expressed as a percent of the weight of the dry pipe. (CISPI)
- ANAEROBIC:** Bacteria living without air. (CISPI)
- ANCHOR:** An anchor is usually pieces of metal used to fasten or secure pipes to the building or structure. (CISPI)
- AREA OF CIRCLE:** To find the area of a circle, multiply the square of the radius by pi. Area = πr^2 . (CISPI)
- BACK FILL:** That portion of the trench excavation which is replaced after the sewer line has been laid is called the backfill. It is the material above the pipe up to the original earth line. (CISPI)
- BACKFLOW:** Backflow is the flow of water or other liquids, mixtures or substances into the distributing pipe of a potable supply of water from any source other than that intended. (CISPI)
- BACKFLOW PREVENTER:** This is a device or assembly designed to prevent backflow into the potable water system. (CISPI)
- BACK-SIPHONAGE:** This is the term applied to the flow of used water, wastes and/or contamination into the potable water supply piping, due to vacuums being established in the distribution system, building service, water main or parts thereof. (CISPI)
- BASE:** The lowest portion or lowest point of a stack of vertical pipe. (CISPI)
- BRANCH:** A branch is any part of the piping system other than a main riser, or stack. (CISPI)
- CAULKING:** Caulking is the operation or method of rendering a joint tight against water or gas by means of plastic substances such as lead and oakum. (CISPI)
- CIRCUMFERENCE OF A CIRCLE:** To find the perimeter or circumference of a circle, multiply the diameter of the circle by pi. Circumference = πD . (CISPI)
- CLARIFIED SEWAGE:** This is a term used for sewage from which suspended matter has been partly or completely removed. (CISPI)
- CODE:** The word code, as related to plumbing work, usually means an ordinance with any subsequent amendments thereto, or any emergency rules and regulations which a city or governing body may adopt to control the plumbing work within their jurisdiction. (CISPI)
- COLIFORM GROUP OF BACTERIA:** This is defined as including all organisms considered in the coli aerogenes group as set forth in the American Water Works Association and the American Public Health Association literature. (CISPI)
- COMPRESSION:** Stress which resists the tendency of two forces acting toward each other. (CISPI)
- CONDUCTOR:** A conductor is that part of the vertical piping which carries the water from the roof to the storm drain, which starts either 6 inches above grade if outside the building, or at the roof sump or gutter if inside the building. (CISPI)
- CROSS CONNECTION:** A cross connection or inter-connection is any physical connection between a city water supply and any waste pipe, soil pipe, sewer, drain, or any private or un-certified water supply. Furthermore, it is any potable water supply outlet which is submerged or can be submerged in waste water and/or any other source of contamination. (CISPI)
- CRUDE OR RAW SEWAGE:** This terminology applies to untreated sewage. (CISPI)
- DEAD END:** A dead end is a branch leading from any soil, waste or vent pipe, building drain, or building sewer, which is terminated at a developed distance of two (2) feet or more by means of a cap, plug or other fitting not used for admitting water or air to the pipe, except branches serving as cleanout extensions. (CISPI)
- DEVELOPED LENGTHS:** The term developed length of a pipe refers to the length measured along the centerline of the pipe and fittings. (CISPI)
- DIAMETER:** Unless specifically stated, the term diameter is the nominal diameter as designed commercially. (CISPI)
- DIGESTER AND DIGESTION:** That portion of the sewage treatment process where biochemical decomposition of organic matter takes place, resulting in the formation of simple organic and mineral substances. (CISPI)
- DOMESTIC SEWAGE:** Sewage originating principally from dwellings, business buildings, institutions and usually thought of as not containing storm water. However, in some localities it may include industrial wastes and rain water from combination sewers. (CISPI)
- DRAIN:** A drain is any pipe which carries waste water or water-borne wastes in a building drainage system. (CISPI)
- DRAIN, BUILDING OR HOUSE:** That part of the lowest horizontal piping of a building drainage system which receives and conveys the discharge from soil, waste and drainage pipes, other than storm drains, from within the walls or footings of any building to the building sewer. (CISPI)

- DRAINS, COMBINED:** The combined drain is that portion of the drainage system within a building which carries storm water and sanitary sewage. (CISPI)
- DRAINS, STORM:** Part of the horizontal piping and its branches which convert sub-soil and/or surface drainage from areas, courts, roofs or yards to the building or storm sewer. (CISPI)
- DRAINS, SUBSOIL:** Part of the drainage system which conveys the subsoil ground or seepage water from the footings of walls, or from under buildings, to the building drain, storm water drain or building sewer. (CISPI)
- DRY WEATHER FLOW:** This term refers to sewage collected during the summer which contains little or no ground water by infiltration and no storm water at the time. (CISPI)
- DUCTILITY:** This is the property of elongation, above the elastic limit, but under the tensile strength. (CISPI)
- EFFLUENT:** Sewage, treated or partially treated, flowing out of sewage treatment equipment. (CISPI)
- ELASTIC LIMIT:** The greatest stress which a material can withstand without a permanent deformation after release of the stress. (CISPI)
- EROSION:** The gradual destruction of metal or other material by the abrasive action of liquids, gases, solids or mixtures of these materials. (CISPI)
- EXISTING WORK:** This applies to that portion of a plumbing system which has been installed prior to the current or contemplated addition, alteration or correction. (CISPI)
- FIXTURES, BATTERY OF:** A battery of fixtures is any group of two or more similar adjacent fixtures which discharge into a common horizontal waste or soil branch. (CISPI)
- FIXTURES, COMBINATION:** A combination fixture is an integral unit such as a kitchen sink and a laundry unit. (CISPI)
- FIXTURES, PLUMBING:** Installed receptacles, devices or appliances which are supplied with water, or which receive liquids and/or discharge liquids, or liquid-borne wastes, either directly or indirectly into the drainage system. (CISPI)
- FIXTURE UNIT:** A fixture unit is that amount of fixture discharge equivalent to seven and one-half (7-1/2) gallons or more; one (1) cubic foot of water per minute. (CISPI)
- FLOOD LEVEL RIM:** The top edge of the receptacle from which water overflows. (CISPI)
- FLUSH VALVE:** Device located at the bottom of the tank for the purpose of flushing water closets and similar fixtures. (CISPI)
- FLUSHOMETER VALVE:** A device which discharges a predetermined quantity of water to a fixture for flushing purposes and is actuated by direct water pressure. (CISPI)
- FOOTING:** The part of a foundation wall resting on the bearing soil, rock or piling which transmits the superimposed load to the bearing material. (CISPI)
- FRESH SEWAGE:** This applies to sewage of recent origin still containing free dissolved oxygen. (CISPI)
- LATERAL SEWER:** A sewer which does not receive sewage from any other common sewer except house connections. (CISPI)
- LEACHING WELL OR CESSPOOL:** Any pit or receptacle having porous walls which permit the contents to seep into the ground. (CISPI)
- LEADER:** The piping from the roof which carries roof water. (CISPI)
- MAIN SEWER:** Also called the Trunk Sewer; the main stem or principal artery of the system or sewage network to which branches may be connected. (CISPI)
- MASTER PLUMBER:** The master plumber's license grants him the authority to install and to assume responsibility for contractual agreements pertaining to plumbing and to secure any required permits. The journeyman plumber properly licensed is allowed to install plumbing only under the supervision of a master plumber. (CISPI)
- OFFSET:** A combination of pipe, pipes and/or fittings which join two approximately parallel sections of the line of pipes. (CISPI)
- OUTFALL SEWERS:** Those receiving sewage from the collection system and carrying it to the point of final discharge or treatment. It is usually the largest sewer of the entire system. (CISPI)
- OXIDIZED SEWAGE:** Sewage in which the organic matter has been combined with oxygen and has become stable in nature. (CISPI)
- PIPE, HORIZONTAL:** Any pipe or part thereof which is installed in a horizontal position or which makes an angle of less than 45° with the horizontal. (CISPI)
- PIPE, INDIRECT WASTE:** A pipe that does not connect directly with the drainage system but conveys liquid wastes by discharging into a plumbing fixture or receptacle which is directly connected to the drainage system. (CISPI)

PIPE, LOCAL VENTILATING: A pipe on the fixture side of the trap through which pipe vapors or foul air can be removed from a room or fixture. (CISPI)

PIPE, SOIL: Any pipe which conveys to the building drain or building sewer the discharge of one or more water closets and/or the discharge of any other fixture receiving fecal matter, with or without the discharge from other fixtures. (CISPI)

PIPE, SPECIAL WASTE: A drain which receives one or more wastes which require treatment before entry into the normal plumbing system; the special waste pipe terminates at the treatment device on the premises. (CISPI)

PIPE, VERTICAL: Any pipe or part thereof which is installed in a vertical position or which makes an angle of not more than 45° with the vertical. (CISPI)

PIPE, WASTE: A pipe which conveys only liquid or liquid-borne waste, free of fecal matter. (CISPI)

PIPE, WATER RISER: A water supply pipe which extends vertically one full story or more to convey water to branches or fixtures. (CISPI)

PIPES, WATER DISTRIBUTION: Convey water from the service pipe to its points of usage on the premises. (CISPI)

PIPES, WATER SERVICE: That portion of the water piping which supplies one or more structures or premises and which extends from the public or private main in the street, alley or easement to the meter or, if no meter is to be provided, to the first stop cock or valve inside the premises. (CISPI)

PITCH: Used to indicate the amount of slope or grade given to horizontal piping and expressed in inches of vertically projected drop per foot on a horizontally projected run of pipe. (CISPI)

PLUMBING: Includes the practice, materials and fixtures used in the installation, maintenance, extension and alteration of all piping, fixtures, appliances and appurtenances in connection with any of the following: Sanitary drainage or storm drainage facilities; the venting system and the public or private water-supply systems, within or adjacent to any building, structure or conveyance; also the practice and materials used in the installation, maintenance, extension or alteration of water-supply systems and/or the storm water, liquid waste or sewage system of any premises to their connection with any point of public disposal or other acceptable termina. (CISPI)

PLUMBING INSPECTOR: Any person who, under the supervision of the authority having jurisdiction, is authorized to inspect plumbing and drainage as defined in the code for the municipality, and complying with the laws of licensing and/or registration of the State, City or County. (CISPI)

PRECIPITATION: The total measurable supply of water received directly from the clouds as snow, rain, hail and sleet. It is usually expressed in inches per day, month or year. (CISPI)

PRIVATE USE: Applies to a toilet room or bathroom intended specifically for the use of an individual or family and such visitors as they may permit to use such toilet or bathroom. (CISPI)

PUBLIC USE: Applies to toilet rooms and bathrooms used by employees, occupants, visitors or patrons, in or about any premises. This term also applies to locked toilet rooms or bathrooms to which several occupants or employees on the premises possess keys and have access. (CISPI)

PUTREFACTION: Biological decomposition of organic matter with the production of ill-smelling products is known as putrefaction. It usually takes place when there is a deficiency of oxygen. (CISPI)

REVENT (Individual vent): That part of a vent pipe line which connects directly with any individual waste or group of wastes, underneath or back of the fixture, and extends either to the main or branch vent pipe. (CISPI)

ROUGHING IN: A term concerning the installation of all parts of the plumbing system which can be completed prior to the installation of the plumbing fixtures. This includes drainage, water supply, vent piping and the necessary fixture backing. (CISPI)

SANITARY SEWER: The conduit or pipe carrying sanitary sewage. It may include storm water, and also the infiltration of ground water. (CISPI)

SEPTIC SEWAGE: Sanitary sewage undergoing putrefaction. (CISPI)

SEPTIC TANK: A receptacle which receives the discharge of a drainage system or part thereof, and is designed and so constructed to separate the solids from the liquid, digest the organic matter through a period of detention, and allow the liquids to discharge into the soil outside the tank through a system of open-joint or perforated piping, or into a disposal pit. (CISPI)

- SEWAGE:** Any liquid waste containing animal, vegetable or chemical wastes in suspension or solution. (CISPI)
- SEWER, BUILDING:** Also called house sewer. It is that part of the horizontal piping of a drainage system extending from the building drain, storm drain and/or subsoil drain to its connection into the public sewer, private sewer, sewage treatment tank or other point of disposal, and carrying the drainage of but one building or part thereof. (CISPI)
- SEWER, BUILDING STORM:** The extension from the building storm drain to the public storm sewer, combined sewer, or other point of disposal. (CISPI)
- SEWER, PRIVATE:** A sewer located on private property owned and maintained which conveys the drainage of one or more buildings to a public sewer or to a privately owned sewage disposal system. (CISPI)
- SEWER, STORM:** A sewer used to convey rainwater, surface water, condensate, cooling water or similar water wastes, exclusive of sewage and industrial wastes. (CISPI)
- SLICK:** Thin oily film usually present which gives the characteristic appearance to the surface of water into which sewage or oily waste is discharged. (CISPI)
- SLUDGE:** The accumulated suspended solids of sewage deposited in tanks, beds or basins, mixed with more or less water to form a semiliquid mass called sludge. (CISPI)
- STACK:** The vertical main of a system of soil, waste or vent piping. (CISPI)
- STACK VENT:** The extension of a soil or waste stack above the highest horizontal drain connected to the stack. (CISPI)
- STALE SEWAGE:** Contains little or no oxygen and is, as yet, free from putrefaction. (CISPI)
- STRAIN:** Change of shape or size of a body produced by the action of stress. (CISPI)
- STRESS:** When external forces act on a body, they are resisted by reactions within the body which are called stresses. (CISPI)
- SUBMAIN SEWER (Also called Branch Sewer):** A sewer into which the sewage from two or more lateral sewers is discharged. (CISPI)
- SUBSOIL DRAIN:** Drain which receives only subsurface or seepage water and conveys it to a place of disposal. (CISPI)
- SUMP:** A tank or pit which receives the discharge from drains or other wastes, located below the normal grade of the gravity system, and which must be emptied by mechanical means. (CISPI)
- TENSION:** That stress which resists the tendency of two forces acting away from each other to pull apart two adjoining planes of a body. (CISPI)
- TRAP:** A fitting or device so designed and constructed as to provide, when properly vented, a liquid seal which will prevent the back passage of air without materially affecting the flow of sewage or waste water through it. (CISPI)
- TRAP SEAL:** The vertical distance between the crown weir and the top of the dip of the trap. (CISPI)
- TURBULENCE:** Any deviation from parallel flow in a pipe due to rough inner wall surfaces, obstructions or directional changes. (CISPI)
- UNDERGROUND PIPING:** Piping in contact with the earth below grade. Pipe in a tunnel or in a watertight trench is not included within the scope of this term. (CISPI)
- USED:** Plumbing materials, fixtures or equipment which have been removed from a previous installation. (CISPI)
- VACUUM:** Any pressure less than that exerted by the atmosphere and may be termed a negative pressure. (CISPI)
- VELOCITY:** Time rate of motion in a given direction and sense. (CISPI)
- VENT, CIRCUIT:** A branch vent that serves two or more traps and extends from in front of the last fixture connection of a horizontal branch to the vent stack. (CISPI)
- VENT, COMMON:** Also called dual vent, is a vent connecting at the junction of two fixture drains and serving as a vent for both fixtures. (CISPI)
- VENT, CONTINUOUS:** A vent that is a continuation of and in a straight line with the drain to which it connects. A continuous vent is further designed by the angle which the drain and vent make with the horizontal at the point of connection; for example, vertical continuous waste-and-vent, 45° continuous waste-and-vent; and flat (small angle) continuous waste-and-vent. (CISPI)
- VENT, LOOP:** A vent from a single fixture or battery of fixtures which is connected into the same stack into which the fixtures discharge. If the loop vent serves more than one fixture, it is one type of circuit vent. (CISPI)
- VENT STACK:** A vertical vent pipe installed primarily for the purpose of providing circulation of air to and from any part of the drainage system. A vent stack or main vent is that part of a venting system to which circuit vents are connected. Branch vents, revents or individual

• vents may be led to and connected with a vent stack. The foot of the vent stack may be connected either into a horizontal drainage branch or into a soil or waste stack. (CISPI)

VENT SYSTEM: A pipe or pipes installed to provide a flow of air to or from a drainage system or to provide a circulation of air within such system to protect trap seals from siphonage and back pressure. (CISPI)

VENT, WET: A vent which receives the discharge of wastes other than from water closets. (CISPI)

VENT, YOKE: A pipe connecting upward from a soil or waste stack to a vent stack for the purpose of preventing pressure changes in the stacks. (CISPI)

VENTING, STACK: A method of venting a fixture through the soil and waste stack. (CISPI)

VENTS, INDIVIDUAL: Separate vents for each fixture. (CISPI)

WASTE: The discharge from any fixture, appliance or appurtenance in connection with the plumbing system, which does not contain fecal matter. For example, the liquid from a lavatory, a tub, a sink or drinking fountain is referred to as waste. (CISPI)

ACCEPTANCE TEST: An investigation performed on an individual lot of a previously qualified product, by, or under the observation of, the purchaser to establish conformity with a purchase agreement. (PPI)

ACETAL PLASTICS: Plastics based on resins having a predominance of acetal linkages in the main chain. (PPI)

ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PIPE AND FITTING PLASTICS: Plastics containing polymers and/or blends of polymers, in which the minimum butadiene content is 6 percent, the minimum acrylonitrile content is 15 percent, the minimum styrene and/or substituted styrene content is 15 percent, and the maximum content of all other monomers is not more than 5 percent, and lubricants, stabilizers and colorants. (PPI)

ADHESIVE: A substance capable of holding materials together by surface attachment. (PPI)

ADHESIVE, SOLVENT: An adhesive having a volatile organic liquid as a vehicle. See "Solvent Cement". (PPI)

AGING: (1) The effect on materials of exposure to an environment for an interval of time. (2) The process of exposing materials to an environment for an interval of time. (PPI)

ANTIOXIDANT: A compounding ingredient added to a plastic composition to retard possible degradation from contact with oxygen (air), particularly in processing at or exposures to high temperatures. (PPI)

ARTIFICIAL WEATHERING: The exposure of plastics to cyclic laboratory conditions involving changes in temperature, relative humidity, and ultraviolet radiant energy, with or without direct water spray, in an attempt to produce changes in the material similar to those observed after long-term continuous outdoor exposure. (PPI)

Note: The laboratory exposure conditions are usually intensified beyond those encountered in actual outdoor exposure in an attempt to achieve an accelerated effect. This definition does not involve exposure to special conditions such as ozone, salt spray, industrial gases, etc. (PPI)

BELL END: The enlarged portion of a pipe that resembles the socket portion of a fitting and that is intended to be used to make a joint by inserting a piece of pipe into it. Joining may be accomplished by solvent cements, adhesives, or mechanical techniques. (PPI)

BEAM LOADING: The application of a load to a pipe between two points of support, usually expressed in pounds and the distance between the centers of the supports. (PPI)

BURST STRENGTH: The internal pressure required to break a pipe or fitting. This pressure will vary with the rate of build-up of the pressure and the time during which the pressure is held. (PPI)

BUTYLENE PLASTICS: Plastics based on resins made by the polymerization of butene or copolymerization of butene with one or more unsaturated compounds, the butene being in greatest amount by weight. (PPI)

CELLULOSE ACETATE BUTYRATE PLASTICS: Plastic made by compounding a cellulose acetate-butyrate ester with plasticizers and other ingredients. Cellulose acetate butyrate ester is a derivative of cellulose (obtained from cotton and/or wood pulp) made by converting some of the hydroxyl groups in cellulose to acetate and butyrate groups with chemicals. (PPI)

CEMENT: See adhesive and solvents, cement. (PPI)

CHEMICAL RESISTANCE: (1) The effect of specific chemicals on the properties of plastic piping with respect to concentration, temperature and time of exposure. (2) The ability of a specific plastic pipe to render service for a useful period in the transport of a specific chemical at a specified concentration and temperature. (PPI)

COLD FLOW: See "Creep". (PPI)

COMPOUND: The intimate admixture of a polymer or polymers with other ingredients such as fillers, softeners, plasticizers, catalysts, pigments, dyes, curing agents, stabilizers, anti-oxidants, etc. (PPI)

COPOLYMER: See "Polymer". (PPI)

CREEP: The time-dependent part of strain resulting from stress, that is, the dimensional change caused by the application of load over and above the elastic deformation and with respect to time. (PPI)

CURE: To change the properties of a polymeric system into a final, more stable, usable condition by the use of heat, radiation, or reaction with chemical additives. (PPI)

DEFLECTION TEMPERATURE: The temperature at which a specimen will deflect a given distance at a given load under prescribed conditions of test. See ASTM D648. Formerly called heat distortion. (PPI)

DEGRADATION: A deleterious change in the chemical structure of a plastic. See also "deterioration". (PPI)

DETERIORATION: A permanent change in the physical properties of a plastic evidenced by impairment of these properties. (PPI)

DIFFUSION: The movement of a material, such as a gas or liquid, in the body of a plastic. If the gas or liquid is absorbed on one side of a piece of plastic and given off on the other side, the phenomenon is called permeability. Diffusion and permeability are not due to holes or pores in the plastic but are caused and controlled by chemical mechanisms. (PPI)

DIMENSION RATIO: The diameter of a pipe divided by the wall thickness. Each pipe can have two dimension ratios depending on whether the outside and inside diameter is used. In practice, the outside diameter is used if the standard requirement and manufacturing control are based on this diameter. The inside diameter is used when this measurement is the controlling one. (PPI)

DRY-BLEND: A free-flowing dry compound prepared without fluxing or addition of solvent. (PPI)

ELASTICITY: That property of plastics materials by virtue of which they tend to recover their original size and shape after deformation. (PPI)

Note: If the strain is proportional to the applied stress, the material is said to exhibit Hookean or ideal elasticity. (PPI)

ELASTOMER: A material which at room temperature can be stretched repeatedly to at least twice its original length and, upon immediate release of the stress, will return with force to its approximate original length. (PPI)

ELEVATED TEMPERATURE TESTING: Tests on plastic pipe above 23C (73F). (PPI)

ENVIRONMENTAL STRESS CRACKING: Cracks that develop when the material is subjected to stress in the presence of specific chemicals. (PPI)

ETHYLENE PLASTICS. Plastics based on resins made by the polymerization of ethylene or copolymerization of ethylene with one or more other unsaturated compounds, the ethylene being in greatest amount by weight. (PPI)

EXTRUSION: A method whereby heated or unheated plastic forced through a shaping orifice becomes one continuously formed piece. (PPI)

FAILURE, ADHESIVE: Rupture of an adhesive bond, such that the plane of separation appears to be at the adhesive-adherend interface. (PPI)

FIBER STRESS: The unit stress, usually in pounds per square inch (psi), in a piece of material that is subjected to an external load. (PPI)

FILLER: A relatively inert material added to a plastic to modify its strength, permanence, working properties, or other qualities, or to lower costs. See also "Reinforced Plastic". (PPI)

FORMING: A process in which the shape of plastic pieces such as sheets, rods or tubes is changed to a desired configuration. See also "Thermoforming." (PPI)

Note: The use of the term "forming" in plastics technology does not include such operations as molding, casting or extrusion, in which shapes or pieces are made from molding materials or liquids. (PPI)

FUNGI RESISTANCE: The ability of plastic pipe to withstand fungi growth and/or their metabolic products under normal conditions of service or laboratory tests simulating such conditions. (PPI)

HEAT DISTORTION: See "Deflection temperature". (PPI)

HEAT FORMING: See "Thermoforming". (PPI)

HEAT JOINING: Making a pipe joint by heating the edges of the parts to be joined so that they fuse and become essentially one piece with or without the addition of additional material. (PPI)

HOOP STRESS: The tensile stress, usually in pounds per square inch (psi), in the circumferential orientation in the wall of the pipe when the pipe contains a gas or liquid under pressure. (PPI)

HYDROSTATIC DESIGN STRESS: The estimated maximum tensile stress in the wall of the pipe in the circumferential orientation due to internal hydrostatic pressure that can be applied continuously with a high degree of certainty that failure of the pipe will not occur. (PPI)

HYDROSTATIC STRENGTH (QUICK): The hoop stress calculated by means of the ISO equation at which the pipe breaks due to an internal pressure build-up, usually within 60 to 90 seconds. (PPI)

LONG-TERM BURST: The internal pressure at which a pipe or fitting will break due to a constant internal pressure held for 100,000 hours (11.43 years). (PPI)

IMPACT, IZOD: A specific type of impact test made with a pendulum type machine. The specimens are molded or extruded with a machined notch in the center. See ASTM D256. (PPI)

IMPACT, TUP: A falling weight (tup) impact test developed specifically for pipe and fittings. There are several variables that can be selected. See ASTM D2444. (PPI)

ISO EQUATION: An equation showing the interrelations between stress, pressure and dimensions in pipe, namely:

$$S = \frac{P(ID + t)}{2t} \quad \text{or} \quad \frac{P(OD - t)}{2t}$$

where S = stress
P = pressure
ID = average inside diameter
OD = average outside diameter
t = minimum wall thickness. (PPI)

Reference: ISO R161-1960 Pipes of Plastics Materials for the Transport of Fluids (Outside Diameters and Nominal Pressures) Part I, Metric Series. (PPI)

JOINT: The location at which two pieces of pipe or a pipe and a fitting are connected together. The joint may be made by an adhesive, a solvent-cement or a mechanical device such as threads or a ring seal. (PPI)

LONG-TERM HYDROSTATIC STRENGTH: The estimated tensile stress in the wall of the pipe in the circumferential orientation (hoop stress) that when applied continuously will cause failure of the pipe at 100,000 hours (11.43 years). These strengths are usually obtained by extrapolation of log-log regression equations or plots. (PPI)

MOLDING, COMPRESSION: A method of forming objects from plastics by placing the material in a confining mold cavity and applying pressure and usually heat. (PPI)

MOLDING, INJECTION: A method of forming plastic objects from granular or powdered plastics by the fusing of plastic in a chamber with heat and pressure and then forcing part of the mass into a cooler chamber where it solidifies. (PPI)

Note: This method is commonly used to form objects from thermoplastics. (PPI)

MONOMER: A relatively simple chemical which can react to form a polymer. See also "Polymer". (PPI)

NYLON PLASTICS: Plastics based on resins composed principally of a long-chain synthetic polymeric amide which has recurring amide groups as an integral part of the main polymer chain. (PPI)

OLEFIN PLASTICS: Plastics based on resins made by the polymerization of olefins or copolymerization of olefins with other unsaturated compounds, the olefins being in greatest amount by weight. Polyethylene, polypropylene and polybutylene are the most common olefin plastics encountered in pipe. (PPI)

OUTDOOR EXPOSURE: Plastic pipe placed in service or stored so that it is not protected from the elements of normal weather conditions, i.e., the sun's rays, rain, air and wind. Exposure to industrial and waste gases, chemicals, engine exhausts, etc., are not considered normal "outdoor exposure." (PPI)

PERMANENCE: The property of a plastic which describes its resistance to appreciable changes in characteristics with time and environment. (PPI)

PERMEABILITY: See "Diffusion". (PPI)

PLASTIC: A material that contains as an essential ingredient an organic substance of large molecular weight, is solid in its finished state, and, at some stage in its manufacture or in its processing into finished articles, can be shaped by flow. (PPI)

The adjective plastic indicates that the noun modified is made of, consists of, or pertains to plastic. (PPI)

Note (1): The above definition may be used as a separate meaning to the definitions contained in the dictionary for the adjective "plastic". (PPI)

Note (2): The plural form may be used to refer to two or more plastic materials, for example, plastics industry. However, when the intent is to distinguish "plastic products" from "wood products" or "glass products", the singular form should be used. As a general rule, if the adjective is to restrict the noun modified, with respect to type of material, "plastic" should be used; if the adjective is to indicate that more than one type of plastic material is or may be involved, "plastics" is permissible. (PPI)

PLASTICIZER: A material incorporated in a plastic to increase its workability and its flexibility or distensibility.

Note: The addition of the plasticizer may lower the melt viscosity, the temperature of the second-order transition, or the elastic modulus of the plastic. (PPI)

PLASTICS CONDUIT: Plastic pipe or tubing used as an enclosure for electrical wiring. (PPI)

PLASTICS PIPE: A hollow cylinder of a plastic material in which the wall thicknesses are usually small when compared to the diameter and in which the inside and outside walls are essentially concentric. See plastics tubing. (PPI)

PLASTICS TUBING: A particular size of plastics pipe in which the outside diameter is essentially the same as that of copper tubing. See "plastics pipe". (PPI)

POLYBUTYLENE: A polymer prepared by the polymerization of butene-1 as the sole monomer. See "Polybutylene Plastics" and "Butylene Plastics." (PPI)

POLYBUTYLENE PLASTICS: Plastics based on polymers made with butene-1 as essentially the sole monomer. (PPI)

POLYETHYLENE: A polymer prepared by the polymerization of ethylene as the sole monomer. See "Polyethylene Plastics" and "Ethylene Plastics." (PPI)

POLYETHYLENE PLASTICS: Plastics based on polymers made with ethylene as essentially the sole monomer. Note: In common usage

for this plastic, essentially means no less than 85% ethylene and no less than 95% total olefins. (PPI)

POLYMER: A compound formed by the reaction of simple molecules having functional groups that permit their combination to proceed to high molecular weights under suitable conditions. Polymers may be formed by polymerization (addition polymer) or polycondensation (condensation polymer). When two or more monomers are involved, the product is called a copolymer. (PPI)

POLYMERIZATION: A chemical reaction in which the molecules of a monomer are linked together to form large molecules whose molecular weight is a multiple of that of the original substance. When two or more monomers are involved, the process is called copolymerization or heteropolymerization. (PPI)

POLYOLEFIN: A polymer prepared by the polymerization of an olefin(s) as the sole monomer(s). See "Polyolefin plastics" and "Olefin plastics." (PPI)

POLYOLEFIN PLASTICS: Plastics based on polymers made with an olefin(s) as essentially the sole monomer(s). (PPI)

POLYPROPYLENE: A polymer prepared by the polymerization of propylene as the sole monomer. See "Polypropylene plastics" and "Propylene plastics". (PPI)

POLYPROPYLENE PLASTICS: Plastics based on polymers made with propylene as essentially the sole monomer. (PPI)

POLYSTYRENE: A plastic based on a resin made by polymerization of styrene as the sole monomer. See "Styrene plastics". (PPI)

Note: Polystyrene may contain minor proportions of lubricants, stabilizers, fillers, pigments and dyes. (PPI)

POLY (VINYL CHLORIDE): A resin prepared by the polymerization of vinyl chloride with or without the addition of small amounts of other monomers. (PPI)

POLY (VINYL CHLORIDE) PLASTICS: Plastics made by combining poly (vinyl chloride) with colorants, fillers, plasticizers, stabilizers, lubricants, other polymers and other compounding ingredients. Not all of these modifiers are used in pipe compounds. (PPI)

POWDER BLEND: See "Dry-Blend". (PPI)

PRESSURE: When expressed with reference to pipe the force per unit area exerted by the medium in the pipe. (PPI)

PRESSURE RATING: The estimated maximum pressure that the medium in the pipe can exert continuously with a high degree of certainty that failure of the pipe will not occur. (PPI)

PROPYLENE PLASTICS: Plastics based on resins made by the polymerization of propylene or copolymerization of propylene with one or more other unsaturated compounds, the propylene being in greatest amount by weight. (PPI)

QUALIFICATION TEST: An investigation, independent of a procurement action, performed on a product to determine whether or not the product conforms to all requirements of the applicable specification. (PPI)

Note: The examination is usually conducted by the agency responsible for the specification, the purchaser, or by a facility approved by the purchaser, at the request of the supplier seeking inclusion of his product on a qualified products list. (PPI)

QUICK BURST: The internal pressure required to burst a pipe or fitting due to an internal pressure build-up, usually within 60 to 90 seconds. (PPI)

REINFORCED PLASTIC: A plastic with some strength properties greatly superior to those of the base resin, resulting from the presence of high strength fillers embedded in the composition. See also "Filler". (PPI)

RESIN: A solid, semisolid or pseudosolid organic material which has an indefinite and often high molecular weight, exhibits a tendency to flow when subjected to stress, usually has a softening or melting range, and usually fractures conchoidally. (PPI)

REWORKED MATERIAL (THERMOPLASTIC): A plastic material that has been reprocessed, after having been previously processed by molding, extrusion, etc., in a fabricator's plant. (PPI)

RUBBER: A material that is capable of recovering from large deformations quickly and forcibly. See "Elastomer". (PPI)

SAMPLE: A small part or portion of a plastic material or product intended to be representative of the whole. (PPI)

SARAN PLASTICS: Plastics based on resins made by the polymerization of vinylidene chloride or copolymerization of vinylidene chloride with other unsaturated compounds, the vinylidene chloride being in greatest amount of weight. (PPI)

SCHEDULE: A pipe size system (outside diameters and wall thicknesses) originated by the iron pipe industry. (PPI)

SELF-EXTINGUISHING: The ability of a plastic to resist burning when the source of heat or flame that ignited it is removed. (PPI)

- SERVICE FACTOR:** A factor which is used to reduce a strength value to obtain an engineering design stress. The factor may vary depending on the service conditions, the hazard, the length of service desired and the properties of the pipe. (PPI)
- SET:** To convert an adhesive into a fixed or hardened state by chemical or physical action, such as condensation, polymerization, oxidation, vulcanization, gelation, hydration, or evaporation of volatile constituents. See also "Cure". (PPI)
- SOFTENING RANGE:** The range of temperature in which a plastic changes from a rigid to a soft state. (PPI)
- Note: Actual values will depend on the method of test. Sometimes referred to as softening point. (PPI)
- SOLVENT CEMENT:** In the plastic piping field, a solvent adhesive that contains a solvent that dissolves or softens the surfaces being bonded so that the bonded assembly becomes essentially one piece of the same type of plastic. (PPI)
- SOLVENT CEMENTING:** Making a pipe joint with a solvent cement. See "Solvent cement". (PPI)
- SPECIMEN:** An individual piece or portion of a sample used to make a specific test. Specific tests usually require specimens of specific shape and dimensions. (PPI)
- STABILIZER:** A compounding ingredient added to a plastic composition to retard possible degradation on exposure to high temperatures, particularly in processing. An anti-oxidant is a specific kind of stabilizer. (PPI)
- STANDARD DIMENSION RATIO:** A selected series of numbers in which the dimensions ratios are constants for all sizes of pipe for each standard dimension ratio and which are the USASI Preferred Number Series 10 modified by +1 or -1. If the outside diameter (OD) is used, the modifier is +1. If the inside diameter (ID) is used, the modifier is -1. Some of the numbers are as follows:

USASI Preferred Number Series 10	OD Control	ID Control
5.	6.	4.
6.3	7.3	5.3
8.	9.	7.
10.	11.	9.
12.5	13.5	11.5
16.	17.	15.
20.	21.	19.
25.	26.	24.
31.5	32.5	30.5
40.	41.	39.
50.	51.	49.
63.	64.	62.

Reference: USASI Preferred Numbers, 717.1-1958, UDS 389.17. (PPI)

STANDARD THERMOPLASTIC PIPE MATERIALS DESIGNATION CODE: A means for easily identifying a thermoplastic pipe material by means of three elements. The first element is the abbreviation for the chemical type of the plastic in accordance with ASTM D1600. The second is the type and grade (based on properties in accordance with the ASTM materials specification); in the case of ASTM specifications which have no types and grades or those in the cell structure system, two digit numbers are assigned by the PPI that are used in place of the larger numbers. The third is the recommended hydrostatic design stress (RHDS) for water at 23C (73F) in pounds per square inch divided by 100 and with decimals dropped, e.g., PVC 1120 indicates that the plastic is poly (vinyl chloride), Type I, Grade 1 according to ASTM D1784 with a RHDS of 2000 psi for water at 73F. PE 3306 indicates that the plastic is polyethylene Type III Grade 3 according to ASTM D1248 with a RHDS of 630 psi for water at 73F. PP 1208 is polypropylene, Class I-19509 in accordance with ASTM D2146 with a RHDS of 800 psi for water at 73F; the designation of PP12 for polypropylene class I-19509 will be covered in the ASTM and Product Standards for polypropylene pipe when they are issued. (PPI)

STIFFNESS FACTOR: A physical property of plastic pipe that indicates the degree of flexibility of the pipe when subjected to external loads. See ASTM D2412. (PPI)

STRAIN: The ratio of the amount of deformation to the length being deformed caused by the application of a load on a piece of material. (PPI)

STRENGTH: The stress required to break, rupture or cause a failure. (PPI)

STRESS: When expressed with reference to pipe, the force per unit area in the wall of the pipe in the circumferential orientation due to internal hydrostatic pressure. (PPI)

STRESS-CRACK: External or internal cracks in a plastic caused by tensile stresses less than that of its short-time mechanical strength. (PPI)

Note: The development of such cracks is frequently accelerated by the environment to which the plastic is exposed. The stresses which cause cracking may be present internally or externally or may be combinations of these stresses. The appearance of a network of fine cracks is called crazing. (PPI)

STRESS RELAXATION: The decrease of stress with respect to time in a piece of plastic that is subject to an external load. (PPI)

STYRENE PLASTICS: Plastics based on resins made by the polymerization of styrene or copolymerization of styrene with other unsaturated compounds, the styrene being in greatest amount by weight. (PPI)

STYRENE-RUBBER PLASTICS: Compositions based on rubbers and styrene plastics, the styrene plastics being in greatest amount by weight. (PPI)

STYRENE-RUBBER (SR) PIPE AND FITTING PLASTICS: Plastics containing at least 50 percent styrene plastics combined with rubbers and other compounding materials, but not more than 15 percent acrylonitrile. (PPI)

SUSTAINED PRESSURE TEST: A constant internal pressure test for 1000 hours. (PPI)

THERMOFORMING: Forming with the aid of heat. See also "Forming". (PPI)

THERMOPLASTIC: A plastic which is thermoplastic in behavior. (PPI)

Capable of being repeatedly softened by increase of temperature and hardened by decrease of temperature. (PPI)

Note: Thermoplastic applies to those materials whose change upon heating is substantially physical. (PPI)

THERMOSET: A plastic which, when cured by application of heat or chemical means, changes into a substantially infusible and insoluble product. (PPI)

Pertaining to the state of a resin in which it is relatively infusible. (PPI)

THERMOSETTING: Capable of being changed into a substantially infusible or insoluble product when cured under application of heat or chemical means. (PPI)

VINYL CHLORIDE PLASTICS: Plastics based on resins made by the polymerization of vinyl chloride or copolymerization of vinyl chloride with other unsaturated compounds, the vinyl chloride being in greatest amount by weight. (PPI)

VIRGIN MATERIAL: A plastic material in the form of pellets, granules, powder, floc or liquid that has not been subjected to use or processing other than that required for its original manufacture. (PPI)

WELD-or KNIT-LINE: A mark on a molded plastic formed by the union of two or more streams of plastic flowing together. (PPI)