

Asphalt Industry Glossary of Terms

This is an alphabetical listing of the terms and descriptions commonly used in the asphalt industry.

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A

Absolute Viscosity	A measure of the viscosity of asphalt with respect to time, measured in poises, conducted at 60°C (140°F). The test method utilizes a partial vacuum to induce flow in the viscometer.
Aggregate Spreaders	Machines used for spreading aggregate evenly at a uniform rate on a surface.
Aggregate Storage Bins	Bins that store the necessary aggregate sizes and feed them to the dryer in substantially the same proportions as are required in the finished mix.
Aggregate Trucks	Trucks equipped with hydraulic lifts to dump the aggregate into the spreader or storage area.
Aggregate	A hard inert mineral material, such as gravel, crushed rock, slag, or crushed stone, used in pavement applications either by itself or for mixing with asphalt.
Air Voids	Internal spaces in a compacted mix surrounded by asphalt-coated particles, expressed as a percentage by volume of the total compacted mix.
Asphalt (asphalt cement)	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 and used for paving, roofing, industrial and other special purposes.
Alligator Cracks	Interconnected cracks forming a series of small blocks resembling an alligator's skin or chicken-wire, and caused by excessive deflection of the surface over unstable subgrade or lower courses of the pavement.
Asphalt Application	The application of sprayed asphalt coatings not involving the use of aggregates.
Asphalt Binder	Asphalt cement that is classified according to the Standard Specification for Performance Graded Asphalt Binder, AASHTO Designation MP1. It can be either unmodified or modified asphalt cement, as long as it complies with the specifications.
Asphalt Concrete	A mixture of asphalt binder and aggregate thoroughly mixed and compacted into a mass.
Asphalt Distributor	A truck or a trailer having an insulated tank, heating system and distribution system. The distributor applies asphalt to a surface at a uniform rate.
Asphalt Emulsion	An emulsion of asphalt binder and water that contains a small amount of an emulsifying agent. Emulsified asphalt droplets may be of either the anionic (negative charge), cationic (positive charge) or nonionic (neutral).

A B C D E F G H I K L
M N O P R S T U V W

Asphalt Emulsion Mix (Cold)	A mixture of unheated mineral aggregate and emulsified (or cutback) asphalt binder. It can be plant-mixed or mixed in-place.
Asphalt Emulsion Mix (Warm)	A mixture of asphalt emulsion and mineral aggregate usually prepared in a conventional hot mix asphalt plant at a temperature less than 95°C (200°F). It is spread and compacted at a temperature above 65°C (150°F).
Asphalt Emulsion Slurry Seal	A mixture of slow-setting emulsified asphalt, fine aggregate, and mineral filler with a slurry consistency
Asphalt Leveling Course	A course of hot mix asphalt of variable thickness used to eliminate irregularities in the contour of an existing surface prior to placing the subsequent course.
Asphalt Pavement Structure	A pavement structure that is designed and constructed so that all courses above the subgrade are asphalt concrete (Full-Depth Asphalt Pavement).
Asphalt Pavements	Pavements consisting of a surface course of asphalt concrete over supporting courses such as asphalt concrete bases, crushed stone, slag, gravel, Portland Cement Concrete (PCC), brick, or block pavement.
Asphalt Prime Coat	An application of asphalt primer to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates or is mixed into the surface of the base and plugs the voids, hardens the top and helps bind it to the overlying asphalt course.
Asphalt Primer	Low viscosity asphalt (highly liquid) that penetrates into a non-bituminous surface upon application.
Asphalt Rubber - Asphalt Concrete (AR-AC)	High quality, thoroughly controlled hot mixture of asphalt rubber binder (AR) and well-graded, high quality aggregate, which can be thoroughly compacted into a uniform dense mass.
Asphalt Rubber Binder (AR)	Conventional asphalt cement to which recycled ground tire rubber has been added, that when reacted with the hot asphalt cement causes a swelling and/or dispersion of the tire rubber particles.
Asphalt Tack Coat	A relatively thin application of asphalt binder applied to an existing asphalt concrete or PCC surface at a prescribed rate. Asphalt emulsion diluted with water is the preferred type. It is used to form a bond between an existing surface and the overlying course.
Asphaltenes	The high molecular weight hydrocarbon fraction precipitated from asphalt by a designated paraffinic naphtha solvent at a specified solvent-asphalt ratio.

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Automatic Cycling Control	A control system in which the opening and closing of the weigh hopper discharge gate, the bituminous discharge valve, and the pugmill discharge gate are actuated by means of self-acting mechanical or electrical machinery without any intermediate manual control. The system includes preset timing devices to control the desired periods of dry and wet mixing cycles.
Automatic Dryer Control	A system that automatically maintains the temperature of aggregates discharged from the dryer within a preset range.
Automatic Proportioning Control	A system in which proportions of the aggregate and asphalt fractions are controlled by means of gates or valves, which are opened and closed by means of self-acting mechanical or electronic machinery without any intermediate manual control.

B

Back-calculation	An analytical technique used to determine the equivalent elastic moduli of pavement layers corresponding to the measured load and deflections. In the iterative method, layer moduli are selected and adjusted until the difference between the calculated and measured deflections are within selected tolerances, or the maximum number of iterations has been reached.
Bank Gravel	Gravel found in natural deposits, usually intermixed with fine material such as sand or clay or a combination thereof; includes gravelly clay, gravelly sand, clayey gravel, and sandy gravel (the names indicate the relative proportion of the materials in the mixture).
Base Course	The layer in the pavement system immediately below the binder and surface courses. It usually consists of crushed stone, although it may consist of crushed slag or other stabilized or unstabilized material.
Batch Plant	A manufacturing facility for producing asphalt paving mixtures that proportions blending. They manufacture asphalt in batches rather than continuously and are more suited for small manufacturing runs and (frequent) changes in mixture types.
Binder Course	The hot mix asphalt course immediately below the surface course, generally consisting of larger aggregates and less asphalt (by weight) than the surface.
Bitumen	A class of black or dark-colored (solid, semisolid, or viscous) cementitious substances, natural or manufactured, composed principally of high molecular weight hydrocarbons, of which asphalts, tars, pitches, and asphaltites are typical.
Blast-Furnace Slag	The nonmetallic product, consisting essentially of silicates and aluminosilicates of lime and of other bases, that is developed simultaneously with iron in a blast furnace.
Bleeding or Flushing Asphalt	The upward migration of asphalt binder in an asphalt pavement resulting in the formation of asphalt film on the surface.

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C

California Bearing Ratio (CBR)	A test used for evaluating bases, subbases, and subgrades for pavement thickness design it is a relative measure of the shear resistance of a soil (see <i>Soils Manual</i> , MS-10). CBR = load required to force a calibrated piston into a soil specimen / load required to force a like piston into a crushed stone specimen capacity and ride quality of the pavement system.
Cape Seal	A surface treatment where a chip seal is followed by the application of either slurry seal or micro-surfacing.
Channels (Ruts)	Channeled depressions that sometimes develop in the wheel paths of an asphalt pavement.
Clinker	A fused or partially fused by-product of the combustion of coal. Also includes lava and Portland Cement and partially vitrified slag and brick.
Coal Tar	A dark brown to black cementitious material produced by the destructive distillation of bituminous coal.
Coarse Aggregate	Aggregate retained on the 2.36 mm (No. 8) sieve.
Coarse-Graded Aggregate	One having a continuous grading in sizes of particles from coarse through fine with a predominance of coarse sizes.
Cold In-place Recycling Train	A unit consisting of a large milling machine towing a screening/crushing plant and pugmill mixer for the addition of asphalt emulsion and production of cold mix base.
Compaction	The act of compressing a given volume of material into a smaller volume.
Consensus Properties	Aggregate characteristics that must follow certain criteria to satisfy a Superpave mix design. Specified test values for these properties are not source specific but widely agreed upon. They include Coarse Aggregate Angularity, Fine Aggregate Angularity, Flat or Elongated Particles, and Clay Content.
Consistency	The degree of fluidity of asphalt cement at any particular temperature. The consistency of asphalt cement varies with its temperature; therefore, it is necessary to use a common or standard temperature when comparing the consistency of one asphalt cement with another.
Corrugations (Washboarding) and Shoving	A type of pavement distortion. Corrugation is a form of plastic deformation typified by ripples across the pavement surface. These distortions usually occur at points where traffic starts and stops, on hills where vehicles brake on the downgrade, on sharp curves, or where vehicles hit a bump and bounce up and down. They occur in asphalt layers that lack stability.
Crack and Seat	A fractured slab technique used in the rehabilitation of PCC pavements that minimizes slab action in a jointed concrete pavement (JCP) by fracturing the PCC layer into smaller segments. This reduction in slab length minimizes reflective cracking in new HMA overlays.

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Crack	An approximately vertical random cleavage of the pavement caused by traffic loading, thermal stresses and/or aging of the binder.
Crack-Relief Layer	A large stone, open graded asphalt mixture placed over a distressed pavement that minimizes reflective cracking by absorbing the energy produced by movement in the underlying pavement.
Crusher-Run	The total unscreened product of a stone crusher.
Curing	The development of the mechanical properties of the asphalt binder. This occurs after the emulsion has broken and the emulsion particles coalesce and bond to the aggregate.
Cutback Asphalt	Asphalt cement that has been liquified by blending with petroleum solvents (diluent). Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function.

D

Deep Strength Asphalt Pavement	Pavements containing at least four inches of HMA over non-stabilized base courses.
Deflection Basin	The idealized shape of the deformed pavement surface as a result of a cyclic or impact load as depicted from the peak measurements of five or more deflection sensors.
Deflection	A load-induced, downward movement of a pavement section.
Rebound Deflection	The amount of surface rebound when a load is removed.
Representative Rebound Deflection	The mean value of measured rebound deflections in a test section, plus two standard deviations, adjusted for temperature and most critical period of the year for pavement performance.
Residual Deflection	The difference between original and final elevations of the pavement surface resulting from the application to, and removal of, one or more loads from the surface.
Deflection Sensor	The term that shall be used to refer to the electronic device(s) capable of measuring the vertical movement of the pavement; and, mounted in such a manner as to minimize angular rotation with respect to its measuring plane at the expected movement. Sensor types include seismometers, velocity transducers, and accelerometers.
Delivery Tolerances	Permissible variations from the exact desired proportions of aggregate and bituminous material as manufactured by an asphalt plant.
Dense-Graded Aggregate	An aggregate that has a particle size distribution such that when it is compacted, the resulting voids between the aggregate particles, expressed as a percentage of the total space occupied by the material, are less than 10%.

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Densification	The act of increasing the density of a mixture during the compaction process.
Design ESAL	The total number of equivalent 80-kN (18,000-lb.), single-axle load applications (equivalent single axle loads) expected throughout the design period.
Design Lane	The lane on which the greatest number of equivalent 80-kN (18,000-lb.) single axle loads (ESAL) is expected. This will normally be either lane of a two-lane roadway or the outside lane of a multi-lane highway.
Design Period	The number of years from the initial application of traffic until the first planned major resurfacing or overlay. This term should not be confused with pavement life or analysis period. Adding hot mix asphalt overlays as required will extend pavement life indefinitely or until geometric considerations (or other factors) make the pavement obsolete.
Design Subgrade Resilient Modulus	The value of the Subgrade Resilient Modulus (M_R) used for designing the pavement structure. It is a percentile value of the subgrade resilient modulus test data distribution that varies with design ESAL.
Disintegration	The breaking up of a pavement into small, loose fragments caused by traffic or weathering (e.g. raveling).
Distortion	Any change of a pavement surface from its original shape.
Drum Mix Plant	A manufacturing facility for producing asphalt paving mixtures that proportions the aggregate, then dries and coats the aggregate with a proportional amount of asphalt in the same drum. Variations of this type of plant use several types of drum modifications, separate (and smaller) mixing drums, and coating units (coater) to accomplish the mixing process. They are more suited for long runs of the same product.
Dryer	An apparatus that will dry the aggregates and heat them to the specified temperatures.
Ductility	The ability of a substance to be drawn out or stretched thin. While ductility is considered an important characteristic of asphalt cements in many applications, the presence or absence of ductility is usually considered more significant than the actual degree of ductility.
Durability	The property of an asphalt pavement that represents its ability to resist disintegration by weathering and traffic.

E

Edge Joint Cracks	The separation of the joint between the pavement and the shoulder, commonly caused by the alternate wetting and drying beneath the shoulder surface. Other causes are shoulder settlement, mix shrinkage, and trucks straddling the joint.
Effective Thickness	The ratio of the thickness of an existing pavement material compared to the equivalent thickness of a new HMA layer.

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Emulsifying Agent or Emulsifier	The chemical added to the water and asphalt that keeps the asphalt in stable suspension in the water. The emulsifier determines the charge of the emulsion and controls the breaking rate.
ESAL (equivalent single axle loads)	The effect on pavement performance of any combination of axle loads of varying magnitude equated to the number of 80-kN (18,000-lb.) single-axle loads that are required to produce an equivalent effect.

F

Fatigue Resistance	The ability of asphalt pavement to resist crack initiation caused by repeated flexing.
Fault	A difference in elevation of two slabs at a joint or crack.
Fine Aggregate	Aggregate passing the 2.36 mm (No. 8) sieve.
Fine-Graded Aggregate	One having a continuous grading in sizes of particles from coarse through fine with a predominance of fine sizes.
Flexibility	The ability of an asphalt pavement structure to conform to settlement of the foundation. Generally, flexibility of the asphalt paving mixture is enhanced by high asphalt content.
Fog Seal	A light application of diluted asphalt emulsion. It is used to renew old asphalt surfaces, seal small cracks and surface voids, and inhibit raveling.
Fractured Slab Techniques	Processes used to rehabilitate PCC pavements by eliminating slab action through the reduction of slab size (crack/break and seat) or the pulverization of the PCC slab (rubblization) into essentially a granular base.
Full-Depth 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 placed directly on the prepared subgrade.

G

Grade Depressions	Localized low areas of limited size.
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H

Heavy Trucks	Two-axle, six-tire trucks or larger. Pickup, panel and light four-tire trucks are not included. Trucks with heavy-duty, wide-base tires are included.
Hot Aggregate Storage Bins	Bins that store heated and fractionated aggregates prior to their final proportioning into the mixer.

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Hot Mix Asphalt (HMA)	High quality, thoroughly controlled hot mixture of asphalt binder (cement) and well-graded, high quality aggregate, which can be compacted into a uniform dense mass.
Hot Mix Asphalt (HMA) Overlay	One or more courses of HMA over an existing pavement.

I

Impermeability	The resistance an asphalt pavement has to the passage of air and water into or through the pavement.
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K

Kinematic Viscosity	A measure of the viscosity of asphalt, measured in centistokes, conducted at a temperature of 135°C (275°F).
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L

Lane Joint Cracks	Longitudinal separations along the seam between two paving lanes.
Lift	A layer or course of paving material applied to a base or a previous layer.
Lime Treated Subgrade	A subgrade preparation technique in which the subgrade soil and added lime are mechanically mixed and compacted to produce a higher modulus base material than the in-situ material.
Lime-Fly Ash Base	A road base material consisting of a blend of mineral aggregate, lime, fly ash, and water, which when combined in proper proportions and compacted produces a dense mass of increased strength.
Load Equivalency Factor (LEF)	The number of 80-kN (18,000-lb.) single-axle load applications (ESAL) contributed by one passage of an axle.
Longitudinal Crack	A vertical crack in the pavement that follows a course approximately parallel to the centerline.

M

Maintenance Mix	A mixture of asphalt emulsion and mineral aggregate for use in relatively small areas to patch holes, depressions, and distressed areas in existing pavements. Appropriate hand or mechanical methods are used in placing and compacting the mix.
Mechanical Spreaders	Spreader boxes that are mounted on wheels. The spreaders are attached to and pushed by dump trucks (HMA boxes are pulled and chip spreaders are pushed).

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Medium-Curing (MC) Asphalt	Cutback asphalt composed of asphalt cement and a diluent of medium volatility.
Mesh	The square opening of a sieve.
Micro-Surfacing	A mixture of polymer modified asphalt emulsion, crushed dense graded aggregate, mineral filler, additives and water. It provides a thin resurfacing of 10 to 20 mm (3/8 to 3/4 inch) to the pavement.
Milling Machine	A self-propelled unit having a cutting head equipped with carbide-tipped tools for the pulverization and removal of layers of asphalt materials from pavements.

Mineral Dust	The portion of the fine aggregate passing the 0.075 mm (No. 200) sieve.
Mineral Filler	A finely divided mineral product, at least 70 percent of which will pass a 0.075 mm (No. 200) sieve. Pulverized limestone is the most commonly manufactured filler, although other stone dust, hydrated lime, portland cement, and certain natural deposits of finely divided mineral matter are also used.
Modified Asphalt Rubber - Asphalt Concrete (MAR-AC)	High quality, thoroughly controlled hot mixture of modified asphalt rubber binder (AR) and well-graded, high quality aggregate, which can be thoroughly compacted into a uniformly dense mass.
Modified Asphalt Rubber Binder (MAR)	Conventional asphalt cement to which recycled ground tire rubber and compounds have been added, that when reacted with the hot asphalt cement causes a dispersion of the tire rubber particles and compounds.
Multiple Surface Treatment	Two or more surface treatments placed one on the other. The aggregate maximum size of each successive treatment is usually one-half the previous one. A multiple surface treatment may be a series of single treatments that produces a pavement course up to 25mm (1 in.) or more in thickness. A multiple surface treatment is a denser wearing and waterproofing course than a single surface treatment.

N

Natural (Native) Asphalt	Asphalt occurring in nature, which has been derived from petroleum through natural processes of evaporation of volatile fractions, leaving the asphalt fractions. The native asphalt of most importance is found in the Trinidad and Bermudez Lake deposits. Asphalt from these sources is often called lake asphalt.
Nondestructive Testing (NDT)	In the context of pavement evaluation, NDT is deflection testing, without destruction to the pavement, to determine a pavement's response to pavement loading.

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O

Open-Graded Aggregate	One containing less-fine aggregate in which the void spaces in the compacted aggregate are relatively large and interconnected, usually 10% more.
Open-Graded Asphalt Friction Course	A pavement surface course that consists of a high-void, asphalt plant mix that permits rapid drainage of rainwater through the course and out the shoulder. The mixture is characterized by a large percentage of one-sized coarse aggregate. This course prevents tires from hydroplaning and provides a skid-resistant pavement surface with significant noise reduction.

P

Pascal-Seconds	The SI unit for viscosity. 1 Pascal-second equals 10 poises.
Pavement Base	The lower or underlying pavement course atop the subbase or subgrade and under the top or wearing course.
Pavement Structure	The entire pavement system of selected materials from subgrade to the surface.
Penetration Grading	A classification system of asphalt cements based on penetration in 0.1 mm at 25°C (77°F). There are five standard penetration grades for paving: 40-50, 60-70, 85-100, 120-150, and 200-300.
Penetration	The consistency of a bituminous material expressed as the distance (in tenths of a millimeter) that a standard needle penetrates a sample vertically under specified conditions of loading, time and temperature.
Performance Graded (PG)	Asphalt binder grade designation used in Superpave. It is based on the binder's mechanical performance at critical temperatures and aging conditions.
Planned Stage Construction	A construction process where stages of the project are performed sequentially according to design and a predetermined time schedule.
Plant Mix (Cold)	A mixture of emulsified (or cutback) asphalt and unheated mineral aggregate prepared in a central mixing plant and spread and compacted with conventional paving equipment while the mixture is at or near ambient temperature.
Plant Mix Base	A foundation course produced in an asphalt mixing plant, which consists of a mineral aggregate uniformly coated with asphalt cement or emulsified asphalt.

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Plant Screens	Screens located between the dryer and hot bins, which separate heated aggregates into proper hot bin sizes.
Pneumatic-Tire Roller	A compactor with a number of tires spaced so their tracks overlap delivering a kneading type of compaction.
Poise	A centimeter-gram-second unit of absolute viscosity equal to the viscosity of a fluid in which a value of stress one dyne per square centimeter is required to maintain a difference of velocity of one centimeter per second between two parallel planes in the fluid that lie in the direction of flow and are separated by a distance of one centimeter.
Polished Aggregate	Aggregate particles in a pavement surface that have been worn smooth by traffic.
Polymer-Modified Asphalt (PMA) Binder	Conventional asphalt cement to which one or more polymer compounds have been added to improve resistance to deformation at high pavement temperatures and often cracking resistance at low temperatures.
Potholes	Bowl-shaped openings in the pavement resulting from localized disintegration.
Power Sweeper	A power operated rotary broom used to clean loose material from the pavement surface.
Present Serviceability Index (PSI)	A mathematical combination of values obtained from certain physical measurements of a large number of pavements, so formulated as to determine, within prescribed limits, the Present Serviceability Rating (PSR) for those pavements.
Present Serviceability Rating (PSR)	The rating assigned to a specific pavement section.
Present Serviceability	The ability of a specific section of pavement to serve its intended use in its existing condition.
Pumping	Slab deflection under passing loads sometimes resulting in the discharge of water and subgrade soils along joints, cracks and pavement edges.

R

Rapid-Curing (RC) Asphalt	Cutback asphalt composed of asphalt cement and a naphtha or gasoline-type diluent of high volatility.
Raveling	The progressive separation of aggregate particles in a pavement from the surface downward or from the edges inward.

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Reclaimed Asphalt Pavement (RAP)	Excavated asphalt pavement that has been pulverized, usually by milling, and is used like an aggregate in the recycling of asphalt pavements.
Reclaiming Machine	A self-propelled unit having a transverse cutting and mixing head inside of a closed chamber for the pulverization and mixing of existing pavement materials with asphalt emulsion. Asphalt emulsion (and mixing water) may be added directly through the machine by a liquid additive system and spray bar.
Recycled Asphalt Mix	A mixture produced after processing existing asphalt pavement materials. The recycled mix may be produced by hot or cold mixing at a plant, or by processing the materials cold and in-place.
Reflection Cracks	Cracks in asphalt overlays (usually over deteriorated PCC pavements) that reflect the crack pattern in the pavement structure below it.
Residue	The asphalt binder that remains from an asphalt emulsion after the emulsifying agent has broken and cured, or the remains of a cutback after the volatiles have cured.
Resilient Modulus of Elasticity (M_R)	A laboratory measurement of the behavior of pavement materials to characterize their stiffness and resiliency (see <i>Soils Manual</i> , MS-10). A confined or unconfined test specimen (core or recompacted) is repeatedly loaded and unloaded at a prescribed rate. The resilient modulus is a function of load duration, load frequency, and number of loading cycles.
Resistance Value (R-value)	A test for evaluating bases, subbases, and subgrades for pavement thickness design.
Road Oil	Asphalt cement and oils of low volatility, usually similar to one of the slow-curing (SC) grades.
Roadway	All facilities on which motor vehicles are intended to travel such as secondary roads, interstate highways, streets and parking lots.
Roughometer	An instrumented, single-wheel trailer, which measures the roughness of a pavement surface in accumulated millimeters, or inches, per mile.
Rubblization	The pulverization of a portland cement concrete pavement into smaller particles, reducing the existing pavement layer to a sound, structural base that will be compatible to an asphalt overlay.

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S

Sand Asphalt	A mixture of sand and asphalt cement, cutback asphalt or emulsified asphalt. It may be prepared with sand or clay or combinations thereof including gravelly clay, gravelly sand, clayey gravel, and sandy gravel (the names indicate the relative proportions of the materials in the mixture). Either mixing-in-place or plant mix construction may be employed. Sand asphalt is used in construction of both base and surface course and may or may not contain mineral filler.
Sand	Fine aggregate (any fraction below a No. 8 sieve) resulting from natural disintegration and abrasion or processing of rock.
Sandwich Seal	A surface treatment consisting of the application of a large aggregate, then a spray applied asphalt emulsion, and covered with a smaller aggregate.
Sandy Soil	A material consisting essentially of fine aggregate particles smaller than 2.36 mm (No. 8) sieve and usually containing material passing a 75 µm (No. 200) sieve. This material usually exhibits some plasticity characteristics.
Saw-Cut and Seal	A method of controlling reflective cracking in HMA overlays that involves constructing joints in the new overlay exactly over the joints in the existing pavement.
Scaling	The peeling away or disintegrating of the surface of portland cement concrete.
Seal Coat	A thin surface treatment used to improve the surface texture and protect an asphalt surface. The main types of seal coats are fog seals, sand seals, slurry seals, micro-surfacing, cape seals, sandwich seals and chip seals.
Self-Propelled Spreaders	Spreaders having their own power units and two hoppers. The spreader pulls the truck as it dumps its load into the receiving hopper. Conveyor belts move the aggregate forward to the spreading hopper.
Sheet Asphalt	A hot mixture of asphalt binder with clean, angular, graded sand and mineral filler. Its use is ordinarily confined to reservoir liners and landfill caps; usually laid on an intermediate or leveling course.
Shoving	A form of plastic movement resulting in localized bulging of the pavement.
Shrinkage Cracks	Interconnected cracks forming a series of large blocks, usually with sharp corners or angles.
Sieve	An apparatus for laboratory work in which the openings in the mesh are square for separating sizes of material.

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Single Surface Treatment	A single application of asphalt to a road surface followed immediately by a single layer of aggregate. The thickness of the treatment is about the same as the nominal, maximum size aggregate particles.
Skid Hazard	Any condition that might contribute to the reduction of friction forces on the pavement surface.
Skid Resistance	The ability of a paved surface, particularly when wet, to offer resistance to slipping or skidding. Proper asphalt content and aggregate with a rough surface texture are the greatest contributors. The aggregate must not only have a rough surface texture, but also resist polishing.
Slippage Cracks	Crescent-shaped cracks resulting from traffic-induced horizontal forces that are open in the direction of the thrust of wheels on the pavement surface. They result when severe or repeated shear stresses are applied to the surface and there is a lack of bond between the surface layer and the course beneath.
Slow-Curing (SC) Asphalt	Cutback asphalt composed of asphalt cement and oils of low volatility.
Slurry Seal	A mixture of emulsified asphalt, well-graded fine aggregate, mineral filler or other additives, and water. A slurry seal will fill minor cracks, restore a uniform surface texture, and restore friction values.
Soil/Cement Base	A hardened material formed by curing a mechanically mixed and compacted mixture of pulverized soil, portland cement and water used as a layer in a pavement system to reinforce and protect the subgrade or subbase.
Solubility	A measure of the purity of asphalt cement. The ability of the portion of the asphalt cement that is soluble to be dissolved in a specified solvent.
Source Properties	Aggregate characteristics that must follow certain criteria to satisfy a Superpave mix design. Specified values are established by local agencies. They include Toughness, Soundness, and Deleterious Materials.
Spalling	The breaking or chipping of a PCC pavement at joints, cracks, or edges, usually resulting in fragments with feathered edges.
Stability	The ability of an asphalt paving mixture to resist deformation from imposed loads. Stability is dependent upon both internal friction and cohesion.
Standard Deviation	The root-mean-square of the deviations about the arithmetic mean of a set of values.
Stationary Plants	Asphalt plants that are so constructed that moving them is not considered economically feasible.

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Steel-Wheel Static Rollers	Tandem or three-wheel rollers with cylindrical steel rolls that apply their weight directly to the pavement.
Steel-Wheel Vibratory Rollers	A compactor having single or double cylindrical steel rolls that apply compactive effort with weight and vibration. The amount of compactive force is adjusted by changing the frequency and amplitude of vibration.
Stoke	A unit of kinematic viscosity equal to the viscosity of a fluid in poises divided by the density of the fluid in grams per cubic centimeter.
Structural Overlay	A HMA overlay constructed for the purpose of increasing the structural value and ride quality of the pavement system.
Subbase	The course in the asphalt pavement structure immediately below the base course. If the subgrade soil has adequate support, it may serve as the subbase.
Subgrade Resilient Modulus	The modulus of the subgrade determined by repeated load, triaxial compression tests on soil samples. It is the ratio of the amplitude of the accepted axial stress to the amplitude of the resultant recoverable axial strain, generally designated by the symbol M_R .
Subgrade, Improved	Subgrade that has been improved as a working platform by: 1) the incorporation of granular materials or stabilizers such as asphalt, lime, or portland cement into the subgrade soil; 2) any course or courses of select or improved material placed on the subgrade soil below the pavement structure.
Subgrade	The soil prepared to support a pavement structure or a pavement system. It is the foundation of the pavement structure.
Superpave Gyrotory Compactor (SGC)	A device used during Superpave mix design or quality control activities for compacting samples of hot mix asphalt into specimens used for volumetric analysis. Continuous densification of the specimen is measured during the compaction process.
Superpave Mix Design	An asphalt mixture design system that integrates the selection of materials (asphalt, aggregate) and volumetric proportioning with the project's climate and design traffic.
Superpave™	Short for "Superior Performing Asphalt Pavement" a performance-based system for selecting and specifying asphalt binders and for designing asphalt mixtures.

T

Transverse Crack	A crack that follows a course approximately at right angles to the centerline.
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Travel Plants	<p>Self-propelled pugmill plants that proportion and mix aggregates and asphalt as they move along the road. There are three general types of travel plants:</p> <ol style="list-style-type: none"> 1. One that moves through a prepared aggregate windrow on the roadbed, adds and mixes the asphalt as it goes, and rear discharges a mixed windrow ready for aeration and spreading. 2. One that receives aggregate into its hopper from haul trucks, adds and mixes asphalt, and spreads the mix to the rear as it moves along the roadbed. 3. Batch mixing units, such as slurry machines, that haul materials to the site and then mix and apply the materials.
Truck Factor	<p>The number of ESALs contributed by one passage of a vehicle. Truck Factors can apply to vehicles of a single type or class or to a group of vehicles of different types.</p>

U

Upheaval	<p>The localized upward displacement of a pavement due to swelling of the subgrade or some portion of the pavement structure.</p>
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V

Viscosity Grading	<p>A classification system of asphalt cements based on viscosity ranges at 60°C (140°F). A minimum viscosity at 135°C (275°F) is also usually specified. The purpose is to prescribe limiting values of consistency at these two temperatures. 60°C (140°F) approximates the maximum temperature of an asphalt pavement surface in service in the U.S. 135°C (275°F) approximates the mixing and laydown temperatures for hot mix asphalt pavements.</p>
Viscosity	<p>A measure of a liquid's resistance to flow with respect to time.</p>

W

Well-Graded Aggregate	<p>Aggregate graded with relatively uniform proportions, from the maximum size down to filler.</p>
Wet Mixing Period	<p>The interval of time between the beginning of application of asphalt material into a pugmill and the opening of the discharge gate.</p>
Whirl Spreaders	<p>Spreaders that are attached to or are built onto dump trucks. Aggregate is fed onto the spreader disc through an adjustable opening. The speed of the disc controls the width of spread.</p>
Workability	<p>The ease with which paving mixtures may be placed and compacted.</p>