

- ALIGNMENT NOTCH:** Cut-out projection or slit on the ends or sides of shingles to assist in applying with proper exposure or course offset. (JM)
- ALLIGATORING:** A term used to denote severe cracking or checking of an asphalt coated surface. (JM)
- AMERICAN METHOD:** A method of applying individual shingle units to provide a square butt appearance. (JM)
- APPLICATOR:** General term for a class of trade who sell asphalt roofings, shingles, and sidings on an applied basis. (JM)
- APPROVED CONTRACTOR:** An individual, partnership, or corporation generally qualified by technical training and experience to properly direct or perform the application or repair of roofing, waterproofing, or sheet metal work, as required in the roofing industry. (JM)
- ARCH KETTLE:** A kettle for melting solid asphalt or pitch. It is arched at the bottom to provide for kindling a wood fire or using an oil burner.
- ASPHALT:** A thermoplastic residue obtained from the distillation of petroleum, commonly used as an impregnating and waterproofing agent in asphalt roofing products. (JM)
- BARE:** Term used in connection with roll roofing when it is furnished without nails and lap cement. Also describes saturated felt to which no coating has been applied. (JM)
- BLEEDING:** Exuding of asphalt coating or saturant to the surface of mineral surfaced roofing with resultant staining or discoloration. (JM)
- BLIND NAILING:** Application of roll roofing in such a manner as to conceal or cover all nail heads. The lap of the undersheet is nailed to the roof deck and then covered with a quick set lap cement which holds the overlaying lap of the top sheet in place, covering all nail heads. (JM)
- BLISTERING:** An enclosed raised spot on the surface of prepared roofing and built roofs due to non-adherence of asphalt coating and saturated felt, or to expansion of gases within the roofing. (JM)
- BOSTON HIP:** A method of applying individual shingles on the hips and ridges of a roof by overlapping and concealing the nails. (JM)
- BUCKLING:** Warping or wrinkling of roll roofing or shingles caused by shrinkage or expansion of roof deck. The condition may be brought about by drying out of green roof sheathing or expansion of roof sheathing due to condensation of moisture from within the building. (JM)
- BUTT:** That portion of a shingle which is exposed to the weather. Sometimes called "Tab". (JM)
- BUTTONS:** Tin discs with a center nail hole for securing saturated felt to the roof deck.
- CANT STRIP:** A beveled strip used under flashing at the point where the roof deck meets any vertical wall. (JM)
- CERAMIC GRANULES:** Granules consisting of a natural mineral base, the surface of which has been colored with a glaze, composed of mineral pigments and a flux and fired at a high temperature. (JM)
- CLIP FASTENER:** Metal clip for fastening down tabs and securing ends of shingles. (Also see "staples") (JM)
- COAL TAR PITCH:** A residue of coke oven tar used as the bitumen for tar and gravel built-up roofs. (JM)
- COATING ASPHALT:** A high softening point asphalt usually prepared by air refining, which possesses a high degree of toughness and weather resistance. It is used as the protective surface in finished roofings. (JM)
- COCKING:** Warping or curling of the tabs of shingles upon exposure. (See "BUCKLING") Often caused by shrinkage and expansion of the roof sheathing. (JM)
- COLD APPLICATION or WELD PROCESS:** A method of applying built-up roofing or prepared cap sheets. (JM)
- COLD PATCH:** To repair a roof leak by using prepared roofing or membrane and plastic cement. (JM)
- COLLAR:** Metal flashing for a vent pipe. (JM)
- COMB:** The ridge of a roof. (JM)
- COMPOSITION ROOFING:** All types of asphalt roll roofing and shingles. (JM)
- CONCEALED NAILING:** See "BLIND NAILING" (JM)
- CONDUCTOR PIPE:** The metal pipe used to carry the water away from the gutters. (JM)
- COUNTER-FLASHING:** That portion of roofing constructed of fabric and bitumen or of metal usually inserted and anchored in the raggle groove above the base flashing. Counter-flashing acts as a protection for the base flashing. (JM)
- COURSE:** A horizontal layer forming one of a series of layers in the application of shingles to a roof deck. (JM)

- COVERAGE:** A term used to describe the number of layers per unit area obtained by the use of certain types of shingles, such as single coverage, double coverage, etc. (JM)
- CRICKET:** A small false roof used to throw off water from behind an obstacle, such as a chimney. (JM)
- CURLING:** A condition sometimes found on asphalt shingle roofs wherein the shingle tabs turn up around the edges giving a saucer-like appearance. Usually caused by under-saturation of the base felt or drying out of the asphalt coating and saturant. (JM)
- CUT BACK:** A mixture of asphalt and a volatile solvent, such as naphtha or mineral spirits. For example, lap cement, asphalt primer, etc. (JM)
- CUT-OUT:** The portion of the strip shingle removed or cut out to produce the tab and give the effect of individual shingles. Sometimes called a "slot". (JM)
- DORMER:** A small houselike structure in the roof, containing a window. (JM)
- DRAIN PIPE:** The metal pipe used to drain water from the roof. (JM)
- DRY COURSE:** The first course of shingles at the eave. (JM)
- DRIP EDGE or DRIP FUSE:** A strip used under the starter course at the eave of the roof. This is usually a metal strip extending or projecting over the roof deck to prevent rotting of the roof boards at the eave. (JM)
- DRY FELT:** A mat or web of fibrous materials, such as rag, paper, jute, asbestos, etc., used in the manufacture of saturated felt and prepared roofing. (JM)
- DUTCH LAP:** A method of applying individual shingles. (JM)
- EAVE TROUGH:** The galvanized or wood gutter at the eave of the roof. (JM)
- EAVES:** The projecting lower edges of a roof, over-hanging the walls of a building. (JM)
- END CAP:** Metal end piece to close end of hanging gutter. (JM)
- END LAP:** The overlap at the end of roll roofing. (JM)
- EXPOSED NAILING:** The opposite of concealed nailing. In exposed nailing the nail heads at the laps are exposed to the weather. (JM)
- EXPOSURE:** The maximum distance, measured on the length of the shingle, that is exposed to the weather, disregarding the space between individual shingles and the cut-out sections of square butt strip shingles. (JM)
- FACE NAILING:** Nailing which leaves the heads exposed to the weather.
- FILLER:** Finely divided mineral aggregate used as an extender or to increase the weather resistance of coating asphalt. (JM)
- FISH MOUTH:** Openings occurring in the lapped portion of applied saturated felt or prepared roll roofing as a result of wavy or scalloped edges on the rolls of felt or prepared roofing before application. (JM)
- FIXTURES:** The nails and cement packed with roll roofing. (JM)
- FLASHING:** (Bare) Any protective and water-proof material used to protect from the weather the juncture of a roof and a vertical wall rising above the roof, such as a parapet wall, chimney, skylight, vent pipe, etc. (JM)
- FLUX:** Asphalt of low softening point and consistency as purchased by roofing manufacturers for processing into roofing saturants and coatings. (JM)
- FRENCH METHOD:** A method of applying large size single coverage individual shingles. Sometimes called Hexagonal Method. (JM)
- FURNISH:** Raw material used in manufacture of dry felt. (JM)
- GABLE:** The vertical triangular portion of the end of a building from the level of the eaves to the ridge of the roof. (In a gambrel roof it, of course, is not triangular but otherwise similar.) (JM)
- GABLE END:** That part of the sidewall from a line extending from eave to eave and up to the roofline. (JM)
- GAMBREL ROOF:** A roof with two areas on each side with different degrees of slope- a lower steeper slope and an upper flatter slope, so that each gable is pentagonal. (JM)
- GRANULES:** The mineral particles of a graded size which are embedded in the coating asphalt of shingles and roofing. (JM)
- GUTTER:** Metal or wood trough at eave of roof to drain rain water. (JM)
- HANGING GUTTER:** Metal or wood trough at eave of roof for drainage, held in place by wire or strapping. (JM)
- HEAD LAP:** The portion of the shingle completely covered by succeeding courses. Thus a 12" wide shingle with a 5" exposure and a 5" cut-out (totaling 10") would have a 2" headlap. In other words, headlap is the shortest distance that water will have to travel up the shingle to reach the roof deck. (JM)

- HEADS:** The caps sometimes used to close the ends of roll roofing containing fixtures. (JM)
- HEXAGON OR HEX:** A strip shingle, the tab or butt of which is 1/2 of a hexagon. (JM)
- HIP, HIPS, OR RIDGE:** A raised line formed between the opposite slopes or sides of a roof. The external angle formed by the meeting of two sloping sides of a roof. (JM)
- HIP ROOF:** A roof consisting of four triangular roof surfaces, or, more common, a roof consisting of two trapezoidal and two triangular roof surfaces. (JM)
- HOOK KNIFE:** A crescent shaped knife for cutting roofing. (JM)
- HORIZONTAL APPLICATION:** Roof roofing applied lengthwise on the roof. (JM)
- HORSEFEATHERS:** A beveled strip or drop siding used to level out wood shingle roofs or clapboard siding preparatory to re-roofing or re-siding with asphalt shingles. (JM)
- HOT STUFF:** Heated asphalt, tar, or pitch used for mopping or applying over felt for flat roof application. (JM)
- INDIVIDUALS:** The common term for shingles in individual units. Each unit forms one tab in the applied roof. (JM)
- INSIDE DRAIN:** A drain pipe from the roof through inside of building used on flat roofs only. (JM)
- JUMBO (or GIANT) WEIGHT:** An extra heavy asphalt shingle or roll roofing usually made on a heavier weight felt base. (JM)
- KETTLE:** Equipment used for heating asphalt, tar, or pitch to a flowing consistency. (JM)
- KNOT BRUSH:** Knitted bristle brush for applying asphalt coating. (JM)
- LAI D TO THE WEATHER:** That portion of a shingle which is exposed. (JM)
- LAP:** That part of the roll roofing or shingle which extends over the course below. (JM)
- LAP CEMENT:** A cut back asphalt used for cementing laps of roll roofing before nailing. (JM)
- LEADER:** Another term for down-spout. (JM)
- LOCK SHINGLE or LOCKED TYPE SHINGLE:** Shingles with a device for locking the shingles together when laid so as to prevent the butt from turning upward. (JM)
- LOUVRE:** Ventilator in the gable of a roof or in the roof itself. (JM)
- MANSARD ROOF:** A roof having two slopes on all sides, the lower slope being steeper than the upper one. (JM)
- MEMBRANE:** A saturated cotton or burlap fabric used on built-up roofs, usually under the promenade decks. (JM)
- MICA:** A mineral surfacing used on roll roofing and the back of asphalt shingles to prevent sticking. The thin and plate-like particles afford excellent protection to the surface of roll roofing. (JM)
- MINERAL SURFACED ROOFING:** Roll roofing or shingles surfaced with either natural or synthetic colored granules, which protects the asphalt coating from the action of the elements, add color, weight, and greater fire resistance to the sheet. (JM)
- MONITOR ROOF:** A roof having an upper small gable type roof with a lower and generally larger shed-type roof on each side. (JM)
- MONITOR SASH:** The sash between the upper and lower areas of a monitor roof. (JM)
- MONOLITHIC:** A method of manufacturing thick butt shingles which builds up thick butt portion by a heavy layer of coating over the saturated felt. (JM)
- MOPPING:** A layer of hot asphalt or pitch mopped between layers of saturated felt. (JM)
- MUCK:** Another name for a thin consistency plastic cement. (JM)
- OCTABS:** A type of strip shingle producing an octagonal design. (JM)
- OVERHANG:** That portion of roofing extending beyond the deck. (JM)
- OVERLAY:** A method of manufacturing thick butt shingles by adding an extra layer of asphalt coating and mineral granules to the butts. (JM)
- PEAK:** See "RIDGE"
- PENETRATION:** The measurement of the hardness or plasticity expressed as the distance that a standard needle vertically penetrates a sample of the material under known conditions of loading, time, and temperature. (JM)
- PITCH OR SLOPE:** The angle of inclination that a roof forms with a horizontal. The incline or slope of the roof, usually referred to as quarter pitch, third pitch, etc. (JM)
- PITCH CARD:** A card clearly indicating different angles which form roof pitches. By sighting the intersection of the roof surfaces with this card from some distance the slope or pitch of the roof can be determined. (JM)
- PLASTIC CEMENT:** A mixture of asphalt, asbestos fiber, and volatile solvent of thick consistency generally used for roof flashings or cold patching. (JM)

- POINT OF FELT:** Weight in lbs. per 480 Sq. Ft. of dry felt. Example: 50 point dry felt weighs 50 lbs. per 480 Sq. Ft. (JM)
- PREPARED ROOFING:** A general term applied to all asphalt roll roofing and shingles. (JM)
- PYRAMID CAPS:** A patented metal device for fastening roll roofing, taking its name from the general shape of the fastener. (JM)
- RAG FELT:** A mat or web of fibrous materials such as rag, paper, jute, asbestos, etc., used in the manufacture of saturated felt and prepared roofing. (JM)
- RAKE:** Slope. Sometimes used to denote the edge of the roof along a gable. (JM)
- RIDGE OR HIP:** The horizontal line where two opposite sides of a roof join at the apex of the roof. (JM)
- RISE:** The vertical elevation of the roof rafters--the distance from the center of the span to the peak of the roof. (JM)
- ROLLER:** Weighted roller used by built-up roofers for embedding the sheets in the hot bitumen. (JM)
- ROOF:** The covering of a structure. It consists of the deck or structural portion and the roofing which is laid on the deck to keep out the elements. Its chief purpose is to seal the upper parts of a building as a protection against wind, rain, and snow. (JM)
- ROOF BOARDS:** The boards which are nailed to the roof rafters to form the roof deck. (JM)
- ROOF CEMENT:** See "PLASTIC CEMENT"
- ROOF COATING:** A roof coat composed of asphalt dissolved in a solvent. Generally used for re-coating old smooth surface roofs. Available in fibered or non-fibered consistency. (JM)
- ROOF DECK:** The sheathing, either wood or other material, laid over the rafters to which the finished roofing is nailed or otherwise fastened. (JM)
- "RUBBER" ROOFING:** General term sometimes applied to all smooth surfaced roofings. (JM)
- RUN:** The horizontal distance from the eaves to a point directly under the ridge or center of the roof. (JM)
- SADDLE:** A ridge in the roof deck, whose top divides the elevation of the roof so that water will be diverted to the drainage heads. (JM)
- SATURANT:** A bituminous material of low softening point used for impregnating the felt base of prepared roofings or saturated felt. (JM)
- SATURATED FELT:** A dry felt which is saturated with either asphaltic or coal tar pitch saturant. It is merely water-repellent and to be serviceable as a roof covering it must be sealed by using it in combination with a coating of either asphalt or coal tar pitch. Also used under shingles in new construction. (JM)
- SAW-TOOTH ROOF:** Rows of shed-like roof areas with vertical windows or skylights the height of the rise. (JM)
- SCOTCH METHOD:** Manner of applying individual shingles with the long side of the shingle paralleling the eaves. (JM)
- SELF SPACING:** Design at end of shingles to provide uniform spacing. (JM)
- SELVAGE:** The unsurfaced strip along a sheet of roll roofing which forms the under portion at the lap. (JM)
- SELVAGE EDGE:** That part of mineral surfaced roll roofing not covered with granules. Usually 2" to 4" except on 19" selvage edge, which is 19". (JM)
- SHED ROOF:** A roof pitched in one direction only. (JM)
- SHEDDING:** A descriptive term for the premature loss of mineral surfacing from prepared roofing. The condition may result from poor initial bond between asphalt and granule or from breakdown of asphalt coating upon exposure. (JM)
- SIDE LAP:** The horizontal distance one shingle overlaps another in the same course. (JM)
- SLATE:** See "MINERAL SURFACED ROOFING".
- SLATE SURFACED ROOFING:** See "MINERAL SURFACED ROLL ROOFING"
- SLOPE:** See "PITCH".
- SMOOTH SURFACED ROOFING:** A type of roll roofing which is coated on both sides in either a smooth or veined surface and finished with talc, mica, or other fine mineral particles. (JM)
- SNIPS:** Shears used for cutting metal roofing. (JM)
- SOOTING:** The accumulation of soot on the surface of mineral surfaced roofing causing a dark discoloration. (JM)
- SPACING:** The distance between shingles. (JM)
- SPAN:** The horizontal measurement from the eaves on a symmetrical gable roof; otherwise considered as twice the run. (JM)
- SPIRAL NAILS:** Screw-type, large head nails for applying roll roofing. (JM)

**SPLIT ROLL:** General term for design edge roll roofing. (JM)

**SPOT NAILING:** Nailing distantly spaced to secure sheets before mopping. (JM)

**SQUARE:** A term used by roofers to indicate an amount of roof area equal to 100 square feet. Sufficient roofing material to cover 100 square feet of roof area. (JM)

**SQUARE BUTT:** Term used to describe strip shingles with rectangular shaped tabs. (JM)

**STANDARD WEIGHT:** The generally accepted weight of shingles and mineral surfaced roofing. (JM)

**STAPLES:** Metal fasteners for securing the tabs of Dutch Lap or other shingles. (JM)

**STARTER STRIP:** Ordinarily a 9" or 12" strip of mineral surfaced roofing applied on the roof deck over the drip edge at the eaves. The first course of shingles is applied over the starter strip. (JM)

**STEP FLASHING:** Metal flashings in "L" shape. Individual pieces used for dormer windows or chimneys and stepped between the shingle course. (JM)

**STRIP SHINGLE:** A multiple shingle strip consisting of projecting tabs or butts. From 2 to 4 in a strip. Intended to give the appearance of individual shingles when properly applied. (JM)

**SUMP:** A pit or reservoir serving as a drain on the roof deck. (JM)

**SURFACING:** Any aggregate used on the coating of roll roofing and shingles. (JM)

**TABS:** The butts or projecting portions of a shingle. (JM)

**T-G LUMBER:** Boards whose lateral edges have been "tongued" on one edge and "grooved" on the other edge to afford a tight, intelocking joint. (JM)

**TALC:** A mineral powder used as surfacing on smooth roll roofing; also used as dusting on back of shingles to prevent sticking. (JM)

**THICK BUTT:** A type of shingle having a heavy tab or butt. The heavy tab construction may be accomplished by the application of a heavy film of coating asphalt to the butt of the shingles or by the application of extra layers of coating asphalt and granules to the butt portion. (JM)

**TOP MOP:** The finished mopping of hot asphalt on a smooth top built-up roof. (JM)

**UNDERLAY:** The material used, usually 15 pound felt, in covering a roof deck (base), before shingles are applied. New construction generally. Also a term describing the initial layer of coating asphalt and granules in the "overlay" process. (JM)

**UNDERSIDE WIND PRESSURE:** Wind pressure on underside of roof caused by openings in sidewalls of buildings; i.e. open doors, windows, ventilators, etc. (JM)

**UNDERWRITERS' LABEL:** Small red and white label used by permission of the Underwriters' Laboratories. Certain types of asphalt shingles and roll roofing (grades better than 45 lb. smooth) are authorized to bear a "Class C" label if they conform to Underwriters' Laboratories' standards. (JM)

**UNDERWRITERS' LABORATORIES:** A non-profit organization maintained in the interest of insurance companies to determine fire resistance of various materials. (JM)

**"UP AND OVER" APPLICATION:** Roll roofing applied up one side of the roof and down the other parallel to the rafters. (see "VERTICAL APPLICATION"). (JM)

**VALLEY:** The place of meeting of two slopes of a roof, forming a depression that carries water to an outlet or drainage head. (JM)

**VENT OR VENT PIPE:** Small iron pipe outlet extending up through the roof. (JM)

**VENTILATING SKYLIGHTS:** Skylights that have side openings for the purpose of ventilation. (JM)

**VENTILATORS:** Metal hooded openings in roof for purpose of ventilating. (JM)

**VERTICAL APPLICATION:** Roll roofing laid parallel to the rafters of the roof; i.e. the roofing is laid up and down the slope of the roof rather than horizontally. See "UP AND OVER APPLICATION" (JM)

**WIDE SELVAGE:** Another name for 19" selvage roofing. (JM)

**WIDE SPACE:** Method of applying individual shingles. (JM)

- ALLIGATORING:** Shrinkage cracking of the bituminous surface of built-up roofing, or the exposed surface of smooth-surfaced roofing, in which the loss of volatile oils under solar radiation produces a pattern of deep cracks with the scaly look of an alligator's hide. It occurs only in unsurfaced bitumen exposed to the weather.
- ASPHALT:** A dark brown to black, highly viscous, hydrocarbon produced from the residuum left after the distillation of petroleum, used as the waterproofing agent of a built-up roof. It comes in a wide range of viscosities and softening points--from about 135°F (dead-level asphalt) to 210°F or more (special steep asphalt). (See "Bitumen").
- ASPHALT MASTIC:** A mixture of asphaltic material, graded mineral aggregate, and fine mineral matter that can be poured when heated, but requires mechanical manipulation to form.
- BACKNAILING:** The practice of blind nailing in addition to hot-mopping all the plies to a substrate to prevent slippage on slopes of 1-1/2 in. or more for steep asphalt, 1/2 in. or more for coal-tar pitch and dead-level asphalt.
- BASE SHEET:** A saturated or coated felt placed as the first ply in a multi-ply built-up roofing membrane.
- BITUMEN:** The generic term for an amorphous, semisolid mixture of complex hydrocarbons derived from petroleum or coal. In the roofing industry there are two basic bitumens: asphalt and coal-tar pitch. Before application, they are either (1) heated to a liquid state, (2) dissolved in a solvent, or (3) emulsified.
- BLISTER:** A spongy, raised portion of a roofing membrane, ranging in size from 1 in. in diameter and barely detectable height to as much as 50 sq. ft. in area and 1 ft. high. Blisters result from the pressure of entrapped air or water vapor.
- BOND:** Adhesive strength preventing delamination of two roofing components. (See also "Manufacturer's bond").
- BTU:** (British thermal unit) The heat energy to raise 1 lb. of water 1°F in temperature.
- BUILT-UP ROOFING MEMBRANE:** A continuous, semiflexible roof covering of laminations, or plies, of saturated or coated felts alternated with layers of bitumen, surfaced with mineral aggregate or asphaltic materials.
- BUR:** Abbreviation sometimes used for built-up roofing membrane.
- CANT STRIP:** A continuous strip of triangular cross section, fitted into the angle formed by a structural deck and a wall or other vertical surface. The 45-degree slope of the exposed surface of the cant strip provides a gradual transition for base flashing and roofing membrane from a horizontal roof surface to a vertical surface.
- CAP FLASHING:** See "Flashing".
- CAP SHEET:** A mineral-surfaced coated felt (or a coated felt without mineral surfacing) used as the top ply of a built-up roofing membrane.
- COAL-TAR PITCH:** Dark brown to black solid hydrocarbon obtained from the residuum of the distillation of coke-oven tar, used as the waterproofing agent of dead-level or low-slope built-up roofs. It comes in a narrow range of softening points--from 140 to 155°F.
- COATED BASE SHEET (OR FELT):** A felt that has previously been "saturated" (impregnated with asphalt) and later coated with harder, more viscous asphalt, which greatly increases its impermeability to moisture.
- COLD-PROCESS ROOFING:** A bituminous membrane comprising layers of coated felts bonded with cold-applied asphalt roof cement and surfaced with a cutback or emulsified asphalt roof coating.
- CONDENSATION:** The process through which water vapor (as gas) liquifies as air temperature drops or atmospheric pressure rises. (See "Dew point").
- COUNTERFLASHING:** See "Flashing".
- COVERAGE:** The surface area (in square feet or squares) that should be continuously coated by a specific unit of a roofing material, after allowance is made for a specified lap.
- CRACK:** A membrane tear produced by bending, often at a wrinkle.
- CREEP:** (1) Permanent elongation or shrinkage of the membrane resulting from thermal or moisture changes. (2) Permanent deflection of structural framing or structural deck resulting from plastic flow under continued stress or dimensional changes accompanying changing moisture content or temperature.
- CUTBACK:** An organic, solvent-thinned, soft or fluid cold-process bituminous roof coating or flashing cement.
- CUTOFF:** A detail designed to prevent lateral water infiltration into the insulation

- where it terminates at the end of the day's work. A felt strip is (normally) hot-mopped to the stepped contour of the deck, the insulation edge, and the horizontal insulation surface.
- DADO:** A rectangular groove cut across the grain of a wood blocking member, normally to provide edge canting at the periphery of a roof.
- DEAD LEVEL:** Absolutely horizontal, of zero slope. (See "Slope")
- DELAMINATION:** A built-up roofing-membrane failure characterized by separation of the felt plies, sometimes resulting in wrinkling and cracking.
- DEW POINT:** The temperature at which water vapor starts to condense in cooling air, with no change in atmospheric pressure or vapor content.
- EDGE STRIPPING:** Application of felt strips cut to narrower widths than the normal 36-in. felt-roll width to start the felt-shingling pattern at a roof edge.
- EDGE VENTING:** The practice of providing regularly spaced openings at a roof perimeter to relieve the pressure of water vapor entrapped in the insulation.
- ELASTOMERIC:** Having elastic properties, capable of expanding or contracting with the surfaces to which the material is applied without rupturing.
- EMULSION:** An intimate mixture of bitumen and water, with uniform dispersion of the bitumen globules achieved through a chemical or clay emulsifying agent.
- ENVELOPE:** The continuous edge formed by folding an edge base felt over the plies above and securing it to the top felt or, if above-deck insulation is used, to the top surface of the insulation. The envelope thus prevents bitumen drippage through the exposed edge joints of the laminated, built-up roofing membrane and also prevents lateral water infiltration into the insulation.
- EQUILIBRIUM MOISTURE CONTENT:** The moisture content, expressed as percentage of moisture weight to material weight, at a given temperature and relative humidity.
- EXPOSURE:** The transverse dimension of a felt not overlapped by an adjacent felt in a built-up roofing membrane. The "exposure" is thus that part of the felt covered directly by the flood coat. The correct felt exposure in a shingled, multi-ply roof is computed by dividing the felt width minus 2 in. by the number of plies.
- FALLBACK:** A reduction of bitumen softening point, sometimes caused by mixing asphalt with coal-tar pitch or overheating the bitumen. (See "Softening-point drift").
- FELT:** A fabric manufactured by the interlocking of fibers through a combination of mechanical work, moisture and heat, without spinning, weaving, or knitting. Roofing felts are manufactured from vegetable fibers (organic felts), asbestos fibers (asbestos felts), or glass fibers (glass-fiber felts).
- FISHMOUTH:** An opening formed by an edge wrinkle in a felt where it overlaps another felt in a built-up roofing membrane.
- FLASHING:** Connecting devices that seal membrane joints at expansion joints, drains, gravel stops, and other places where the membrane is interrupted. "Base flashing" forms the upturned edges of the watertight membrane. "Cap" or "counterflashing" shields the exposed edges and joints of the base flashing.
- FLASHING CEMENT:** A trowelable, plastic mixture of bitumen and asbestos (or other inorganic) reinforcing fibers, and a solvent.
- FLOOD COAT:** The top layer of bitumen is an aggregate-surfaced, built-up roofing membrane. Correctly applied, it is poured, not mopped, to a weight of 60 lb. per square for asphalt, 75 lb. per square for coal-tar pitch.
- GLAZE COAT:** (1) The top layer of asphalt in a smooth-surfaced built-up roof assembly; (2) a thin protective coating of bitumen applied to the lower plies or top ply of a built-up membrane, when the top pouring and aggregate surfacing are delayed. (See "Phased application").
- GRAIN:** Weight unit equal to 1/7,000 lb., used in measuring atmospheric moisture content.
- GRAVEL:** Coarse, granular aggregate, with pieces larger than sand grains, resulting from the natural erosion or crushing of rock.
- GRAVEL STOP:** Flanged device, normally metallic, designed to prevent loose aggregate from washing off the roof and to provide a finished edge detail for the built-up roofing assembly.
- "HOT STUFF" or "HOT":** Roofer's term for hot bitumen.
- HYGROSCOPIC:** Attracting, absorbing and retaining atmospheric moisture.
- HYPALON:** A synthetic rubber (chemically chlorosulfonated polyethylene), often used in conjunction with neoprene in elastomeric roof coverings. (Hypalon

is a registered trademark of E. I. du Pont de Nemours & Co.)

**INSULATION:** See "Thermal insulation".

**MANUFACTURER'S BOND:** A guarantee by a security company that it stands behind a manufacturer's liability to finance membrane repairs occasioned by ordinary wear within a period generally limited to 10, 15 or 20 years.

**MEMBRANE:** A flexible or semi-flexible roof covering, the weather-resistant component of the roofing system. (See "Built-up roofing membrane").

**MINERAL GRANULES:** Natural or synthetic aggregate ranging in size from 500 microns to 1/4 in. diameter, used to surface cap sheets, slate sheets and shingles.

**MINERAL-SURFACED SHEET:** An asphalt-saturated felt, coated on one or both sides and surfaced on the weather-exposed side with mineral granules.

**MOPPING:** An application of bitumen applied hot with a mop or mechanical applicator to the substrate or to the felts of a built-up roofing membrane.

**Solid mopping:** A continuous mopping surface with no unmopped areas.

**Spot mopping:** A mopping pattern in which the hot bitumen is applied in roughly circular areas, generally about 18 in. in diameter, with a grid of unmopped, perpendicular bands.

**Strip mopping:** A mopping pattern in which the hot bitumen is applied in parallel bands, generally 8 in. wide with 4-in. unmopped spaces.

**Sprinkle mopping:** A random pattern of heated bitumen beads hurled onto the substrate from a broom or mop.

**NEOPRENE:** A synthetic rubber (chemically polychloroprene) used in fluid or sheet-applied elastomeric roofing membranes or flashing.

**PERLITE:** An aggregate, used in lightweight insulating concrete and in preformed insulating board, formed by heating and expanding siliceous volcanic glass.

**PERM:** A unit of water-vapor transmission, defined as 1 grain of water vapor per square foot per hour per inch of mercury pressure difference. (1 in. HG = 0.491 psi).

**PERMEANCE:** An index of a material's resistance to water-vapor transmission. (See "Perm").

**PHASED APPLICATION:** The practice of applying the felt plies of a built-up roofing membrane in two or more operations, separated by a delay normally of at least 1 day.

**PITCH POCKET:** A flanged, metal container placed around a column or other roof-penetrating element and filled with bitumen or flashing cement to seal the joint.

**PLASTIC CEMENT:** See "Flashing cement".

**PLY:** A layer of felt in a built-up roofing membrane: a four-ply membrane has at least four plies of felt at any vertical cross section cut through the membrane. The dimension of the exposed surface ("exposure") of any ply may be computed by dividing the felt width minus 2 in. by the number of plies; thus, the exposed surface of a 36-in.-wide felt in a four-ply membrane should be 8-1/2 in. (See "Exposure").

**PRIMER:** A thin liquid bituminous solvent applied to a surface to improve the adhesion of heavier applications of bitumen and to absorb dust.

**RAKE:** The edge of a roof at its intersection with a gable.

**REGLET:** A groove in a wall or other vertical surface adjoining a roof surface for the embedment of counterflashing.

**RELATIVE HUMIDITY:** The ratio of the weight (or partial pressure) of water vapor actually diffused through an air-vapor mixture to the saturated weight (or partial pressure) of the water vapor.

**ROLL ROOFING:** Coated felts, either smooth or mineral-surfaced.

**ROOFER:** The roofing subcontractor.

**ROOFING SYSTEM:** An assembly of interacting roof components designed to weatherproof, and normally to insulate, a building's top surface.

**SATURATED FELT:** A felt that has been impregnated with bitumen of low softening point--from 100 to 160°F.

**SEAL:** A narrow counterflashing strip made of bituminous materials.

**SELVAGE JOINT:** A lapped joint detail for mineral-surfaced cap sheets, in which the mineral surfacing is omitted over the transverse dimension of the overlapping sheet to get better adhesion with the bituminous mopping between the lapped cap sheet surfaces.



- SHINGLING:** The pattern formed by laying parallel felt rolls with lapped joints so that one longitudinal edge overlaps the longitudinal edge of one adjacent felt, whereas the other longitudinal edge underlaps the other adjacent felt. (See "Ply"). Shingling is the normal method of applying felts in a built-up roofing membrane.
- SLAG:** A grayish, porous aggregate left as a residue from blast furnaces and used as surfacing agent.
- SLIPPAGE:** Relative lateral movement of adjacent felt plies in a built-up membrane. It occurs mainly in sloped roofing membranes, sometimes exposing the lower plies, or even the base sheet, to the weather.
- SLOPE:** The tangent of the angle between the roof surface and the horizontal, in inches per foot. The Asphalt Roofing Manufacturers' Association ranks slopes as follows:
- Level: 1/2 in. maximum  
Low slope: over 1/2 in. up to 1-1/2 in.  
Steep slope: over 1-1/2 in.
- SMOOTH-SURFACED ROOF:** A built-up roofing membrane surfaced with a layer of hot-mopped asphalt or cold-applied asphalt-clay emulsion or asphalt cutback, or sometimes with an unmopped inorganic felt.
- SOFTENING POINT:** An index of bitumen fluidity. Asphalt softening point is measured by the "ring-and-ball" test (ASTM D2398). Coal-tar pitch's softening point is measured by the "cube-in-water" test (ASTM D61).
- SOFTENING-POINT DRIFT:** A lowering of bitumen softening point, generally caused by prolonged overheating, or mixing asphalt and coal tar pitch.
- SOLID MOPPING:** See "Mopping".
- SPLIT:** A membrane tear resulting from tensile stress.
- SPOT MOPPING:** See "Mopping".
- SPRINKLE MOPPING:** See "Mopping".
- SQUARE:** A roof area of 100 sq. ft.
- STACK VENTING:** The practice of providing vertical outlets in the interior areas of a built-up roofing system to relieve the pressure of water vapor entrapped in the insulation.
- STRIP MOPPING:** See "Mopping".
- STRIPPING:** (1) The technique of sealing the joint between metal and built-up membrane with one or two plies of felt or fabric and hot- or cold-applied bitumen. (2) The technique of taping joints between insulation boards.
- SUBSTRATE:** The surface upon which the roofing membrane is placed--structural deck or insulation.
- SYSTEM:** See "Roofing System".
- TEDLAR:** Polyvinyl fluoride, used as a film surfacing in elastomeric membranes. (Tedlar is a registered trademark of E. I. du Pont de Nemours & Co.)
- THERMAL CONDUCTIVITY (k):** Heat energy in Btu per hr transferred through a 1-in. thick 1-sq.-ft. area of homogeneous material per °F of temperature difference from surface to surface.
- THERMAL INSULATION:** A material applied to retard the flow of heat through an enclosing surface. For roofs it should have a maximum thermal conductance (C value) of 0.5 (Btu) (hr) (sq ft) (°F).
- THERMAL RESISTANCE (R):** An index of a material's resistance to heat transmission, the reciprocal of thermal conductivity k or thermal conductance C.
- THERMAL SHOCK:** The stress-producing phenomenon resulting from sudden temperature changes in a roof membrane, when, for example, a rain shower follows brilliant sunshine.
- VAPOR BARRIER.** A material designed to restrict the passage of water vapor through a wall or roof. In the roofing industry, it should be rated at 0.2 perm or less.
- VAPOR MIGRATION:** The movement of water-vapor molecules from a region of high vapor pressure to a region of lower vapor pressure, penetrating building roofs and walls.
- VENT:** A stack designed to convey water vapor, or other gas, from inside a building or a building component to the atmosphere.
- VERMICULITE:** An aggregate used in lightweight insulating concrete, formed by heating and consequent expansion of mica rock.