

MAINTENANCE GUIDEBOOK V ROOF AND WATERPROOFING MAINTENANCE

GLOSSARY

ARMA—Asphalt Roofing Manufacturers' Association, 6288 Montrose Road, Rockville, Maryland 20852, 301/231-9050.

AGGREGATE—(1) crushed stone, crushed slag or water-worn gravel used for surfacing a built-up roof; (2) any granular mineral material.

ALLIGATORING—Cracking of the surfacing bitumen on a built-up roof, producing a pattern of cracks similar to an alligator's hide; the cracks may or may not extend through the surfacing bitumen.

ASBESTOS—A group of natural, fibrous, impure silicate materials.

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.

BACKNAILING—The practice of blind-nailing roofing felts to a substrate in addition to hot-mopping to prevent slippage. (See **BLIND NAILING**).

BASE FLASHING—(See **FLASHING**.)

BASE PLY—The lowermost ply of roofing material in a roof-membrane assembly.

BASE SHEET—Saturated or coated felt placed as the first ply in some multi-ply built-up roof membranes.

BITUMEN—(1) a class of amorphous, black or dark colored, (solid, semi-solid or viscous) cementitious substances, natural or manufactured, composed principally of high-molecular weight hydrocarbons, soluble in carbon disulfide, and found in asphalts, tars, pitches, and asphaltites; (2) a generic term used to denote any material composed principally of bitumen.

BLACKBERRY—Small bubble or blister in the flood coating of a gravel-surfaced roof membrane.

BLISTER—An enclosed pocket of air mixed with water or solvent vapor, trapped between impermeable layers of felt, or between the felt and substrate.

BLOCKING—Wood built into a roofing system above the deck and below the membrane and flashing to stiffen the deck around an opening, act as a stop for insulation, or to serve as a nailer for attachment of the membrane or flashing.

BOND—The adhesive and cohesive forces holding two roofing components in intimate contact.

BUILT-UP ROOF MEMBRANE (BUR)—A continuous, semi-flexible roof membrane assembly, consisting of plies of saturated felts, coated felts, fabrics, or mats between which alternate layers of bitumen are applied, generally surfaced with mineral aggregate, bituminous materials, or a granule-surfaced roofing sheet.

CANT STRIP—A beveled strip used under flashings to modify the angle at the point where the roofing or waterproofing membrane meets any vertical element.

CAP SHEET—A granule-surfaced coated sheet used as the top ply of a built-up roof membrane or flashing.

CAULKING MATERIAL—A composition of vehicle and pigment, used at ambient temperatures for filling joints, that remains plastic for an extended time after application.

COAL TAR—A dark-brown to black, semi-solid hydrocarbon obtained as residue from the partial evaporation or distillation of coal tar.

CONDENSATION—The conversion of water vapor or other gas to liquid as the temperature drops or the atmospheric pressure rises. (See DEW-POINT.)

COPING—The covering piece on top of a wall which protects it from water infiltration (usually sloped to shed water).

COUNTERFLASHING—Formed metal or elastomeric sheeting secured on or into a wall, curb, pipe, rooftop unit, or other surface, to cover and protect the upper edge of a base flashing and its fasteners.

CRACK—A separation or fracture occurring in a roof membrane or roof deck, generally caused by thermally induced stress or substrate movement.

CRICKET—A relatively small, elevated area of a roof constructed to divert water around a chimney, curb or other projection.

DAMPPROOFING—Treatment of surface or structure to resist the passage of water in the absence of hydrostatic pressure.

DEAD LOADS—Nonmoving rooftop loads, such as mechanical equipment, air conditioning units, and the roof deck itself.

DECK—The structural surface to which the roofing or waterproofing system (including insulation) is applied.

DELAMINATION—Separation of the plies in a roof membrane system or separation of laminated layers of insulation.

DEW POINT—The temperature at which water vapor starts to condense in cooling air at existing atmospheric pressure and vapor content.

DRAIN—A device that allows water to flow from a roof area. (See NRCA Construction Details.)

EPDM—Ethylene Propylene Diene Monomer. Single-ply rubber roof membrane, typically black, although some white membrane is sometimes used.

EMBEDMENT—(1) the process of pressing a felt, aggregate, fabric, mat, or panel uniformly and completely into hot bitumen or adhesive; (2) the process of pressing granules into coating in the manufacture of factory-prepared roofing.

EXPANSION JOINT—A structural separation between two building elements that allows free, independent movement without damage to the roofing or waterproofing system.

FABRIC—A woven cloth of organic or inorganic filaments, threads, or yarns.

FACTORY MUTUAL (FM)—An organization that classifies roof assemblies for their fire characteristics and wind-uplift resistance for insurance companies in the United States.

FELT—A flexible sheet manufactured by the interlocking of fibers through a combination of mechanical work, moisture, and heat. Felts are manufactured principally from vegetable fibers (organic felts), asbestos fibers (asbestos felts), or glass fibers (glass fiber felts); other fibers may be present in each type.

FISHMOUTH—(1) a half-cylindrical or half-conical opening formed by an edge wrinkle; (2) in shingles, a half-conical opening formed at a cut edge.

FLASHING—The system used to seal membrane edges at walls, expansion joints, drains, gravel stops, and other places where the membrane is interrupted or terminated. Base flashing covers the edges of the membrane. Cap flashing or counterflashing shields the upper edges of the base flashing.

FLOOD COAT—The top layer of bitumen into which the aggregate is embedded on an aggregate-surfaced built-up roof.

GLASS FELT—Glass fibers bonded into a sheet with resin and suitable for impregnation in the manufacture of bituminous waterproofing materials, roof membranes, and shingles.

GLASS MAT—A thin mat composed of glass fibers with or without a binder.

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 roof membrane when application of additional felts or the flood coat and aggregate surfacing are delayed.

GRAVEL—Coarse, granular aggregate, with pieces larger than sand grains, resulting from the natural erosion of rock.

GRAVEL STOP—A metal flange designed to prevent loose aggregate from being washed off the roof.

HEADLAP—The minimum distance, measured at 90 degrees to the eaves along the face of a shingle or felt, from the upper edge of the shingle or felt to the nearest exposed surface.

ICE DAM—A mass of ice formed at the transition from a warm to a cold roof surface, frequently formed by refreezing meltwater at the overhang of a steep roof, causing ice and water to back up under roofing membrane.

INSPECTION—Checking or testing against established standards.

LIVE LOADS—Weight, associated with wind, snow, ice, rain, installation of equipment, or workers on the roof, which shifts instead of bearing constantly on one location.

LOW-SLOPE ROOFING—A "flat" roofing system with nominal slope (1/8 inch/foot to 4 inches/foot).

MEMBRANE—A flexible or semi-flexible roof covering or waterproofing layer, whose primary function is the exclusion of water.

MOPPING—The application of hot bitumen with a mop or mechanical applicator to the substrate or to the felts of a built-up roof membrane.

NRCA—National Roofing Contractors Association, 10255 West Higgins Road, Suite 600, Rosemont, Illinois 708/299-9070.

NAILINS—Self-contained expansion anchor constructed of a zinc body and a steel pin. (Zamac Nailins by Rawl, or equal.)

PARAPET WALL—The part of a wall entirely above the roof, which serves to protect the edge of the roof.

PHASED APPLICATION—The installation of a roof or waterproofing system during two or more separate time intervals.

PITCH POCKET—A flanged, open-bottomed, metal container placed around columns or other roof penetrations and filled with hot bitumen or flashing cement to seal the joint. The use of pitch pockets is not recommended by NRCA.

PLY—A layer of felt in a built-up roof-membrane system. A four-ply membrane system has four plies of felt.

POND—A depression in the roof surface that retains water.

POSITIVE DRAINAGE—A slope in the direction of drains which, in consideration of roof loads, ensures adequate drainage of the roof area within 48 hours of rainfall.

PREVENTIVE ROOF MAINTENANCE—Scheduled periodic treatment procedures for preventing the development of premature roofing problems and extending the lifetime of a roof. This work includes, but is not limited to, recaulking counterflashing, painting metal surfaces, resetting flashing, cleaning roof drainage, re-slagging and re-coating roof membrane.

PRIMER—A thin liquid bitumen applied to a surface to improve the adhesion of subsequent applications of bitumen.

PRMA—Protected Roof Membrane Assembly. Also known as inverted roofing system, in which the insulation is installed above the waterproofing membrane, rather than below it.

RAKE—The sloped edge of a roof at the first or last rafter.

RECEIVER—Top portion of two-piece counterflashing.

RE-COVER ROOF—Installation of a new roof over the existing roof.

REGLET—A groove in a wall or other surface adjoining a roof surface for use in the attachment of counterflashing.

REPLACEMENT ROOF—Removal of all roof components down to the roof deck and installation of a new roof.

RE-ROOFING—The process of re-covering or replacing an existing roofing system (See RE-COVERING and REPLACEMENT.)

ROOF—The exterior surface and its supporting structure to protect the interior against the adverse affects of weather conditions.

ROOF ASSEMBLY—An assembly of interacting roof components (including the roof deck) designed to weatherproof and, normally, to insulate a building's top surface.

ROOF REPAIR—Restoration of a roof by correcting/replacing defective parts of products or materials in the roof system. Roof repair is a treatment following partial failure of components of the roof system. The repair may involve the replacement of broken tile or blown off shingle, patching cracked or punctured roof membranes, or other components.

ROOF SYSTEM—An assembly of interacting roofing materials designed to protect the building and its contents from water infiltration and damages, and to thermally insulate the top of the building envelope. A typical roof system includes all or part of the following: structural frame (beams, purlins, sub-purlins); deck, vapor retarder, insulation, waterproofing membrane, surfacing, flashing, parapet wall, roof penetrations, drainage system, and walkways.

ROOFING—The construction process in the construction of the roof.

SMACNA—Sheet Metal and Air Conditioning Contractors' National Association, Inc., 4201 Lafayette Center Drive, Chantilly, Virginia 22021 (Telephone: 703/803-2980).

SCUPPER—Opening in a parapet, raised gravel stop, or roof edge through which water can drain.

SCUTTLE—A hatch that provides access to the roof from the interior of the building.

SEALANT—A mixture of polymers, fillers, and pigments used to fill and seal joints where moderate movement is expected; it cures to a resilient solid.

SHINGLING—(1) the procedure of laying parallel felts so that one longitudinal edge of each felt overlaps and the other longitudinal edge underlaps an adjacent felt. (See PLY.) Normally, felts are shingled on a slope so that the water flows over rather than against each lap; (2) the application of shingles to a sloped roof.

SLAG—A hard, air-cooled aggregate that is left as a residue from blast furnaces and used as a surface aggregate.

SLIPPAGE—Relative lateral movement of adjacent components of a built-up membrane. It occurs mainly in roofing membranes on a slope, sometimes exposing the lower plies or even the base sheet to the weather.

SPALL—(1) a small fragment or chip of brick, concrete or stone; (2) the process of breaking up by chipping.

SPLIT—A membrane tear resulting from tensile stress.

SPUDDING—The process of removing the roofing aggregate and most of the bituminous top coating by scraping and chipping.

STACK VENT—A vertical outlet in a built-up roof system designed to relieve the pressure exerted by moisture vapor between the roof membrane and the vapor retarder or deck.

STRIPPING OR STRIP-FLASHING—(1) the technique of sealing a joint between metal and the built-up roof membrane with one or two plies of felt or fabric and hot-applied or cold-applied bitumen; (2) the technique of taping joints between insulation boards or deck panels.

SUBSTRATE—The surface upon which the roofing or waterproofing membrane is applied (the structural deck or insulation).

SUMP—An intentional depression around a drain.

TEST CUT—A sample that is cut from a roof membrane to (a) determine the weight of the average interply bitumen moppings; (b) diagnose the condition of the existing membrane (detect leaks or blisters).

THROUGH-WALL FLASHING—A water-resistant membrane or material assembly extending through a wall and its cavities, positioned to direct water entering the top of the wall to the exterior.

TUCKPOINTING—(1) troweling mortar into a joint after masonry units are laid; (2) final treatment of joints in cut stonework. Mortar or a putty-like filler is forced into the joint after the stone is set.

UNDERWRITERS LABORATORIES (UL)—An organization that classifies roof assemblies for their fire-resistance characteristics and wind-uplift resistance.

VAPOR RETARDER—A material designed to restrict the passage of water vapor through a wall or roof.

VENT—An opening designed to convey water vapor or other gas from inside a building or a building component to the atmosphere, thereby relieving vapor pressure.

WATERPROOFING—Treatment of a surface or structure to prevent the passage of water to the interior.

WATERPROOFING SYSTEM—The combination of individual components that work together to prevent the passage of water to the interior.

WYTHER—A masonry wall, one masonry unit, a minimum of two inches thick.

END OF GLOSSARY