



ALL ABOUT

Roof Maintenance



Roof maintenance is easy to ignore, but small problems can lead to significant damage if maintenance is avoided for too long.

But, we're here to help!



P.O. BOX 2237
BEND, OR 97709

NORTHWEST QUALITY ROOFING MAINTENANCE GUIDELINES

CCB#187751

PAINTED METAL ROOFING AND SIDING

Following are the recommendations for the maintenance of painted metal roofing and siding:

Maintenance at the time of erection

After the structure has been completed, the panels should be carefully examined for strains, scratches, abrasions, grease, or dirt. Stubborn stains should be washed with "one" of the following solutions:

- One cup of detergent which contains less than 0.5% phosphate (example-"Tide") * Dissolved into 5 gallons of water. *Trisodium Phosphate (Soilax)
- One cup of household ammonia dissolved into 5 gallons of water (room temperature).
- Solvent containing cleaners (examples-"Fantastic" or "Formula 409") are very effective and can be used without concern.
- Starbrite instant Black Streak Remover can also be very effective and can be used without concern. Fort Lauderdale, Fla 33314 Phone #: 800-327-8583.

Working from the top to the bottom of the panels, use a well soaked cloth, sponge, brush (with very soft bristles) or low pressure spray washer. Once the building is washed, a thorough rinsing with clear water is necessary to eliminate the possibility of residue. The use of scouring powders or industrial solvents are not recommended since these agents may damage the film, or leave unsightly sources for dirt accumulation. Particular attention should be paid to remove metal chips, shavings, or random particles, loose or lightly embedded in the paint. These particles originate from drilled holes and field-cut sections and consist of carbon steel which, if left, will oxidize quickly and be a source of red rust stains. These stains can be extensive and severe, and all possible steps should be taken to avoid them.

IMPORTANT: All scratches or abraded areas should immediately be spot-painted with a bottle brush touch-up paint. The acid rain areas of the country it is recommended, that all exposed cut edges/ends, should be roller painted with an acrylic clear coat, or equivalent clear coat. This includes factory cuts, and field cuts. This will prolong the chance of exposed rusting in the future.

Annual Maintenance

The system paint finishes will last many years longer than ordinary paints, however, a routine, thorough cleaning should be performed at least once a year. A thorough cleaning will generally restore the appearance of the panels and render repainting unnecessary.

In rural areas, annual washing with clear water may be all that is required. Even though the system paint finishes are mildew resistant, mildew will grow on accumulated dust and dirt which is on the surface. If mildew or other fungal growth becomes a problem and cannot be removed as outlined, household bleach (read all caution warnings)-mixed at a concentration of one gallon bleach to five gallons of water, along with one cup mild soap to aid wetting-is recommended. Rinse thoroughly.

In industrial areas where fumes and soot are more prevalent, or in marine environments where salt is on the atmosphere, the structure should be washed washing with one of the solutions described in section one followed by a fresh water rinse.



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IB ROOF SYSTEMS™

Protecting Your Investment in an IB Roof System

Congratulations on your choice of installing an IB Roof Systems Membrane for your application. IB Roof Systems is the best solution for many flat or low-pitched residential and commercial roofing projects and is backed by a leader and veteran in the roofing industry.

With all of our roofing systems, low maintenance was very high on our priority list. Properly installed, IB PVC roofing requires very little in the way of maintenance other than industry-recommended seasonal inspection and general housekeeping/preventative owner care. While this is a key performance benefit of IB membranes versus other types of roofing products, it is important to recognize that modern roof assemblies are made up of many other components and products beyond the roof membrane material. Roofs are only one part of the building envelope and are affected by the performance of other materials, fixtures and equipment present on the roof. Your roof is a major investment in your property and there are simple, inexpensive routine care and maintenance items that, when performed, will allow you to enjoy all of its benefits and have that investment perform to its potential.

Roof installations covered by IB Roof Systems Limited Material and Total System warranties include coverage for the life of the warranty against leaks or loss of water-tightness resulting from defects per their terms and conditions. IB Lifetime Residential Limited, Commercial Limited, and Warranty Plus Limited Material warranties provide coverage against leaks resulting from manufacturing defects in the IB roof membrane. IB Total System warranties cover both material and installation defects in the IB materials as the IB Authorized Applicator is responsible for workmanship and installation defects for the first two years of the warranty period. Upon expiration of this contractor warranty term, the IB Roof Systems Total System warranty covers both material defects and leaks that result from installation deficiencies in the application of the IB roof membrane material for the remaining warranty period.

It will be of benefit for you as the owner to develop a routine roof observation and maintenance program, which can help you avoid problems that could result in costly repairs to your building. The IB Roof Systems membrane installed on your roof is designed to give you excellent performance for years to come. Other building components such as gutters and drains, exterior cladding, roof-mounted equipment, metal work and overburden materials do need routine inspection and maintenance to ensure best performance and protect your roofing investment.

If a leak appears, contact your IB Authorized Applicator and notify IB Roof Systems immediately at 800-426-1626. The terms of your IB Roof Systems warranty requires you to call or report a leak to IB Technical Services at the number above within 5 calendar days of discovering a leak, and to provide written notice within 14 days of the leak occurrence. Notification to the contractor does not constitute notification to IB Roof Systems.

NOTE: IB recommends that a building owner first investigates or has inspected any reported or observed leak by an IB Authorized Applicator or trained building maintenance personnel. Leak investigations are the owner's responsibility and could result in an inspection, repair or service call invoice from IB Roof Systems or the IB Authorized Applicator should leaks be determined as not attributed to the IB single-ply membrane or a condition covered by the IB warranty. An examination of the roof area and associated building components/equipment near the area may be helpful in avoiding unnecessary charges for non roof membrane-related moisture entry such as leaks resulting from maintenance items, rooftop equipment, drain lines, plumbing or HVAC leaks.

In some circumstances, emergency repairs may be needed to prevent accelerated building damage until a full inspection and investigation of a leak can be conducted. Should this occur, a building owner may make reasonable temporary repairs at their sole expense and notify IB Roof Systems the next business day. Emergency repairs must be reasonably controlled and completed with methods and materials compatible with the IB roof membrane so as, in the sole judgement of IB Roof Systems, not to significantly increase the scope or cost of authorized warranty repairs.



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MAINTENANCE PROGRAM

Safety Measures

It is the responsibility of the building owner and contractor to protect persons on the roof. OSHA and local safety agencies should be consulted for guidelines on how this should be accomplished. Roof repair can be dangerous, and every precaution should be taken to protect these persons.

Elements of a good Owner's Maintenance Program will vary according to many factors including the size, location, occupancy, use and design of an installed roof assembly. The complexity of any given roof application and variety of other building components integrated into it must be considered in developing an effective approach to maintenance activities. Typical maintenance programs include inspection and preventative care in the following general areas:

- a schedule of periodic/seasonal roof maintenance inspections
- roof access and repair logs
- inspection of sealants and caulks
- drainage
- parapet walls, copings and metal work
- building envelope (cladding, fenestration, interior/exterior walls, ceilings, rooftop structures)
- roof tie-ins and expansion joints
- HVAC units and rooftop equipment
- general appearance
- emergency repair plan and materials

Inspections

Scheduling regular inspections and assigning them to the right personnel are the first things needed to organize an Owner's Maintenance Program. Visual roof inspections and minor preventative roof maintenance are recommended twice yearly; in the fall before winter weather arrives and inclement weather prevents roof access or correction of minor problems, and again in early spring to assess any damage incurred during winter and before arrival of rainy seasons and increased storm activity. To correct minor problems and damage to the roof before they become a costly repair, additional inspections should occur after every extreme or unusual storm, fires, building damage or additions to the building, significant maintenance work or repairs involving access to or traffic on the roof.

Roof Access and Repair Logs

A roof access log should be maintained to record and manage the activities of other trades and service personnel working on the roof. Any work being conducted such as window washing, equipment or exterior building maintenance, routine service calls, additions or other construction activities involving access to the roof should be logged consistently. Roof traffic and damage from other trades is a common source of roof leaks. These individuals or companies are liable for any damages to your roofing system.

It will also benefit commercial and multi-tenant facilities to have maintenance personnel maintain a repair log with both a roof plan and floorplan pinpointing the locations of observed roof leaks, date of occurrence, general weather conditions, record of notification and inspection dates. This information should be reviewed prior to regular seasonal inspections and will be helpful during investigations of any leak reports or problems.

Sealants

On almost every roof, there is a need to periodically maintain and reseal joints, flashings and protrusions with caulking or sealants. Caulking and sealants are considered owner maintenance items and will not last the life of the roofing system without periodic care. These areas need to be inspected and resealed if necessary with an IB-approved sealant. Review metal work, membrane and flashing terminations, penetrations and other areas where sealants and caulks are present to ensure there are no open cracks or separations allowing water penetration to occur. Deteriorated or questionable areas should be proactively resealed to avoid the potential for moisture entry.



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Drainage

Unrestricted, properly operating drainage outlets and adequate roof drainage on any roof are critical. Your IB roof membrane is designed to resist small puddles and areas of ponded water. However, the weight of retained water can adversely affect your building's health and can, in severe cases, result in loads on the roof exceeding a building's structural design capacity. Ponded areas can also act as a reservoir and significantly worsen moisture infiltration and damage from leaks should they occur; can collect contaminants and support biologic growth; and can significantly reduce roof membrane reflectivity, potentially costing energy savings. Leaks can occur when water levels reach heights above a roof assembly's terminations and flashing heights such as at curbs, walls, equipment penetrations and vents.

Routine inspection and cleaning of drains, scuppers, outlets and gutter systems are essential to maintaining adequate roof drainage and unobstructed pathways for water to be removed from the roof. Inspect drains and outlets frequently as part of regularly scheduled maintenance inspections and during seasonal changes when leaves, ice or snow loads, or other debris may be present.

Parapet Walls, Copings and Metal Work

Parapet walls need to be checked for condition of exposed cladding, deterioration of masonry or concrete surfaces, and water-tightness of installed coping materials. Inspect and reseal all sealant joints and surfacing as needed to maintain a watertight condition. Parapets and other walls extending above the roofline should be inspected for signs of moisture entry, integrity and general condition. Leaks from condensation, moisture and air entry into or through walls can adversely affect your roofing assembly and building structure.

Counterflashings, reglets, storm collars, vent hoods and similar metal work should be reviewed for securement and water-tightness. Sheet metal work, copings, roof edge metal and miscellaneous metal flashing materials should be inspected for signs of wind damage, loss of securement, movement, damage to membrane flashings, corrosion and deteriorated caulking or sealants, as these are considered owner maintenance items. Particular attention should be paid to end joints, laps and corners where metal condition and movement may affect sealants, caulks or membrane terminations.

Building Envelope and Structure

The overall building envelope and structure should be examined to determine if there have been any major visual changes. Inspect exterior surfaces for signs of deterioration, rust, moisture entry, damage from freeze/thaw or thermal exposure, exposure to contaminants and similar evidence of potential problems. These changes, changes in building occupancy or use, may affect the way your roof and building interact with each other. Cracks, open joints, deteriorated cladding or siding, unsealed laps, deteriorated sealant joints/materials at windows and fenestration units; all of these conditions can allow significant moisture and/or moisture-laden air into the building envelope. The underside of the roof deck, attic spaces, plenums and building interior should be checked for evidence of moisture, deterioration and structural movement including settling or stress on structural and roof deck supports and components. Water stains on beams or interior walls may indicate ongoing moisture entry and should be investigated. Concrete surfaces need to be inspected for spalling and cracking. Structural defects and changes can affect the performance of your roofing system. If present, IB recommends examination by a competent party such as a structural engineer or architect to determine what corrective action may be needed.

Roof Tie-Ins and Expansion Joints

Tie-ins on the roof between dissimilar roofing materials or assemblies must be inspected regularly and maintained in a watertight condition. These areas are outside the scope of coverage of an IB warranty and are the owner's responsibility to maintain. Inspect flashings, metal work, wood curbs or blocking, sealants and caulks used in these areas for evidence of stress, moisture entry or loose materials. Expansion joints should be inspected for physical damage, excessive joint movement and general condition of laps and seams. Counterflashing and metal work should be inspected and repaired if needed.



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HVAC Units and Rooftop Equipment

Great care is required for maintenance on rooftop air conditioning units and other equipment where sharp tools, oils, lubricants, caustic chemicals or heavy components are handled or used. Make sure that maintenance personnel avoid placing sharp and/or hazardous objects and incompatible chemicals on the roof. Metal service doors must be properly secured and not left open or loose. Remove old compressors, motors, and other debris or service materials immediately from the roof. Punctures may result from fasteners and screws left on the roof surface.

Where service work involves potential damage to the roof membrane, require service personnel to protect the roof with tarps, plywood and other compatible materials to prevent damage. Ensure air ducts are in good condition with joints and connections properly sealed against moisture. Condensate lines should be maintained in good working order to avoid leaks and back-up. Drainage pans should be inspected for signs of rust and deterioration at seams. Clean all HVAC unit drains, and make sure all panels are secure so as not to allow water penetration.

General Appearance

Inspect the roof surface for signs of unusual deterioration, evidence of contaminants or excessive build-up of dirt and environmental deposits. Keeping the roof free from debris and periodic cleaning as necessary will not only help the general appearance of the roof but avoid future problems. Grease traps, vents and containment systems must be routinely maintained to avoid overflow and contaminant deposit on the roof. Avoid use of incompatible cleaning compounds and high-pressure washers. Contact IB Roof Systems for additional information on cleaning recommendations.

The field of the IB roof membrane and flashings should be checked for signs of physical damage or premature wear. Inspect all overburden materials such as solar racks, walkways and walking decks for flashing condition or signs of damage where bearing on the roof surface. Where snow removal operations have been utilized during winter months, inspect all areas for evidence of damage. Areas of previous roof repairs should be periodically re-inspected to ensure they are in good condition and remain watertight.

Emergency Repairs

The building owner should keep general roof system information, warranty records, and key contact numbers handy for use when leaks occur or emergency repairs are needed. Contact information for the installing IB Authorized Applicator and IB Roof Systems should be kept available when warranty service is needed or questions arise regarding roof system maintenance. Safety during inspection and repair of a roof is critical and must be observed at all times, following all OSHA and applicable safety regulations. Extreme care must be exercised anytime access to the roof is needed or attempted. Particular care must be given to fall protection and avoidance of electrical hazards when setting ladders or working around the roof. Roof surfaces and materials can be slippery even when they appear dry. Particular care should be taken when the roof is wet or frozen.

For additional information and recommendations on implementing your own Owner Maintenance Program, refer to the IB Roof Systems Maintenance brochure available online at www.ibroof.com or contact IB Roof Systems.



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MALARKEY WARRANTED ROOF SYSTEM

General Information

Thank you for choosing Malarkey Roofing Products to provide your new roof system. A roof system protects your investments, and we at Malarkey appreciate the responsibility that you have given us as your product manufacturer. We take this responsibility most seriously and will do all in our power to assure you a quality roof that provides protection season after season. As the new owner of a Malarkey roof system, there are things you can do to ensure that the performance of your new roof extends beyond the warranty period. Care of the roof is generally simple and the efforts put forth on periodical maintenance will pay you dividends in extended roof life and reduced problems over the life cycle of your roof.

Malarkey system warranties are provided on applicable roof systems that are pre-approved by Malarkey and installed by an approved Malarkey applicator in good standing. While Malarkey does not own or operate roofing applicators, we do “approve” roofing applicators to apply warranted systems. Only established contractors who, through their reputation in the industry and community, have proven that they apply roofs in a professional manner are eligible to construct and repair Malarkey roof systems. The appellation “Malarkey Approved Roofing Contractor” identifies a contractor who has met our requirements and is eligible to apply for a Malarkey roof warranty, but it does not designate him as an agent for Malarkey. Additional information concerning your roof or specific conditions can be obtained from Malarkey.

Procedure for Reporting and Repair of Leakage

Should your roof develop a leak, it is very important that it be handled expeditiously! If left unrepaired, leaks can not only damage the building and its contents, but can also damage your roof system.

If a leak is discovered, it should be reported immediately to Malarkey Technical Services Department by calling 1-800-545-1191 or by fax to 1-503-283-5405. Our hours are 7:00 am to 5:00 pm, Monday through Friday, US Pacific Coast Time.

Once the leak is determined, Malarkey will either authorize repairs under the terms of the warranty or, if not a covered item, will inform you of the findings and work with you to remedy the problem. The original contractor must perform repair work performed in the first two (2) years (or as stated in the contract documents) on a Malarkey Warranted Roof System. If this presents a problem, we will work with you to see if other roofing arrangements can be made. In most cases, if the work is not performed by the original contractor it can jeopardize the warranty you received from the original roofing contractor.

Repairs made at any time during the warranty period must be performed by a Malarkey Approved Roofing Contractor to avoid jeopardizing your Malarkey roofing systems warranty. Special circumstances can always occur, contact Malarkey for details or assistance.

Alterations and Modifications

Malarkey recognizes that alterations or modifications to a building are sometimes necessary for a variety of reasons. For your Malarkey warranty to remain in force, Malarkey requires that any alterations or modifications that effect or contact the roof system be pre-approved in writing by Malarkey. Unauthorized alterations or modifications will jeopardize or place restrictions on all or part of the Malarkey warranty.

Warranty holders can easily obtain approval for properly designated alterations and modifications by submitting a written request along with detailed roof drawings of the alterations and their locations on the roof to:

Malarkey Roofing Products Technical Services Department

P.O. Box 17217

Portland, OR 97217-0217 USA



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At Malarkey's discretion, inspection of the alterations to your roof system may be required. Verifications of completed alterations and/or modifications may sometimes be achieved by submission of photographs. Please enclose an explanation of the repair procedures to the above address. If an inspection is required, depending on circumstances, there may be a charge for the inspection service. Should an inspection of your roof system be required, costs are limited to Malarkey's reasonable out of pocket expenditures, including travel.

Inspection Practices

Malarkey recommends that you have semi-annual inspections performed by a qualified individual, preferably in the spring and fall. Inspections are also recommended after a severe storm, after maintenance is performed on rooftop equipment or when the roof is used as an access path for any purpose. A log of all persons working on the roof or using it as an access is recommended. Such a log should contain name(s), date, a brief description of activities and their locations on the roof. Such a log may assist in more rapidly determining leak locations and the cause if damage should occur to your roof system.

During an inspection, the condition of all roof components should be reviewed, noted and photographed. These can then be forwarded to Malarkey if warranty work is needed, or used by the contractors to bid work. The selection of a contractor for repair work should be done in conjunction with Malarkey. As noted in the section titled Procedure for Reporting and Repair of Leakage, the selection of the contractor can affect your warranty. Use only Malarkey Approved Roofing Contractors on warranted roofs. Obtain pre-authorization for all repairs and/or alterations.

SPECIFIC AREAS OF INSPECTION

Built-up Roof Systems

Roof system and Base Flashings: Carefully check the entire roof surface and vertical base flashings for signs of abnormal conditions such as:

- New penetrations are often unauthorized and improperly installed
- Excessive wear and tear or surfacing loss
- Damage such as cuts, punctures or breaks
- Wind or storm damage
- Visible attacks by spilled chemicals or environmental contaminants (i.e. bird feces)

Areas in need of repair must be corrected with like procedures and materials. Variations to the original application methods may be needed depending upon job circumstances. These variations must be pre-approved by Malarkey.

Metal Flashings and Roof Accessories

Gravel-stops/Edge Metal: Check carefully for separation between the membrane and metal, rusting, wind damage or breaks at lap joints. Re-secure as needed and reseal using like membrane sheets embedded in a uniform layer of hot asphalt or Malarkey adhesive.

Metal Roof Jacks: Carefully check all pipe and vent locations for cracking or separation of membrane sheets from the metal flanges. Check condition of the secondary seal of sealant around the base of the jack. Reseal as needed with Malarkey adhesive/sealant. If sealant is used at the top of the roof jack check for cracks and separation.

Drains and Scuppers: Check all locations and clear the outlets of any obstructions. Ensure drain bolts are tight and clamping rings are not cracked. Check for voids, gaps, or separations between the roof membrane and metal flanges. Repair breaks or voids with like membrane sheets embedded in a uniform bed of Malarkey adhesive.



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Metal Counter Flashings: Check for rust, damage due to wind or vandalism and ensure that metal is securely fastened. Check the condition of sealants. Replace any missing or damaged metal that is not repairable. Re-secure and reseal as necessary.

Pitch Pans: Though not covered by the warranty, check for cracks or separation between the roof membrane and metal flanges. Check the condition of pitch pan filler for excessive shrinkage. Repair breaks at flanges with like membrane sheets embedded in a uniform layer of Malarkey adhesive. Refill pitch pan with proper pitch pan filler material. Installation of pitch pan covers or caps can provide additional protection.

Metal Wall Copings, Drip Edge Fascia, and Guttering: Check condition of metal for rust, damage due to wind, vandalism, and the condition of seam covers and sealants. Ensure coping is securely fastened. Replace any missing or damaged metal that is not repairable. Re-secure and reseal as necessary.

Roof-mounted Equipment: Curb-mounted vents, ducts, skylights and air conditioning units must be checked for damage from service personnel, wind damage and leakage of chemicals. Minor damage is repairable by applying like membrane sheets adhered in hot asphalt or cold adhesives.

Note: The owner or in-house maintenance persons can do many maintenance repairs, but Malarkey recommends that all significant repairs or work that requires a working knowledge of roofing is best left to a Malarkey Approved Roofing Contractor.

CLEANING THE ROOF SURFACE, GUTTERS, AND DOWNSPOUTS

Roofs should be kept clean on a regular basis. All trash, debris and dirt that accumulate should be collected and removed from the roof. Leaves and foliage must be kept from hindering drainage of water in valleys and outlets.

Shingled Roof Systems

Roof system: Carefully check the entire roof surface and all flashings for signs of abnormal conditions such as:

- Loose tabs
- New penetrations are often unauthorized and improperly installed
- Excessive wear and tear or surfacing loss
- Damage such as cuts, punctures or breaks
- Wind or storm damage
- Visible attacks by spilled chemicals or environmental contaminants (i.e. bird feces)

Areas in need of repair must be corrected with like procedures and materials. Variations to the original application methods may be needed depending upon job circumstances. These variations must be pre-approved by Malarkey.

Shingles: Carefully check the shingles for any tabs that may be loose. Hand-seal any loose tabs with a spot of shingle tab adhesive.

Chimneys, Walls, Skylights, Vents: Check that:

- Metal step flashing and counter flashing is present and secure.
- Shingles are embedded in roof cement where they contact the metal flashing.

Counter flashing, Drip Edge Fascia, and Guttering: Check condition of metal for rust, damage due to wind, vandalism, and the condition of seam covers and sealants. Ensure coping is securely fastened. Replace any missing or damaged metal that is not repairable. Re-secure and reseal as necessary.



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Roof-mounted Equipment: Curb-mounted vents, ducts, skylights and air conditioning units must be checked for damage from service personnel, wind damage and leakage of chemicals.

Metal Roof Jacks: Carefully check all pipe and vent locations for cracking or separation of shingle from the metal flanges. Check condition of the secondary seal of roof cement or sealant around the base of the jack. Reseal as needed with plastic roof cement.

Cleaning the Roof Surface, Gutters, and Downspouts

Roofs should be kept clean on a regular basis. All trash, debris and dirt that accumulate should be collected and removed from the roof. Leaves and foliage must be kept from hindering drainage of water in valleys and outlets.