

Building Maintenance Manual



Project Information

Owner:	
Location of the Building:	<div></div> <div></div> <div></div>
Purchase Order No & Date:	
Project No:	
Date of Shipment Completion:	
Date of Project Completion:	
MR-24® Roof System Warranty Number*	
<small>*10 Years Leak Proof Warranty applicable only for BUTLER® BUILDING SYSTEMS with MR-24® Roof System</small>	

Certified Builder

Name:	
Address:	
Phone No:	
Fax:	
Email ID:	
Contact Person:	

At the outset...

Dear Customer

I would like to congratulate and thank you for choosing Tata BlueScope Building Solutions for your project.

We, at Tata BlueScope Building Solutions, are aware that you have preferred us over many other choices and are also aware that you are placing your confidence and trust in us - in our 'Product', our 'Service' and our 'People'. Your expectations from us are undoubtedly high and that's what keeps us continuously trying to improve ourselves. In our attempt this manual is an important reference tool in maintaining your building.

The objective is to provide you guidance in inspections, adjustments, cleaning and care for your building.

The metal building systems supplied by Tata BlueScope Building Solutions, have evolved over a period of time into a “structure”, which requires minimal maintenance because of the continuous research, developments and improvements in materials, engineering design applications, fabrication, advanced roll forming and erection techniques. However, like many other investments, your building does require some attention to maintain its value and appearance. This manual is provided to help you to keep your metal building in a good condition.











It is our continuous endeavor to meet and exceed our customer's expectations. In this regard, we welcome your feedback and suggestions.

I ‘thank you’, once again for your valued patronage and reaffirm our commitment to serve you better.

With best wishes

DR. GREG PASLEY
Vice President - Building Solutions Business
Tata BlueScope Building Solutions
Email: greg.pasley@tatabluescopesteel.com

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" Important Notification: This maintenance manual covers the procedures to be followed for the optimum service and life of the product you have purchased, however, it does not extend to procedures followed, adopted, devised, improvised, exercised, any deviations from the standard maintenance procedures detailed in this manual and accordingly shall exclude the scope of warranty applicable to the product in the event of any non standard maintenance procedures are exercised."

Scope

The information in this manual is not intended to cover major work that should be done by an authorised builder or Tata BlueScope Building Solutions during the erection of the building, but only to provide guidelines for periodic care to ensure the maximum life of a building. This document forms a part of the warranty terms and conditions provided by Tata BlueScope Steel Limited. Failure to provide regular maintenance as set forth in this manual may void any warranty, actual or implied, that may be applicable to a building or its components.

The information contained herein, is only intended to provide recommendations for maintaining a metal building system supplied by Tata BlueScope Building Solutions. Due to special feature or requirements and / or the location of the building, some or all of the recommendations contained herein may or may not apply to your building.

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to provide the fall protection. Translucent roof panels, commonly known as skylights and / or fiber glass reinforced plastic (FRP) are not made to support the concentrated loads such as foot traffic. Translucent panels are designed to allow natural light into building, yet with proper installation and maintenance they are capable of resisting wind and snow falls. Stepping on a translucent panel could cause the panel to collapse causing the person to fall and sustain serious injury. In most of the buildings supplied by Tata BlueScope Building Solutions we recommend OSHAS certified SKYWEB® II as a passive restraint system against the fall protection, unless the customer has not accepted it as a part of our standard offer.

Accumulation of dust, dirt and / or snow on a roof can easily conceal the location of a roof translucent panel. As a result, it is highly recommended that each person planning to go on the roof, reviews the roof framing plan drawing which is part of erection drawings for your building to identify the locations of rafters and purlins and “as built” roof translucent panels. An up-to-date copy of roof framing plan drawing that accurately shows the location of roof translucent panels should be kept readily available and carefully reviewed by everyone before they go on the roof.

Safety

General Safety Recommendations:

Whenever you perform maintenance on the roof system, safety must be a prime concern. Building maintenance personnel should have fall protection and other personnel protection equipments. Failure to follow can result in serious personal injury or even fatal Injury of the maintenance personnel.

A completed roof system is a safe working surface except near the edge of the roof and when any moisture (such as dew, frost, snow, etc.) makes the surface of the roof very slippery. Roof installations with steep slopes can also be hazardous without proper safety equipment. Appropriate safety measures and extra caution should be exercised whenever these conditions are present.

Make sure maintenance personnel are adequately instructed in safety and they are provided with appropriate safety equipment. Working off the ground, even a few feet, can be dangerous and fall from any height can be fatal.

Whenever performing building maintenance, the following precautions must be taken:

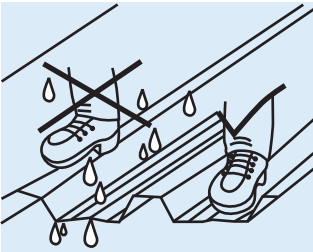
- Always use fall protection when working at elevated places
- Do not walk on FRP Sheets or translucent panels

It is important to understand that OSHAS considers skylights as a roof opening and as such it is the building owner's responsibility

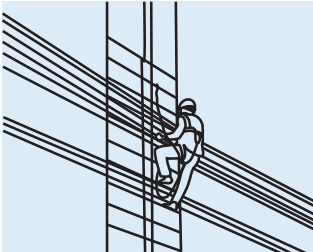
Always follow and comply with all Central, State, and Local government rules and regulations as well as OSHAS regulations when performing routine building maintenance.

In addition to complying with the government regulations, use of proper safety equipment, conducting the job safety analysis (JSA), and religiously following the safety procedures for each maintenance activity is also of paramount importance.

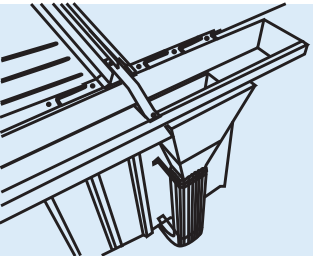
Do not forget to consult your insurance carrier and fire hazard inspector about building maintenance or major renovations. They can be valuable resources for the latest information on safety and risk procedures for each maintenance activity is also of paramount importance.



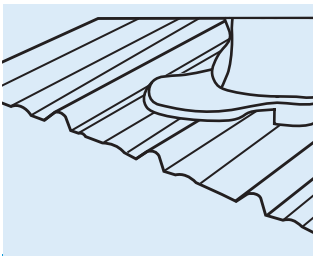
Do not walk on wet roof panels



Wear PPEs before climbing on the roof

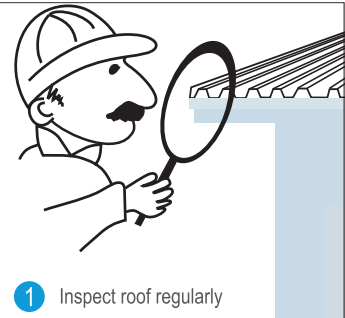


Do not walk in gutters

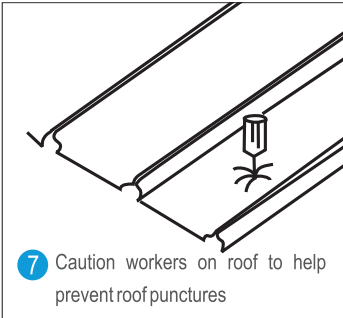


Do not walk, step or sit on skylights or ridge cap

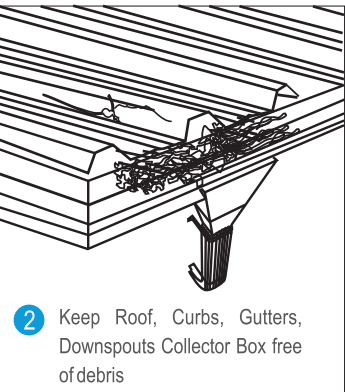
Do's



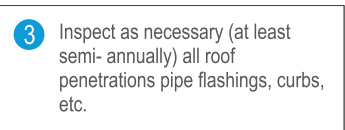
1 Inspect roof regularly



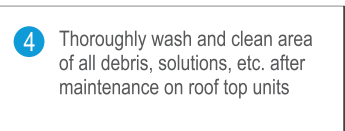
7 Caution workers on roof to help prevent roof punctures



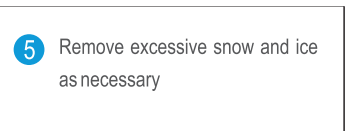
2 Keep Roof, Curbs, Gutters, Downspouts Collector Box free of debris



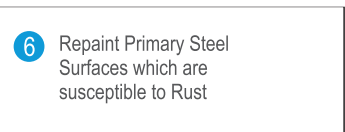
3 Inspect as necessary (at least semi- annually) all roof penetrations pipe flashings, curbs, etc.



4 Thoroughly wash and clean area of all debris, solutions, etc. after maintenance on roof top units

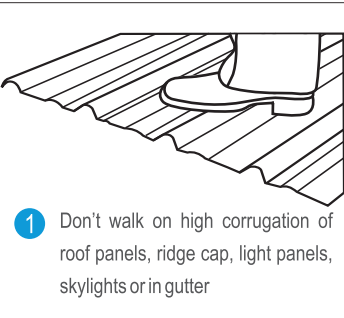


5 Remove excessive snow and ice as necessary

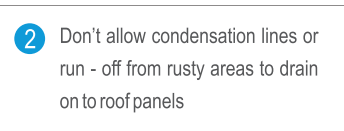


6 Repaint Primary Steel Surfaces which are susceptible to Rust

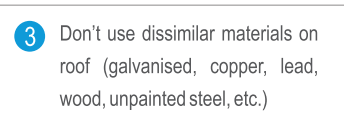
Don'ts



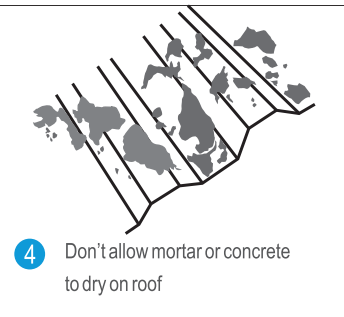
1 Don't walk on high corrugation of roof panels, ridge cap, light panels, skylights or in gutter



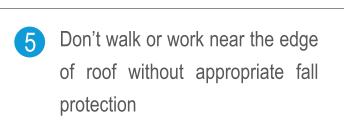
2 Don't allow condensation lines or run - off from rusty areas to drain on to roof panels



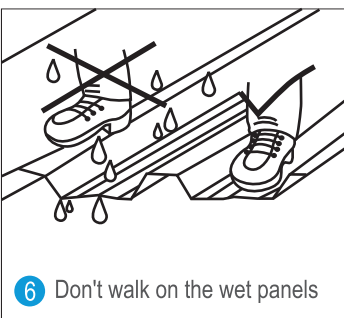
3 Don't use dissimilar materials on roof (galvanised, copper, lead, wood, unpainted steel, etc.)



4 Don't allow mortar or concrete to dry on roof



5 Don't walk or work near the edge of roof without appropriate fall protection



6 Don't walk on the wet panels

Guidelines for Inspection & Maintenance

Frequency of Maintenance

The frequency with which the preventive maintenance activities should be performed will depend on several factors including the specific maintenance tasks.

- The internal and external building environment influences based on the location of the building, end use of the building, etc.
- The age and condition of the building
- Most importantly your commitment to a preventive maintenance program

General Guidelines for Inspection & Maintenance

1. We recommend that most of the maintenance activities should be performed at least once annually. (Except for the buildings that are located in areas that have moderate to severe rainfall conditions, the inspections are recommended in post winter and in the pre-rainy season early enough to complete any necessary repairs prior to rains.) However the regular roof cleaning activity can be carried out once in every quarter.
2. Additional inspections and maintenance may be needed following severe or unusual storms.
3. Inspection & maintenance activities should be performed more frequently than twice per year on building located in costal areas, areas subjected to industrial pollution and areas with high humidity, as a result of increased exposure to corrosive elements in these areas. In addition, buildings used for the activities that are potentially detrimental to the building such as indoor pools, animal confinement or activities that generate corrosive chemicals should have maintenance activities performed more frequently.



Maintenance of COLORBOND® steel & ZINCALUME® steel



The paint system of COLORBOND® steel and the metallic coating on ZINCALUME® steel are both highly durable and have decorative finishes. Simple maintenance of these finishes by regular washing with clean water will not only enhance their life but also maintain their attractiveness for longer periods thus protecting your asset.

Note (a) "Tata BlueScope Steel does not recommend the use of hard, mineral rich ground waters in the maintenance of COLORBOND® steel and ZINCALUME® steel."

Applications where the surface finish is naturally washed by rainwater do not usually require this maintenance, e.g. roof cladding. However, maintenance cleaning of COLORBOND® steel and ZINCALUME® steel products is required whenever the finish is NOT washed by rain. Examples of applications requiring maintenance cleaning include fascia, wall cladding under eaves, garage door and underside of the eave gutters. Washing should be done at least every six months but may need to be done every three months in coastal areas where marine salt spray is prevalent and in areas where high levels of industrial fallout occur. Care should be taken to prevent the accumulation of salty deposits or industrial dirt.

Cleaning

- Establish a regular routine for washing COLORBOND® steel and ZINCALUME® steel products.
- Wash the surface with a mild solution of pure soap or non abrasive dish washing kitchen detergent in warm water. Application should be with a sponge, soft cloth, soft bristle nylon brush (no abrasive scourers, steel wool, etc.) and should be performed gently to prevent possibility of scuffing of the surface.
- The COLORBOND® steel or ZINCALUME® steel surface should be thoroughly rinsed with clean water immediately after cleaning to remove the traces of detergent.
- It is recommended that the chosen cleaning method be tried on a small inconspicuous section of the building to ensure that no damage to the COLORBOND® steel or ZINCALUME® steel sheeting is occurring.

• Never use abrasive or solvent type cleaners (e.g. turpentine, petrol, kerosene, paint thinners, sugar soap) on COLORBOND® steel or ZINCALUME® steel surfaces.



A typical gutter clogged with leaf litter prior to cleaning



Wear correct protection when cleaning leaves and twigs



When litter is removed the layer of hardened dirt is revealed below



Spray the gutter & downpipes with water to soften and break up dirt

Roof & Wall System Maintenance Recommendations

Maintenance of Building Exterior: The location of the building is the governing factor for the periodic maintenance of the building exteriors.

Building Location	Maintenance Period
Up to 5 miles from the sea	3 Months
High pollution industrial area	3 Months
Medium pollution industrial area	6 Months
Areas of high humidity	6 Months
Low pollution industrial area	9 Months
Dry dessert areas	9 Months

The building maintenance schedule should begin immediately after a building is erected, modified or repaired.

1. Check for any debris that may have been left on top of panel or trim. Examples of this are ferrous items such as screws, pop rivets nails, sheet metal off cuts, tin cans, etc. Large or heavy items should be removed by hand to avoid damaging the paint or ZINCALUME® steel metallic coating layer on the panel. The remaining smaller items may be swept off with a soft nylon brush. Please note this check should be made after tradesman has worked on the building, e.g. electricians, plumbers, air conditioning technicians and steel erectors.
2. Check for sand or dirt build up. These retain salt and moisture and will rapidly break down the paint and zinc layers resulting in corrosion of the base metal.



Check the roof after repair or replacement of roof top equipment



Remove screws, swarts, metal off cuts, etc. after completing the job



Clean unwashed surfaces regularly

3. The most vulnerable areas of the building are gutters, roof sheets, shelters area under eaves or canopies, top portion of walls sheltered by roof overhangs or gutters. Sand and dirt should be washed off with clean water and a soft nylon brush. Clean from top to bottom and give a final rinse with water when completed. Ensure no water is trapped anywhere.

4. If building is in an area of high industrial pollution or close to marine environment then water alone may not be enough. Salt and other deposits build up in formed corners of panels and quickly breakdown the paint and metallic coating layers and finally corrode the base metal. As such deposits build up, the hardness of the layers increases making removal more difficult. In these cases the period between maintenance operations should be shortened and mild detergent should be added to the initial washing water.



Roof and Wall Translucent Panel

Maintenance Recommendations:



In order to maintain good appearance and long life, translucent panels or fiberglass reinforced panels (FRP), especially roof panels should be hosed down or washed periodically. Cleaning removes the accumulation of dust, dirt and debris which can combine with sunlight and wind to attack exposed surfaces, both chemically and abrasively. When cleaning these panels non corrosive cleaning compounds should be used. Avoid the use of compounds containing ammonia or chlorine since they may cause panel discoloration.

Translucent panels should be cleaned periodically to allow maximum light penetration. Depending on your building location it may be necessary for these panels to be cleaned on a more frequent basis.

“A good time to check and see if the panels need to be cleaned or resurfaced is in October, when fewer daylight hours are available and the need for maximum light penetration is greatest.”

Roof Maintenance

The roof of your metal building is an area that is seldom seen and consequently too often forgotten in planning routine building maintenance. BUTLER® Roof Systems are designed to withstand the most severe weather conditions and provide years of maximum protection at the lowest possible maintenance cost. No roof, however, is completely maintenance free or immune to abuse or the continuing effects of severe weather. A comprehensive roof maintenance program is as important as proper installation of the BUTLER® Roof System. Failure to properly maintain the roof may cause any warranties to be voided and may shorten the life of the roof. The following maintenance suggestions will greatly enhance the probability of continuing trouble-free service.

I. Regular Roof Inspections / Clean-up Debris

The roof should be inspected at least semi-annually. Roof, curbs, gutter and down spouts should be cleaned as necessary and kept free of debris. In addition to the regularly scheduled inspections, roof inspections should also be conducted whenever any of the following conditions occur:

- Exposure of the roof to severe weather conditions, such as strong winds, hail or long continued heavy rain. Examine the roof for severely ponded conditions, debris and any other damage to the building components that may allow moisture to infiltrate. The roof panels

should also be examined in areas where damage has been identified for punctures or loose fasteners.

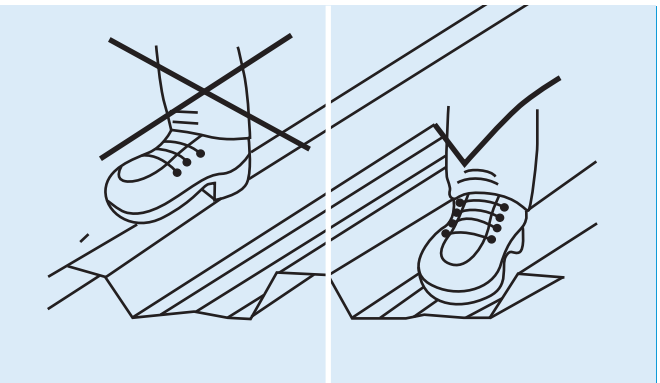
- After repair or replacement of rooftop equipment, and at any other time when the roof may become exposed to activities of other trades where damage may occur.
- After excessive foot traffic, examine the roof for spills, debris, sharp objects, and punctures.

Care should be taken to remove sharp metal chips that stick in the soles of workers shoes. These could scratch the protective surface as they walk on the roof. Mortar from masonry walls, chimneys, etc., will severely etch the coating of roof panels. Roof panels in areas where this type of work is being done should be protected. If mortar is spilled on the panels, it should be cleaned off before drying. Flying debris from tools such as abrasive saws (hot saws) and welding equipment can create much roof damage. Extreme care and skill must be used with these tools. Corrugated cardboard cartons or other protective material should be used to cover and protect the roof surface areas where abrasive sawing, drilling and welding is done.

Remove all spills of material which may degrade the roof (such as solvent based materials, oil-based paint, etc.) Maintain the record and document for observations of the inspections of the roof.

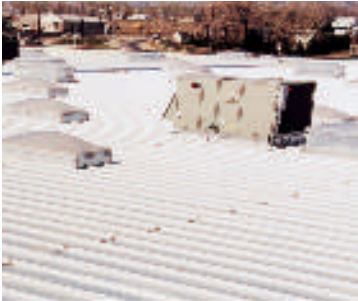
II. Protect The Roof From Foot Traffic

Roof traffic should be kept to an absolute minimum but when access to the roof is required, the roof is designed to withstand normal traffic without sustaining damage. Always walk in the flat of the panel between the corrugations and as much as possible, walk on supporting roof structurals.



Walk in the flat of the panel between corrugations on supporting roof structurals

III. Drainage From Equipment And Other Roofs



A corrosive condition can occur when water from air conditioner, condensate lines, copper flashing, lead, and other heavy metals is drained directly onto ZINCALUME® steel (Zinc - aluminum alloy coated steel) roof.

The following are the most common causes of damage:

- Copper in direct contact with roof
- Drainage from copper on to the roof
- Condensate drainage from air conditioners
- Drainage from other roof-mounted equipment having copper fin condensers and piping
- Continuous spray or flow of water onto roof may occur at the outlet of a drain line
- Copper cable from lightening rods
- Rust particles or run-off from rusty services on to the roof panels

Water drippings from bare copper wire, copper pipe, or copper flashings, contains copper ions which are very corrosive to most bare panel materials. These items and adjacent panels should be painted to minimise the problem if the copper source can not be eliminated.

Condensate from air conditioners or evaporators should never be allowed to drain directly onto the roof. This condensate should be piped off the roof into the gutter. Plastic pipe with flexible joints is recommended. Never use copper pipe. Steel pipe is undesirable unless painted.

Roof panels exposed to condensate may deteriorate in as short a time as six months. If roof panels have been in contact with condensate, thoroughly clean the panels using a fiber brillo cloth, and if necessary, rinse, clean, and coat with 8 mils of Uniflex.

Do not use lead flashing on vent pipes. The same galvanic corrosion will occur as the copper condensate water lines.

Sometimes "black steel" is used for gas pipe and supports of roof mounted equipment. If these items are not cleaned and painted, mill scale and rust will fall on the roof below the equipment. Not only will this stain the roof, but it may start rusting of the panel itself.

V. Ice And Snow Removal

Excessive ice and snow build-up should be removed immediately to prevent damage from the freeze and thaw cycles or possible overload.

Avoid damaging the roof if the removal of snow is necessary. Use plastic shovels and pay particular attention when working around curbs or other areas where wall flashing can be damaged. Snow blowers and shovels with sharp edges must not be used.

Roof Maintenance Procedure

Twigs, dust, leaves and fungal matter (debris) should be removed using the following recommended procedure, taking care to ensure no damage occurs to the cladding during debris removal:

1. Sweep debris into a pile using a stiff, soft bristled brush (shovels or hard tools should not be used).



Debris should be removed frequently

2. Place debris into receptacle and lower to the ground.
3. The whole roof and the gutter should then be washed down with a hose, including high ends of gutter possibly protected by overhangs, rain head water spouts and overflow locations.
4. If significant fungal growth is found it should

be identified and removed.

5. Investigate metallic staining of the roof or gutter to determine if it is caused by a metallic deposit, or by breakdown of the coating on the cladding. If it is a metallic deposit, completely remove it immediately. Breakdowns in coating would generally result from poor maintenance techniques and scratching.

The following is suggested solution:

- a. 1/3 cup detergent (e.g. tide)
- b. 1/3 tri-sodium phosphate (e.g. soilex)
- c. 1 quart sodium hypochlorite-5% solution (e.g. chlorox)
- d. 3 quarts water

Wash down the panel with the above solution and a soft nylon brush. A final rinse with clean water should follow. Caulking compounds, oil grease, tar wax or similar substances can be removed with mineral spirit. Follow this by cleaning with detergent solution and clean water rinse.

“Avoid solvent and abrasive type cleaners as they can do more harm than good by wearing away both the paint and metallic coating layers.”

6. Check the base of wall panels to ensure the ground level is at least 1 1/2” below the bottom of panels. If wind blown soil has built up at the base of the wall, it should be removed. If plants / shrubs etc. are around the building, make sure they are not touching the wall panels, particularly thorn-type bushes.

7. Check all equipments which are located through or adjacent to any panel (Roof or Wall). Ensure there is no moisture build up on or near the panel; if there is, then corrosion is inevitable. If this condition exists, then modifications are required to avoid it. The following situations are examples of conditions to be avoided:

- a. Water run-off from water services or air conditioners
- b. Copper pipes fastened directly to the steel panel
- c. Open water storage tanks or ponds adjacent to the panels

8. Standard gutter and valley gutters:

- a. Regular checks should be made and all rubbish and sand should be removed
- b. Flush the gutters with water
- c. Check that downspouts are clear
- d. Check that downspouts have adequate drainage away from the building

Gutter Maintenance:

Twigs, dust, leaves and fungal matter (debris) should be removed using the following recommended procedure, taking care to ensure no damage occurs to the gutter during debris removal.

- Sweep debris into a pile using a stiff, soft bristled brush (shovels or hand tools should not be used).
- Place debris into a receptacle and lower to the ground.
- The whole roof and gutter should then be washed down with a hose, including high ends of gutters possibly protected by overhangs, rain heads, water spouts and overflow locations.
- If significant fungal growth is found it should be identified and removed.
- Any metallic staining should be investigated to determine whether the cause is from a metallic deposit on the surface, or from the breakdown of the coating. Metallic deposits on the surface should be completely removed immediately. Breakdowns in the coating would generally result from poor maintenance techniques and scratching.

Down-take Pipe Maintenance



The down take pipes and stored water disposal pipes are to be inspected for cleanliness and free flow of water. Growth of fungus, other matter and collected debris at the inlet and the outlet locations is to be noted. Complete testing of the system for blockage at each downpipe is recommended. Record and document the observations of the inspections.

- Down-pipe made from Tata BlueScope Steel products should be cleaned using a pressure water hose directed down each of the downpipes.
- The hose should then be fed in to the pipe from the inlet down to the outlet, to ensure there are no obstructions.
- Constrictions in the down-pipe system may make it necessary to access the pipe from inspection point downstream of the down-pipe inlet location.
- Any noted blockages should be removed immediately, to avoid water back-up in the gutters.

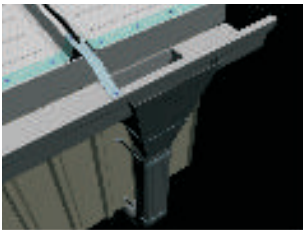
Penetrations, Flashings, Cappings:

All penetrations and cappings are to be inspected for the buildup of debris or organic material located between the flashings or cappings and the cladding materials, visually noted to be protruding from, or staining the joint. Care is to be taken in noting any staining at the high side of penetrations. All observations are to be recorded and documented in accordance.

- Build-up of debris or organic matter (debris) should be completely removed using a stiff bristled soft brush. No hard tools should be used.
- The area should then be washed down with a pressure hose. Care should be taken to ensure that debris is not lodged between sheets or the sheeting and flashing and that water from the pressure hose is not driven into the building.
- Stubborn stains and dirt not removed in the hosing can be removed by application of soaps and detergents which are detailed in this document.

Maintenance of Accessories

1. Eave Gutters, Valley Gutters, Downspouts and Collector Box



Inspect the gutters regularly

• When working on or inspecting gutters or downspouts be aware of safety issues in doing so including, but not limited to falling from the roof and injuries from using a high pressure hose for cleaning. Always follow OSHAS and other governing requirements for fall protection and tie off.

- Visually inspect the gutters for accumulation of debris that would prevent gutter or downspouts from operating properly.
- Clean out all accumulated debris regularly using a water hose with sufficient pressure to flush the dirt and small debris. Larger items such as pebbles, rocks, cans, limbs and heavy accumulations of leaves should be removed by hand first.
- It is recommended that suitable gloves be worn. Gutter obstructions can cause dirt to build up which holds moisture that can cause premature rusting and allow standing water to accumulate on the roof. Blocked downspouts also can produce the same results if they are not allowed to drain freely. The weight of accumulated debris in a gutter compounded with ice and snow (if any) could exceed the load carrying capacity of the gutter and gutter support clips and cause the gutter to fall.

2. Personal Doors

- Occasionally lubricate the hinges and locksets.
- Remove any dirt or grit from the threshold.
- Make sure the door is not allowed to swing back against the wall; this can spring the hinges, and damage the panels.

3. Sliding Doors



Regular cleaning of bottom door guide by removal of stones and sand will ensure smooth running.

4. Roll Up Doors



- Occasionally clean and lubricate chain and reduction drive gears.

- Lightly grease the vertical guides.

5. Power Vents / Roof Vents



- Periodically clean the blades to avoid build-up of dust and dirt.
- Check electrical connections and check tightness of all fasteners.

6. Buildings with Overhead Cranes



- When maintaining overhead or associated parts, lockout the electrical on the crane before commencing work.
- After the days work, the overload crane should be placed always between the two rafters / truss i.e. never below a rafter or a truss.
- After first 45 Days of operation, check the high strength bolts on crane beams for tightness. Also, this check is to be carried out every 3 months subsequently.
- Crane rail checking to be done every 3 months for the weldment.
- End stoppers to be checked once in every 3 months.

Primary Structural

The structural components of metal building system will not often require maintenance other than repair of possible physical damage or the occasional repainting of Primary Structural's that are exposed to the weather or to unusual atmospheric conditions. However it is important to keep in mind that alterations or additions to your building after the original construction may affect the structural integrity of the building and should be properly engineered by design professional. Our Project Management department or certified builder can assist you in the planning and execution of such alterations or additions.

"Before making any structural modifications in metal building systems supplied by Tata BlueScope Building Solutions of whatsoever nature, you should contact Tata BlueScope Building Solutions for assistance."

Alterations requiring professional assistance will usually fall under one of the following three categories and examples of alterations within each of the categories explained herein.

• Additions that add load to structural components

- Addition of roof mounted heating, ventilating or air conditioning units.
- Addition of piping, duct work, suspended ceilings, unit heaters or other utilities supported from the roof purlins.
- Addition of crane ways, hoists or jib cranes supported by building structurals.
- Construction of adjacent wall or building creating a stepped elevation that may result in excessive accumulation of snow on the lower elevation.
- Addition of any load not specifically included in the certification letter for the original building design.

• Alterations entailing removal or relocation of essential building components

- Removal or relocating brace rods , X Rod / angle bracings, etc.
- Removal or relocation of wall girts
- Removal or relocation of building columns
- Removal or relocation of flange braces
- Cutouts / framed openings in the existing roof system: This can damage the roof system and the warranty of the MR-24® roof system will be null and void.

The structural components of metal building will not often require maintenance other than repair of possible physical damage or the occasional repainting of structural's that are exposed to the weather or to unusual atmospheric conditions.

• Alterations or additions detrimental to the Primary Structural's Capacity of Load Carrying Components

- Cutting holes or notches in structural components for passage of utilities.
- Deformation of components to provide clearance for pipe hangers or other connecting devices.
- Eccentric Load applied to beams or columns.

Project Documents

For your convenience and use the following documents are provided for buildings whenever it is applicable. These documents should be kept in safe location along with other items related to the building, such as architectural drawings and information on building equipment. We recommend making additional copies of pertinent documents and storing them separately in case one set is lost or damaged.

- Inspection and Test Plan: The document includes the process / operations for manufacturing of various structural components, quantum of quality check, acceptance norms and authority for inspection.
- Structural Stability Certificate / Engineering Design Certification: The letter of certification will include information concerning the building design code used in the engineering design of the structure, the design load, the building size and any special load conditions.
- Erection Drawings: These drawings show the structural, enclosure and trim components of the building.
- Warranties: BUTLER® 10 Years Leak Proof Warranty for MR-24® Roof System used for BUTLER® BUILDING SYSTEMS. (When applicable a written warranty is provided by Tata BlueScope Building Solutions)
- Building Handover Certificate

Subsequent Trades and Services

Persons involved in subsequent trades and services need to be made fully aware of the consequences of their work. Warranties previously issued may be rendered null and void if work conducted damages the roof or any of the components. Additionally all following trades must check the compatibility of their products and associated discharge by these products when installed on the roof system. Air conditioning system waste and condensate should be directed to the sewer system in accordance with requirements of the relevant statutory authority.

Care must be taken not to use CCA treated timber on or above roof cladding, not to use unpainted copper flashings and not to spill the mortar on the cladding. A full register of persons and reasons for trafficking the roof must be documented and maintained.

Inspection and Maintenance Records

A full log of all inspections and the maintenance work undertaken is to be maintained along with the date of inspection and maintenance, all of the observations made and the extent of site maintenance works undertaken.

Date	Inspection Activity	Maintenance Activity	Remarks / Notes and Signature of authorised person

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A full log of all inspections and the maintenance work undertaken is to be maintained along with the date of inspection and maintenance, all of the observations made and the extent of site maintenance works undertaken.

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Regional Contacts

Pune: +91 20 66742000
Mumbai: +91 22 66743329
Baroda: +91 265 2350403

Chennai: +91 44 42693319
Hyderabad: +91 9600038665
Bengaluru: +91 80 65837060

Kolkata: +91 33 65502727
Delhi: +91 124 4712810

Note:

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TATA BLUESCOPE BUILDING SOLUTIONS

(A Division of Tata BlueScope Steel Limited)

Survey No. 247 & 250, Hinjewadi,
Taluka Mulshi, Dist.: Pune - 411057, India
Tel: +91 20 66742000 Fax: +91 20 66742001
Website: www.tatabluescope-bs.com
Email: buildingsolutions@tatabluescopesteel.com