



OWNERS MAINTENANCE MANUAL

COMMITTED TO
EXCELLENCE



BUILDING MAINTENANCE GUIDELINES

It is important to carryout periodic maintenance of your building to ensure trouble free service and extend the life span of the building.

Following are general maintenance recommendations for pre-engineered steel buildings. We suggest that you develop a preventive maintenance schedule for your building based on the guidelines given below and considering any special conditions that are specific to your project.

Safety of maintenance personnel:

Before proceeding with maintenance, care should be taken for the safety of the maintenance personnel.

Roofs

Extreme caution should be exercised when working on roofs.

- A. Only use steel / aluminum ladders, which are long enough to reach one metre above the step off point.
- B. Always secure the ladder to the building and make sure it is on a firm base.

- C. When walking on the roof, do not step on the high rib of the panel. Stepping on high ribs (high corrugations) can damage the sheets.
- D. Walk along the purlin lines.

Overhead cranes

When maintaining overhead cranes or associated parts, immobilize the crane before commencing work.

MAINTENANCE OF BUILDING EXTERIOR

Kirby Buildings are practically maintenance free. But for long life the minimum routine maintenance requirement are recommended below:

Periodic maintenance of the exterior will depend on the location of your building.

The following table gives recommended period but can be varied to suit particular environments based on local or practical experience.

Building Location	Maintenance Period
1. Up to 5 km from the sea	3 months
2. High pollution industrial area	3 months
3. Medium pollution industrial	6 months
4. Areas of high humidity	6 months
5. Low pollution industrial area	9 months
6. Dry, desert areas	12 months



CAUTION: Do not step on skylight panels.

Preventive maintenance should commence immediately after a project 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, drill swarf, sheet metal off-cuts, tin cans, etc., Large or heavy items should be removed by hand to avoid damaging the paint or zinc 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 any trade 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 breakdown the paint and zinc layers resulting in corrosion of the base metal.
3. The most vulnerable areas of the buildings are:
 - a. Gutters (valley & eave)
 - b. Downspouts
 - c. Roof Sheets
 - d. Sheltered areas under eaves or canopies
 - e. Top portion of walls sheltered by roof overhangs or gutters

Sand and dirt should be washed off with clean potable water and a soft nylon brush. Clean from top to bottom and give a final rinse with potable water when completed. Ensure no water is trapped anywhere.

If the building is in an area of high industrial pollution or close to a marine environment then water alone may not be enough. Salts and

other deposits build up at the formed corners of panels will quickly breakdown the paint and zinc layers and finally corrode the base metal. As such deposits build up, the hardness of the layer increases making removal more difficult. In these cases, the period between maintenance operations should be shortened and a mild detergent should be added to the initial washing water.

The following is a suggested solution:

- a. 1/3 cup detergent (e.g. Tide)
- b. 2/3 cup tri-sodium phosphate (e.g. Soilex)
- c. 1 quart sodium hypochlorite - 5% solution (e.g. Clorox)
- d. 3 quarts water

Wash down the panel with the above solution and a soft nylon brush. A final rinse with clean potable water should follow.

Caulking compounds, oil, grease, tar wax, or similar substances can be removed with mineral spirits. Follow this by cleaning with the detergent solution and clean potable water rinse.

1. Check the base of wall panels to ensure the ground Level is atleast 150 mm below the bottom of the panel. If wind blown-sand 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 panel, particularly thorn-type bushes.
2. Check all equipment, which is 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 make modifications to avoidit.



Warning: Avoid solvent and abrasive type cleaners as they can do more harm than good by wearing away both the paint and zinc layers.

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 panel.
 - d. Steam outlets adjacent to the panels.
 - e. Acid storage areas adjacent to the panels
1. Standard gutters and Valley gutters:
 - a. Regular checks should be made and all rubbish and sand should be removed.
 - b. Flush gutters with water.
 - c. Check that downspouts are clear
 - d. Check that downspouts have adequate drainage away from the building.
 2. If minor damage occurs to the sheeting or trims, and paint touch-up is required, then the following procedure should be followed:
 - a. Abrade the affected area
 - b. Clean down with a solvent (e.g. Sigma 9053)
 - c. If base metal is exposed, apply one coat of a zinc chromate primer. If base metal is not exposed then the primer is not required.
 - d. Apply one coat of touch up paint.



CAUTION: Please ensure that there are no harmful chemicals like Chlorine, SO₂ in the vicinity of the building, either in Gas or liquid form, which will react with the Galvalume roof sheets and corrodes the Roof and wall sheets.

Maintenance of Accessories :

Personnel Doors :

- a. Occasionally lubricate the hinges and lockset.
- b. Remove any dirt or grit from the threshold.
- c. Make sure the door is not allowed to swing back against the wall; this can sprain the hinges, and damage the panel.

Sliding Doors :

Regular cleaning of the bottom door guide by removal of stones and sand will ensure smooth running. Ensure Bottom Guide rollers is in place to avoid shutter lifting during heavy winds.

NOTE:

FOR ANY CLARIFICATIONS, PLEASE CONTACT OUR CUSTOMER SERVICE DEPARTMENT.

Roll-up-Doors :

- a. Occasionally clean and lubricate chain and reduction drive gears.
- b. Lightly grease the vertical guides.
- c. Operate with caution.

Power Vents :

Periodically clean the blades to avoid build-up of dust and dirt.

Building with Cranes

- a. Every 3 months check that diagonal rod bracing is tight.
- b. After one month of operation check that the high strength bolts on the crane beams are tight.
- c. Every six month check the high strength bolts in the crane beams and mainframe connections.

CAUTION :



PLEASE DO NOT REMOVE ANY WALL / ROOF BRACINGS ANYTIME, AS THE BUILDING STABILITY IS ENSURED ONLY WITH BRACINGS.

DO NOT DO ANY SITE MODIFICATIONS ON THE PRE-ENGINEERED BUILDING SYSTEM SUPPLIED BY KIRBY, WITHOUT KIRBY'S CONSENT IN WRITING.



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