Periodic roof inspection and maintenance manual

RENOLIT ALKORPLAN



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This manual provides information for periodic roof inspections and routine maintenance procedures. It can be used as a helpful tool for planning and starting a specific inspection and maintenance programme.

Because of its unique formulation **RENOLIT** ALKORPLAN waterproofing membranes and accessories are not maintenance-intensive.

However, since the **RENOLIT** ALKORPLAN membranes are part of a roof complex where many external factors can influence the performance of the roofing membrane, periodical roof inspection and maintenance is required to ensure a long-lasting waterproofing performance.

An extended warranty can be issued only if a suitable roof inspection and maintenance programme has been defined.

A regular programme of inspection and maintenance will detect minor problems before becoming significant, avoiding interruptions of activities and/or production processes inside the building, and first and foremost protects your investments by adding years of service life to the roof.

Periodic inspection and maintenance

Periodic inspection and maintenance should be planned in a proper inspection and maintenance programme and entrusted to a **specialized company**.

All components of the roofing system should be inspected thoroughly. Proper record and documentation should be kept of any inspection tracking any signs of deterioration, unusual traffic patterns, poor drainage, accumulated debris, displacement or loss of ballast, scouring, etc.

It is essential that the records of any inspection is linked to a plan of the roof showing all penetrations, roof-mounted equipment, and other pertinent details. This will avoid confusion with instructions to contractors and provide an ongoing record of the roof performance, which can be compared year-on-year.

Once Every Six Months

Regular inspection of the roof should be carried out twice per year, preferably in **early spring** and **late autumn**.

The purpose of this inspection is to:

- **Check** for damage
- **Ensure** rainwater outlets are not obstructed
- **Check** that materials from other trades have not been left on the roof
- **Check** lightning and fall arrest equipment

This ensures that dirt or debris is removed before causing damage and that signs of failure can be reported and remedial action taken at an early stage. These inspections involve a routine look at the roof structure and its ancillary services. It is important to check that the gutters and outlets are not blocked by fallen leaves which may cause water to pond.

Semi-annual inspection works	Goals
Cleaning of leaf guards and rainwater outlets	To prevent clogging of the rainwater outlets which may compromise their performance
Cleaning and removal of any dirt (soil, sand, vegetation, etc.) on the roof and on the waterproofing membrane	To prevent the creation of a culture bed and the growth of vegetation or micro-organisms
Cleaning and removal of any debris and rubbish on the roof	To prevent debris and rubbish damaging the waterproofing membrane
General visual inspection of the roof and the equipment installed onto it to identify any peculiarities (waterproofing, skylights, etc.)	To guarantee immediate reporting of any peculiarities

Once a Year

Each year it is essential that a more detailed study of the flat roof is carried out to **identify any potential problems** and renew damaged components. Before any work is undertaken the original specifications should be consulted as the **roof may be under guarantee**. If there is a guarantee it is essential that remedial work is carried out by the original contractors to ensure that the guarantee is not invalidated. As with the six monthly inspection, the roof must be checked for debris and gutters and outlets cleaned. Gratings and wire cages should be renewed where necessary and flashings, trims and cappings replaced if damaged.

Annual inspection works	Goals
Visual inspection of flashings, metal sheet trims and capping	Check the fasteners and detect any leaks and corrosion
Visual inspection of silicone sealing	Detect any leaks and check the adhesion
Visual inspection of the waterproofing membrane and its details and connected accessories	Detect any peculiarities that could limit or compromise the waterproofing's performance
Visual inspection of the roof structure (inside)	Detect any traces of water infiltration, settlement in the exterior walls or deck, rusting or spalling of the deck, shrinkage or cracking of the deck, etc.

Once Every Ten Years

The roof structure should be inspected professionally, either by a roofing contractor or roofing system manufacturer. This inspection will identify any current problems and those which are likely to occur in the future. It is important that this inspection is **carried out by a professional**, as many of the potential problems will not be apparent to the untrained eye. The roof should be surveyed for the deterioration of structural elements, especially where a timber deck has been used as this is susceptible to moisture.

General instructions

Access to the roof

Access to the roof must be granted only to **authorized personnel**, adequately trained and informed about the hazards and risks present on the roof.

Roof access must always be carried out in accordance with all current safety regulations, providing suitable collective protective equipment and / or personal protective equipment (PPE).

All workers accessing the roof must be equipped with appropriate PPE, compliant with the work to be performed (e.g. life lines, safety harnesses, etc.)

Caution! When accessing the roof during wet and/or frosty weather conditions, be aware that the surface may be slippery.

Accessibility of roofs

RENOLIT ALKORPLAN roofs can be accessed for maintenance purposes only:

- Maintenance of the waterproofing membrane.
- Maintenance of any technical equipment on the roof.

If the roof is equipped with technical installations that require periodic maintenance or cleaning, it is recommended to create **walkways,** e.g. by applying **RENOLIT** ALKORPLAN 81114 Walkway and Protection membrane**,** in order to avoid any damage to the waterproofing membrane and to provide a safe and guided preferential route for all operators.

When walking directly on the waterproofing membrane, it is mandatory to wear **suitable footwear,** to avoid damaging the waterproofing membrane and for your own safety. In case of using cleated sole shoes we recommend before walking on the waterproofing membrane, to check the presence of gravel or other abrasive material accidentally stuck in the sole, in order to avoid the risk of puncturing the waterproofing.

Do not place anything heavy or sharp directly on the waterproofing membrane, unless a suitable protection and load distribution surface has been set, e.g. a protective wooden board (plywood, OSB).

In case of **ballasted roofs**, the accessibility depends on the type of ballast used, as shown below:

- **Gravel ballast**:
  - **Accessible for maintenance only** (maintenance to the roof and / or any technical equipment present on the roof)
- **Paving slabs on support pads:**
  - Accessible for maintenance
  - Walkable
- **Tiles laid on concrete support**:
  - Accessible for maintenance
  - Walkable
- **Green roof**:
  - Accessible for maintenance of the green roof system

Cleaning of the roof

If necessary (e.g. ponding causes accumulation of silt or algae) the waterproofing membrane can be **cleaned** with a solution of water and a non-aggressive domestic cleaner. The solution is applied using non-abrasive sponges, a soft bristle brush or brooms, and removed by water spray.

Proprietary fungicides or cleaners are not necessary and may not be compatible with the waterproofing membrane; they should not be used.

Technical equipment

Technical equipment on the roof such as air-conditioning units etc. must be **adequately positioned** and **connected** with the waterproofing membrane.

Technical equipment must not be positioned in direct contact with the waterproofing membrane, but on a suitable protective and load distribution supporting surface. For good measure the supporting surface must be designed in such way it does not damage the waterproofing membrane and / or connected roof components.

Technical equipment must not release or leak harmful substances (liquids, solids or fumes) that could weaken the performance of the waterproofing membrane.

In case of maintenance operations on technical equipment on the roof, suitable protective measures must be taken in order **not to damage the waterproofing membrane**. Avoid spilling substances (liquids, solids) or materials that could damage the waterproofing membrane. When accidental spilling occurs, all debris and / or leakage must be promptly removed and the waterproofing membrane must be adequately cleaned, always in compliance with the environmental safety regulations in force.

When in doubt, contact the **RENOLIT** recognized roofing company, who will provide appropriate information and support.

Snow on the roof

RENOLIT ALKORPLAN waterproofing membranes offer excellent resistance to low temperatures. In general snow on the waterproofing membrane will not cause any damage and does not require particular interventions.

In some cases, however, it may be recommended to:

- Clear rainwater outlets in order to favour evacuation of melt water,
- Reduce the thickness of the snow blanket in specific roof areas, to avoid it reaches the upper level of rooflights, chimneys and any other opening in the roof which could cause snow overflow and infiltration, and/or to avoid overloading risks due to the roof deck's limited load capacity.

Extreme caution must be exercised when accessing the roof for snow removal, using appropriate collective and personal protective equipment, as the roof's surface will be extremely slippery. Snow removal must be carried out with **precaution** in order not to damage the waterproofing membrane: do not use metal shovels, but use plastic blades with rounded edges instead.

When using ice melts, products that contain potash, urea, calcium chloride and/or sodium chloride (common table salt) are safe to use with **RENOLIT** ALKORPLAN waterproofing membranes.

Caution! Ice melts may affect metal roof components (discolouring, rusting, etc.). Whenever there is any doubt, contact the **RENOLIT** recognized roofing company, who will provide appropriate information and support needed.

Repair and/or alteration work on the waterproofing membrane

In the event of accidental damage of the waterproofing membrane, do not carry out inappropriate repairs, but **always contact a recognized roofing company**.

Do not apply bituminous-based membrane patches to the **RENOLIT** ALKORPLAN waterproofing membranes.

In case of an emergency requiring urgent action, it is possible to carry out a simple and quick repair by using self-adhesive, non-bituminous repair tape. These interventions are temporary measures only, therefore it will always be necessary to contact the **RENOLIT** recognized roofing company who will carry out a compliant and durable repair.

In case of alteration or extension works on the roofing membrane (e.g. new chimneys, building modifications, etc.), do not carry out inappropriate work, but always contact the **RENOLIT** recognized roofing company.





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