

# BEMO Cleaning & Maintenance Guide

**DESIGN FREEDOM**

**SUSTAINABILITY**

**COST EFFICIENCY**

**THE SKY'S THE LIMIT**

**DISTINCTIVE INDIVIDUALITY**

**ACHIEVED EXCELLENCE**

**GLOBAL SUCCESS**



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## 2.0 Cleaning and Maintenance

### 2.1 General



#### General

During installation and after, for general maintenance and inspection purposes, it is possible to walk on BEMO panels that have been partially seamed or fully seamed together to the parameters shown in the ***Walkability Tables (General Certificates)***.

Maintenance and cleaning personnel must use walkways, scaffold boards and in any case fall arrest systems on all roofs with BEMO panels, to ensure their safety and so as not to damage the BEMO panels.

The sheets are capable of withstanding impacts resulting from handling, installation and normal service.

The ridge and eaves are common "walkways" on roofs. It is therefore important to advise workmen of the dangers involved.

The last sheet at the edge, e. g. gable/verge end, as well as plastic translucent sheets cannot be walked on.

#### Recommendation:

**Always provide load-spreading measures (catwalks, rigid insulation) at the ridge and at the eaves in order to avoid local deformations as a result of excessive foot traffic in the base of the BEMO panels especially at the point of entry/access to the roof.**

The sheets may occasionally be damaged in use by foot traffic, falling objects, severe weather etc. Such sheets can be repaired and any defective or missing halters replaced. However, if panels are damaged before erection, they **must not** be used.

Experienced and trained personnel **must** undertake any BEMO sheet removal.



## 2.0 Cleaning and Maintenance

### 2.2 Cleaning



#### Cleaning

Cleaning is vital in areas where industrial deposits have dulled the surface, where materials from construction processes have soiled the surface or where cleaner run-down from other surfaces should be removed.

Cleaning is specifically required in:

- Areas of low rainfall or in industrialized areas.
- Foggy coastal regions with cycles of condensation and drying may tend to cause a build-up of atmospheric salts and dirt.
- In any climate, sheltered areas, such as overhangs, may become soiled due to insufficient rainwater rinsing.
- Thorough rinsing is especially important after cleaning of these sheltered areas.

Local conditions as well as building location within a geographical area quite naturally have an effect on cleanliness.

Construction soils, including concrete or mortar, etc. should be removed as soon as possible. The exact procedure for cleaning will vary depending on the nature and degree of soil.

Try to restrict cleaning to mild weather. Cleaning should be done on the shaded side of the building or ideally on a mild, cloudy day.

Method of cleaning, type of cleaner, etc. of one component of the building must be used with consideration for other components such as glass, sealant, painted surfaces, etc.



## 2.0 Cleaning and Maintenance

### 2.2 Cleaning

#### Removal of light surface soil

Removal of light surface soil may be accomplished in several ways. Some testing is recommended to determine the degree of cleaning actually necessary to accomplish the task. Ideally, an initial step of forceful water rinse from the top down is recommended prior to any cleaner application. Significant benefit is gained with some type of surface agitation. Low water volume with moderate pressure is much better than considerable volume with little pressure. Physical rubbing of the surface with soft, wet brushes, sponges or cloth is also helpful.

The simplest procedure would be to apply the water rinse with moderate pressure to dislodge the soil. If this does not remove the soil, then a concurrent water spray with brushing or sponging should be tested. If soil is still adhering after drying, then a mild detergent will be necessary.

When a mild detergent (Ph7) or mild soap is necessary for removal of soil, it should be used with brushing or sponging. The washing should be done with uniform pressure, cleaning first with a horizontal motion and then with a vertical motion.

Apply cleaners only to an area that can be conveniently cleaned without changing position. The surface must be thoroughly rinsed with clean water. It may be necessary to sponge the surface while rinsing, particularly if cleaner is permitted to dry on the surface. The rinsed surface can be air dried or wiped dry with a chamois, squeegee or lint free cloth.

Run down of cleaner (from any operation) to the lower portions of the building should be minimized and these areas should be rinsed as soon as and as long as necessary to reduce streaking etc. from unavoidable run down. Do not allow cleaning chemicals to collect on surfaces or to "puddle" on horizontal surfaces, crevices, etc. These areas should be flushed with water and dried via air or wiped dry with a chamois, squeegee or lint free cloth. Always clean coated surfaces down from top to bottom and follow with a thorough rinsing with clean water. (With one storey or low elevation buildings, it is recommended to clean from bottom up and rinse from top down). To avoid water stain, the surface should be wiped.



## 2.0 Cleaning and Maintenance

### 2.2 Cleaning



#### Mild detergents

Mild soaps or detergents ruled safe for bare hands should be safe for coated aluminium. Stronger detergents such as some dishwasher detergents should be carefully spot tested. Some of the latter may require rubber gloves, long handled brushes, etc. With any of these, the finish should be thoroughly rinsed with clean water and dried via air or wiped dry with a chamois, squeegee or lint free cloth. Some mild cleaning solutions, which consist of selected wetting agents in water solution, are available for automatic building washing machines. These machines would have built in brush agitation, squeegee, filtrations and recirculation; in some, a fresh water connection may be provided.

#### Cleaning of medium to heavy soil

Some type of mild solvent such as mineral spirits may be used to remove grease, sealant or caulking compounds. Stronger solvent or solvent containing cleaners may have a deleterious or softening effect on coatings; accordingly, great care should be taken. To prevent harm to the finish, these types of solvent or emulsion cleaners should be soap tested and preferably the coating manufacturer should be consulted. Care should be taken to assure that no marring of the surface is taking place in this manner since this could cause an undesirable appearance at certain viewing angles. Cleaners of this type are usually applied with a clean cloth and removed with a cloth. Remaining residue should be washed with mild soap and rinsed with water. Use solvent cleaners sparingly.

It may be possible for solvents to extract materials from sealants which could stain the painted surface or could prove harmful to sealants; therefore, possible adverse effects must be considered. Test clean a small area first.

If cleaning of a heavy surface soil has been postponed or in cases of tenacious soil, stubborn stains, etc., then a more aggressive cleaner and technique may be required. Cleaner and technique should be matched to the soil and the painted finish. Some local manual cleaning may be needed at this point. Always follow the recommendations of the cleaner manufacturer as to proper cleaner and concentration. Test clean a small area first. Cleansers should not be used indiscriminately. Do not use excessive, abrasive rubbings as such may alter surface texture or may impart a "shine" to the surface.

Concrete spillage that has dried on the coated surface may become quite difficult to remove. Special cleaners and/or vigorous rubbing with non-abrasive brushes or plastic scrapers may be necessary. Diluted solutions of Muriatic Acid (under 10%) may be effective in removing dried concrete stains; however, a small test clean area should be tried first, and proper handling precautions must be exercised for safety reasons.



## 2.0 Cleaning and Maintenance

### 2.2 Cleaning

#### Never mix cleaners

Never mix cleaners!

Doing so may be ineffective, and worse, very dangerous. For example, mixing chlorine containing materials, such as bleaches, with other cleaning compounds containing ammonia can cause poisonous gas emissions.

Always rinse the coated material after removal of heavy surface soil.

#### Summary of general cleaning tips

- Overcleaning or excessive rubbing can do more harm than good.
- Strong solvents or strong cleaner concentrations can cause damage to painted surfaces.
- Avoid abrasive cleaners. Do not use household cleaners that contain abrasives on painted surfaces.
- Abrasive materials such as steel wool, abrasive brushes, etc. can wear and harm finishes.
- Avoid drips and splashes. Remove run downs as quickly as possible.
- Cleaning should be done in shade at moderate temperatures. Avoid temperature extremes. Heat accelerates chemical reactions and may evaporate water from solution. Extremely low temperature may give poor cleaning effects. Cleaning under adverse conditions may result in streaking or staining.
- Do not substitute a heavy duty cleaner for a frequently used mild cleaner.
- Do not scour coated surfaces.
- Never use paint removers, aggressive alkaline, acid or abrasive cleaners, phosphate or highly alkaline or highly acid cleaners.
- Follow manufacturers recommendations for mixing and diluting cleaners.
- Never mix cleaners.
- To prevent marring, make sure cleaning sponges, cloth etc. are grit free.
- Always test clean small surface.
- "An ounce of prevention is worth a pound of cure".



## 2.0 Cleaning and Maintenance

### 2.2 Cleaning



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#### Cleaning of natural finishes

##### **Natural finish surfaces like stucco embossed & mill finish.**

Use an abrasive agent with a **ph value of between 5 - 8** and a soft non-woven fabric cleaning cloth.

When using special cleaning agents, make sure that they are ecologically compatible.

Always rinse off with water.

A specialized company must perform steam-jet cleaning.

#### Cleaning of coil coated finishes

When a mild detergent (ph value 7) or mild soap is necessary for removal of soil, it should be used with brushing or sponging.

The washing should be done with uniform pressure, cleaning first with a horizontal motion and then with a vertical motion.

Apply cleaners only to an area that can be conveniently cleaned without changing position.

The surface must be thoroughly rinsed with clean water.

It may be necessary to sponge the surface while rinsing, particularly if cleaner is permitted to dry on the surface.

The rinsed surface can be air dried or wiped dry with a chamois, squeegee or lint free cloth.



## 2.0 Cleaning and Maintenance

### 2.2 Cleaning



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#### Cleaning down before project handover to the client

- The roofing contractor is to thoroughly clean down all sheet areas.
- Any swarf, rivets, screws and debris must be removed from the roof area. All gutters are to be checked and cleaned.
- For colour coated material, the roofing contractor is to be remove with care all protective polyethylene film.



## 2.0 Cleaning and Maintenance

### 2.3 Repair of coated surfaces



#### Repair

Damage may be found on the surface of the coating when cleaning or otherwise maintaining the coated roof covering or wall cladding. Paint repair should be restricted to small areas (max. 5.0 m<sup>2</sup>). Any significant repair work should be discussed with your supplier to retain warranty benefits!

Execution when no corrosion is found:

- The damaged surface should be washed and dried as described above.
- A recommended touch-up paint should be applied for protective and aesthetic reasons.

Execution with small corrosion defects:

- Remove the dust by abrading, scraping, and sand blasting to the bare material.
- Degrease the complete surface.
- Clean and dry the surface (as described above) before applying a repair paint system (primer and top coat) recommended by the material supplier.

#### Overpainting / recladding

If it is deemed necessary to re-paint or reclad large surfaces, contact BEMO before execution to keep any right of warranty claim.

Investigating the economic feasibility of over-painting the existing structure or replacing the coated sheets is recommended.

In case of any questions about overpainting please contact us. Using non-compatible systems of repair paints and original coated surfaces might cause undesired effects.



## 2.0 Cleaning and Maintenance

### 2.4 Intervals & Maintenance guideline



#### Intervals

Two inspections per year and associated cleaning of all areas are recommended, at least one documented inspection is required for Limited Warranty coverage.

#### Regular inspection and maintenance should consist of

- Checking the condition of the sealants, fasteners and flashings to ensure water tightness
- Examining local defects (e.g. scratches) that may cause early deterioration of the coating or corrosion of the substrate
- Removing any blockage in gutters to avoid overflow or buildup
- Removal of leaves, grass, mould and other objects and debris
- Removal of dirt in areas of cladding not rinsed naturally by rainwater
- Removal of graffiti or other marks
- *Fasteners* – all fasteners are to be checked for tightness and weather seal. Fasteners that are found to be loose or corroded **MUST BE REPLACED**.
- *Welds* – all welds shall be inspected for cracks that may occur during thermal expansion and contraction of the system or foot traffic.
- *Sealants* – all exposed or concealed sealant will be checked for early signs of degradation from thermal or UV exposure. If sealant is found not to be performing, the damaged sealant must be replaced.
- *Corrosion* – any area that is exhibiting corrosion **MUST** be addressed **IMMEDIATELY** and appropriate action taken to stop additional damage.



## 2.0 Cleaning and Maintenance

### 2.4 Intervals & Maintenance guideline



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#### Additional recommendations

An individual inspection / maintenance is highly recommended after:

- Heavy rain
- Storm with high wind forces
- Hail and thunderstorms – especially after an thunder impact to the roof!
- Prolonged snow-loads above the project related calculated loads



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