

EQUITONE Comprehensive cleaning and maintenance information

TECHNICAL
NOTE
Eq-35/01/en/v3
ANZ/v1

1. Introduction



Facades covered with EQUITONE fibre cement materials ensure a beautiful dynamic appearance and architecture. To retain its attractive appearance, all façades, irrespective of the material used, should be serviced regularly. Then, unnecessary and high costs are avoided in the long term.

For that reason, periodic and preventive inspection of facades is recommended, so that imperfections can be discovered and resolved or repaired in good time. For that matter air inlets and outlets (ventilation and drainage gaps) should always remain clear.

2. Scope of this document

This cleaning advice is specifically intended for EQUITONE panels used for façade applications. A number of basic principles are given here. For variations or additional advice, please contact your local Etex Exteriors Technical Support.

Cleaning must always take place in accordance with the conditions of the supplier of the cleaning system and under their supervision and guarantee conditions.

For product data and the details of the processing of the various panels reference is made to the product information sheets available from local Technical Support.

3. The Soiling Process

Dust, soot, oils, greasy substances, etc. are present in the air and rainwater and can deposit on a façade. If care is taken through considerate design and application, local soiling and runs can be avoided. This can be achieved by having adequate drip-moulding, good sealing and attention for corrodible materials such as zinc, copper, aluminium, steel, etc.

Where the façade is protected by a soffit or the like and hence not sufficiently exposed to rain a more regular inspection and wash down may be required to prevent any salt and dirt build up. Coastal projects may also require more regular inspection and wash down.

The degree and speed at which materials become soiled largely depends on their surface, chemical stability, hardness, porosity, ability to become electrostatically charged or not, etc.

If the soiling is allowed to work into the materials for too long, it is possible that it will have penetrated so deeply into the pores of the material that simple cleaning is no longer possible and a more rigorous cleaning method may be needed.

4. Maintenance vs cleaning



A façade covered with EQUITONE is low in maintenance. However, it is recommended to regularly check the facade for possible soiling and clean if necessary.

If maintenance is done on a regular basis, simple washing with a mild household detergent or soft soap solution followed by rinsing with clear water will suffice to keep an even appearance.

If general maintenance is forgotten or being neglected soiling could become harder to remove. Specific cleaning agents depending on the type of soiling may offer a solution to restore an even appearance.

5. Points of attention during cleaning

In principle, perform the cleaning of the facade over the entire surface, from top to bottom as partial cleaning can result in colour tonal differences.

Any cleaning product used must be ammonia free. Solvent based cleaners such as acetone, white spirit, etc. attack the paint surface and are therefore not suitable.

If there is doubt on the suitability of the cleaning product, use it first on a leftover of the façade or a less visible part of the façade (e.g. behind rainwater drain) to check that the agent doesn't damage the surface. There is a risk that the panel colour coating may become cloudy.

Facade parts and other materials (metal parts, glass) on the building that can be affected by the cleaning agent must be protected!

Do not use tapes that leave glue residues on the surface when fixing protective cover plastic foils!

6. Cleaning Method

There are two methods of cleaning façades:

- mechanical cleaning (pressure washing)
- chemical cleaning

Chemical cleaning procedure

The dirt is first soaked loose by the cleaning products, and then removed by water and energy (high pressure or water and sponge). Do not rub vigorously as it may damage or polish the surface coating.



The cleaning product is diluted with water in the proportions specified in the technical file and according to the degree of soiling, and applied to the surface to be cleaned by means of:

- a brush
- a hand atomizer
- a spraying appliance.



The slightly foaming mixture must be allowed to work in for 4 to 10 minutes, depending on the nature of the surface and the degree of soiling. One must however make sure that the product does not dry into the surface. A maximum of 10 minutes after the application of the cleaning product rinse copiously with:



- a sponge or cloth and water.
- a garden hose.
- a high pressure cleaner with clean water at low pressure.

Note: the use of abrasive materials such as scouring pads, scouring brushes, steel wool, etc. is not permitted, as they leave irreparable scratches on the surface.

Mechanical cleaning - Pressure washing

The use of a high pressure cleaner is subject to some restrictions.



- For coated surfaces, a pressure washer can be used in certain circumstances to remove more stubborn stains. This must be done by experienced operatives. A pressure rating of 20-30 bar is generally advised. The nozzle must remain at all times at least 60cm away from the facade. Incorrect use can lead to the removal of the panels coating.
- For uncoated surfaces a high pressure cleaner with clean cold water at a maximum pressure of 100 bar, or with clean warm water at a maximum pressure of 80 bar, and a maximum flow rate of 10 litres/minute can also be used. One must spray perpendicular to the surface at a distance of at least 25 cm. If spraying occurs at excessive pressure or a too short distance this can cause damage to the panel surface.

A dirt blaster or surface cleaner with rotating nozzles must not be used.

Stubborn stains

With stubborn staining (e.g. the edges of the sheets, leaching of iron and aluminium oxides, traces of silicon sealing, etc.) the cleaning product is applied undiluted with a soft sponge and rubbed in, before everything is rinsed with clean water.

Façade parts that can be affected by the cleaning product must be protected.

7. Security recommendations



Security recommendations

Always consult the safety recommendations in the associated Material Safety Data Sheet of the used cleaning agent.



Personal protective equipment

To avoid possible allergic reactions, it is advisable to wear rubber gloves, protective goggles and a face mask while working.

Trained operative

When working with any acid solutions the operative must be fully trained and experienced in its application and removal.

8. Cutting and Drilling

Sawing and drilling must take place in a dry environment. Sawing and drilling contain cement and can cause permanent stains on the surface of the panels if allowed to dry in.

Cleaning

Immediately after drilling and sawing clean off all dust with a dry micro-fibre cloth. Keep the cloth dry. Do not use a wet cloth as staining may occur. Keep the cloth free of grit. Only use cloth for cement dust removal. Clean cloth regularly.

If the dust can get on damp panels then remove all dust with a soft brush and plenty of water.

Smaller lime stains, cement splashes or limescale deposits and light efflorescence can be removed with a 5% malic acid solution or commercial citric acid in a 10% concentration. The panels are treated with the solution using a paintbrush or a soft brush. After an exposure time of 2 to 3 minutes, the remaining solution is rinsed off thoroughly with plenty of water, if necessary, with a pressurized water jet. If efflorescence is still visible after drying, the application must be repeated. The solution should never be allowed to dry on the surface.

9. Lime Scumming or efflorescence



Lime scumming or efflorescence can be avoided by handling and storing the sheets in the correct way.

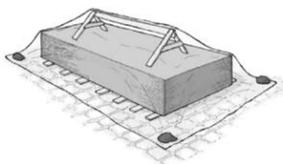
Inside Storage

Cedral should be stored under cover on the pallets on which they are supplied in a dry ventilated space. During storage the plastic protection may not be removed. Any temporary transportation hoods should be removed to release any trapped moisture. Re-cover with an opaque tarpaulin.

Outside storage

Where panels must be stored outside then extra care and attention is needed to protect them from rain and direct sun. Remove the outer plastic protection as this may cause condensation if left in place especially in times of direct sun.

Protect the pallet from rain or condensation by covering the pallet with an opaque waterproof cover. This cover must be provided with a slope, so all moisture runs off quickly and must not be allowed to pond on the pallets. This will also allow the air to circulate around the panels. Use only opaque coverings.



If moisture can penetrate between the stored panels, permanent surface staining in the form of efflorescence may occur and may prevent the panels being used. If the sheets do become wet in the packing, all packaging must be removed, and the sheets must be rubbed dry and placed in a way that they can dry out thoroughly.

Cleaning

If lime scumming still occurs, one can remove it with a light acid solution, only applied to the sheet (not to glass, aluminium, etc.).

10. Greenery, algae and moss formation

Algae deposits and moss formation is usually a result of high moisture level in the cavity, due to no or insufficient ventilation behind the rainscreen cladding.

Orientation of the façade has also an influence as north oriented facades will stay humid for a longer period of time.

The proximity of trees may accelerate algae and moss formation, especially when trees throw shadows on the façade for a significant part of the day.

It is important to first check the façade structure for the available ventilation features. Cavity width, ventilation entry at bottom and exit at top need to comply with our application guidelines.

Algae removal and cleaning without corrective measure to the ventilation will not stop greenery from returning in the near future.



Cleaning with water and soap

Initially, an attempt should be made to remove the algae deposits with clean water or with a mild household detergent or mild soap solution, followed by rinsing with clean water.

Cleaning with moss remover

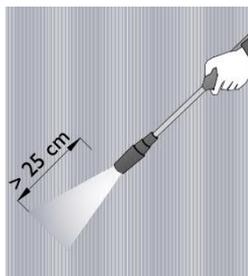
If mild household detergent or mild soap can not remove the green deposit, a more specific product might be necessary.



Algae deposits can most likely be removed with commonly available moss removal products. Always try on a leftover of the facade or on a less visible part of the façade to see if the cleaning agent does not affect the surface.

High pressure cleaning

To remove moss formation high pressure cleaning is the most effective. High pressure cleaning is best left to professionals who have the appropriate tools.



When high pressure cleaners with warm water are used a maximum pressure of 20-30 bar for coated panels, and 80 bar for uncoated panels is advised. For cold water devices a maximum pressure of 20-30 bar for coated panels, and 100 bar for uncoated panels is admitted. Use of rotating nozzles is not allowed. The maximum flow rate is always 10 litres/minute.

Always spray perpendicular to the surface at a distance of at least 60 cm from coated and 25 cm from uncoated surfaces. If spraying takes place at excessive pressure or a too short distance this can cause damage.

Reduce water pressure if there is a risk of water infiltration in the building structure. Cleaning is always done from top to bottom.

11. General Cleaning/Maintenance Products by Henkel

The following chemical cleaning products are recommended by HENKEL.
For safety information please contact:

HENKEL Belgium nv Contact : Bert Bellon	Tel. : +32 (0)2 421 27 11
Esplanade 1 B-1020 Brussels Belgium	Info.benelux@henkel.com www.henkel.be

Compatibility table

Check compatibility of material and cleaning agent in table below

Material	Scale Gon	Bonderite	Bonderite	Bonderite	Bonderite	Bonderite
	Building	C-IC R	C-MC 3000	C-MC 12300	C-MC 20100	C-MC 90014
	Acidic	Light acidic	Alkaline	Neutral	Neutral	Light alkaline
Equitone [lines]	-	-	-	✓	-	-
Equitone [tectiva]	-	-	-	✓	-	-
Equitone [lunara]	-	-	-	✓	-	-
Equitone [materia]	-	-	-	-	-	-
Equitone [natura]	✓	✓	✓	-	✓	✓
Equitone [natura] Pro	✓	✓	✓	-	✓	✓
Equitone [pictura]	✓	✓	✓	-	✓	✓

✓ Compatible
- Not recommended

Scale Gon Building Liquid by Henkel



Scale Gon building liquid is an acidic cleaning product especially developed to remove white efflorescence traces by means of a hard brush or low pressure equipment. Because it is free from hydrochloric acid and phosphoric acid, scale Gon building liquid has an optimal activity in combination with a high safety for the treated walls.

Application

- Soak the surface with water to prevent the acid solution to be applied from penetrating the sheet.
- Apply by means of a hard brush or low pressure equipment.
- Apply SCALE GON BUILDING LIQUID neat.
- Leave the product reacting with the wall for 5 to 20 minutes.
- Clean with copious amounts of clean water
- If necessary, repeat the application when there is heavy contamination.
- Rinse the wall or parts using cold water from the bottom to the top.

Properties

- Transparent liquid
- Estimate of consumption: $\pm 1\text{L}/1.5\text{m}^2$
- Packaging: jerrycan of 9 kg (9 liter)
- Storage
 - At temperature between 5 °C and 30 °C
 - Shelf life in unopened packaging: 2 years

Note:

- Do NOT use on uncoated surfaces!
- Contact with aluminum and glass should be avoided as much as possible but at least rinsed thoroughly.
- Contact with stainless steel, zinc, hardstone and concrete must be avoided.

Bonderite C-IC R



Bonderite C-IC R is a light acidic cleaning product with the following properties

- Liquid
- Color : Amber
- Resin and other synthetic materials are not affected
- Removal of mineral soiling, iron oxide, aluminium oxide
- Contains no sulphuric acid, nitric acid, oxalic acid, hydrochloric acid or hydrogen fluorides
- Avoid contact with zinc, steel and copper alloys.
- Dilution:
 - for normal soiling: 2 parts Bonderite C-IC R in 10 parts water
 - for stubborn soiling: 2 parts Bonderite C-IC R in 4 parts water
- Temperature of the surface must be at least + 5°C.
- Apply with brush, hand atomizer, spraying appliance (acid-resistant). Rub thoroughly in with an acid-resistant brush.
- Always rinse the foamed surface areas thoroughly with clean water.
- Precautions:
 - Technical measures need not be taken with correct use
 - Personal measures are necessary such as wearing gloves and safety glasses
 - In case of contact with the eyes and skin, immediately rinse with copious amounts of water. If necessary, seek medical advice.
- Packing: 25 kg jerrycan
- Storage:
 - at temperatures between 0 °C and + 50°C.

Bonderite C-MC 3000



Bonderite C-MC 3000 is an alkaline cleaning product with the following properties.

- Liquid
- Alkaline cleaner
- Resin and other synthetic materials are not affected.
- Removes mineral soiling, iron oxide, aluminium oxide.
- Affects zinc and copper alloys with a longer period of contact
- Dilution:
 - for normal soiling: 1 part Bonderite C-MC 3000 in 10 parts water
 - for stubborn soiling: 1 part Bonderite C-MC 3000 in 4 parts water
- Temperature: of the surface must be at least + 5°C.
- Foam: with brush, hand atomizer, spraying appliance (alkaline-resistant). Rub in thoroughly in with an alkali-resistant brush.
- Rinsing: always rinse the foamed surface areas thoroughly with clean water
- Precautions:
 - Technical measures need not be taken with correct use
 - Personal measures are necessary such as wearing gloves and safety glasses
 - in case of contact with the eyes or skin, immediately rinse with copious amounts of water. If necessary, seek medical advice.
- Packing: in 5, 25 and 200 litre drums
- Storage:
 - temperatures between + 5°C and + 50°C for not-diluted solution

Bonderite C-MC 12300



Bonderite C-MC 12300 is a neutral cleaning product with the following properties.

- Liquid
- Soluble in water in all proportions
- Basic ingredients: Non-ionogenic surface-active agents and phosphates
- Resin and other synthetic materials are not affected
- Removes organic pigment soiling
- Suitable for the cleaning of all lacquered and enameled surfaces, synthetic material, concrete, natural stone, etc.
- Suitable for of all metals, in particular aluminium
- Dilution for normal soiling:
Clean with brush / cloth: 30-50 g/l at a temperature of 30-50 °C
Clean at high pressure: 10-20 g/l at a temperature of 30-50 °C
- Foam: with brush, hand atomizer, spraying appliance. Thoroughly rub in with a brush.
- Rinsing: always rinse the foamed surface areas thoroughly with clean water.
- Precautions:
technical measures need not be taken with correct use;
personal measures are necessary such as wearing gloves and safety glasses
with contact with the eyes immediately rinse with copious amounts of water. If necessary, seek medical advice.
- Packing: in 5 and 200 litre drums.
- Storage:
 - above +0°C for not diluted solution.

Bonderite C-MC 20100



Bonderite C-MC 20100 is a neutral general cleaner with the following properties.

- Brown liquid
- Low foaming
- Removal of organic soiling such as grease, fat, dust
- Resin and other synthetic materials are not affected
- Contains no caustic soda or other corrosive ingredients
- Dilution:
 - for normal soiling: 2 parts Bonderite C-MC 20100 in 10 parts water.
 - for stubborn soiling: 2 parts Bonderite C-MC 20100 in 4 parts water;
- Temperature of the surface must be at least + 5°C.
- Apply with brush, hand atomizer, spraying appliance. Let the product act for some minutes and rub thoroughly.
- Always rinse the surface thoroughly with clean water.
- Precautions:
 - Technical measures need not be taken with correct use
 - Personal measures are necessary such as wearing gloves and safety glasses
 - In case of contact with the eyes and skin, immediately rinse with copious amounts of water. If necessary, seek medical advice.
- Packing: 10,5 kg and 23 kg jerrycan
- Storage:
 - at temperatures between 0 °C and + 50°C.
 - Shelf life: 36 months

Bonderite C-MC 90014



Bonderite C-MC 90014 is a light alkaline cleaning product with the following properties.

- Clear transparent liquid
- Ready to use liquid for regular surface maintenance substituting solvents such as white spirit.
- Removal of light organic contaminations (fat, grease, finger marks...)
- Resin and other synthetic materials are not affected
- Suitable for all surfaces.
- Fast drying time
- Low VOC (6 %)
- Temperature of the surface must be at least + 5°C.
- Apply with brush, hand atomizer, cloth ... Apply and let act very short time.
- Take away with a clean cloth
- Precautions:
 - Personal measures are necessary such as wearing gloves and safety glasses (see also the MSDS)
 - In case of contact with the eyes and skin, immediately rinse with copious amounts of water. If necessary, seek medical advice.
- Packing: 5 kg and 25 kg jerrycan
- Storage:
 - at temperatures between 0 °C and + 50°C
 - Shelf life in unopened packaging: 36 months

12. Cleaning Products by Lithofin

The following chemical cleaning products are recommended by LITHOFIN.
For safety information please contact:

LITHOFIN AG		Tel. : +49 (0)7024 94030
Heinrich-Otto-Straße 36 D-73240 Wendlingen am Neckar Germany		info@lithofin.de www.lithofin.com

Compatibility table

Lithofin products can only be used on coated surfaces!
Check compatibility of material and cleaning agent in table below

Material	Lithofin MN Builders Clean	Lithofin Cement Away	Lithofin MN Power Clean	Lithofin ASR
	acidic	acidic	mild alkaline	strong alkaline
Equitone [lines]	-	-	-	-
Equitone [tectiva]	-	-	-	-
Equitone [lunara]	-	-	-	-
Equitone [materia]	-	-	-	-
Equitone [natura]	✓	✓	✓	✓
Equitone [natura] Pro	✓	✓	✓	✓
Equitone [pictura]	✓	✓	✓	✓

Lithofin MN Builders' Clean



Removes cement films, stubborn dirt residues, blooms, efflorescence, rust and rust discolorations.

- Lithofin article number 162
- Product type: acidic cleaner
- concentrate - high yield
- highly effective
- Dilution ratio: 10% solution
- Coverage approx. 30 - 50 m²/L
- Stocking closed, cool, up to 5 year
- Packaging 1 L, 5 L

Note: Do NOT use on uncoated surfaces!

Lithofin Cement-Away (NL: Muro)



Removes even stubborn cement and mortar residues, blooms and similar stubborn dirt from acid-resistant surfaces.

- Lithofin article number 010
- Product type: acidic cleaner
- concentrate
- highly effective
- extra strong
- Dilution ratio: 10% solution
- Coverage approx. 30 - 50 m²/L
- Stocking closed, cool, up to 5 year
- Packaging 1 L, 5 L

Note: Do NOT use on uncoated surfaces!

Lithofin MN Power Clean



For thorough cleaning in case of severe general and greasy dirt, residues of floor care products, etc.

- Lithofin article number 160
- Product type: alkaline cleaner
- concentrate - high yield
- highly effective
- low on solvents and odour
- Dilution ratio: undiluted or 10% solution
- Coverage approx. 10 - 30 m²/L
- Stocking closed, cool, up to 3 year
- Packaging 1 L, 5 L

Note: Do NOT use on uncoated surfaces!

Lithofin ASR (Alkaline Special Remover)



For removing stubborn dirt deposits, grease, oil, wax, polymer layers, etc. Cleans and degreases ceramic tiles, stone, slabs, etc.

- Lithofin article number 041
- Product type: highly alkaline cleaner
- concentrate
- highly effective
- Dilution ratio: undiluted or 10% solution
- Coverage up to 100 m²/L
- Stocking closed, cool, up to 5 year
- Packaging 1 L, 5 L

Note: Do NOT use on uncoated surfaces!

13. Cleaning Products by HG

For safety information please contact:

HG International b.v.	Tel. : +31 (0)36 54 94 727
PO BOX 30078 NL-1303 AB Almere The Netherlands	www.hg.eu

Compatibility table

Check compatibility of material and cleaning agent in table below

Material	HG Rust Remover	HG Algae and Mould Remover
	acidic	biocide
Equitone [lines]	x ¹	-
Equitone [tectiva]	x ¹	-
Equitone [lunara]	x ¹	-
Equitone [materia]	-	-
Equitone [natura]	✓	-
Equitone [natura] Pro	✓	✓
Equitone [pictura]	✓	✓

Compatibility should always be double checked on a less visible part of the façade.

- ✓ Compatible
- x¹ Compatible but the hydrophobation layer is affected
- Not recommended

If the hydrophobation layer is affected, a renewal of the hydrophobation on site is possible. See chapter 'Re-hydrophobation'

HG Rust Remover



Metal oxides such as iron oxide and aluminium oxide can be cleaned with HG Rust Remover.

This rust dissolver from HG evaporates very slowly, which means it stays active for a long period of time.

- Based on phosphoric acid
- Biodegradable
- Wear rubber or plastic gloves when using rust stain remover.
- Packaging: 0.5 litres
- Applicable dilution degree: 1: 5
- Apply with brush.
- Leave to work for 10 minutes.
- After treatment, rinse thoroughly with plenty of water.

Note: The product will affect the hydrophobation layer on uncoated surfaces!

HG Algae and Mould Remover



Removes algae from different surface amongst which facades and roofs.

- Packaging: 1 litre concentrate
- The mould and algae remover should be applied in dry weather and when no rain has been forecast for at least two days.
- Remove most of the moss prior to the treatment.
- Dilute in a ratio of 1:20 with water. Apply the solution with a watering can or plant spray.
- Read the instruction before use. Use biocides safely.

Note: Do NOT use on uncoated surfaces!

Note: Do NOT use on EQUITONE [natura]!

14. Re-hydrophobation

Only applicable to EQUITONE [tectiva], [lines] and [lunara]. These boards are supplied in the factory with a colourless water-repellent impregnation. Certain cleaning products might reduce the hydrophobic effect of the surface. After thorough cleaning, the boards can be rehydrophobized, if desired. The following products may be used.

ANTIPLUVIOL W

Mapei Australia

4076 Brisbane
Queensland

Tel. : +61-7-3276-5000
www.mapei.com/au/en



- Packaging:
 - 10 Kg
- Storage
 - 24 months if stored in a dry place away from sources of heat and at a temperature between +5°C and +30°C
 - Protect from frost
- For the application and safety information of this product, please refer to the technical data sheet and the safety data sheet which can be downloaded from www.mapei.com/au/en

Funcosil SNL

Remmers Baustofftechnik

D-49624 Lönigen
Germany

Tel. : +49 (0)5432 83-0
www.remmers.de



- Packaging:
 - 5 l and 30 l tin cans
 - 200 l drums and 1000 l containers
- Storage
 - Shelf life 2 years if unopened
 - Store dry
 - Protect from temperatures above 30°C
- For the application and safety information of this product, please refer to Remmers

15. Information



Information on the different applications can be found in the Etex Exteriors application guidelines. They can be found on the website or can be obtained from local support. Information about external suppliers can also be downloaded from the local websites.

Disclaimer

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