ATLAS

façade maintenance and renovation

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Introduction

Building façades are exposed to various types of damage occurring as a result of standard use, natural process of weathering and degradation of construction materials throughout the entire building lifespan. The intensity of these processes depends on numerous factors: object location, quality of construction works and appropriate object maintenance.

ATLAS insulation systems are durable and can be safely operated for many years provided they are periodically inspected, maintained and repaired. Depending on the system, in accordance with the issued relevant documentation, such as the European Technical Assessment or the British Board of Agrément Certificate, the durability of ATLAS ETICS systems should be ensured minimum for 25 years. According to the requirements, ongoing care and maintenance should be provided by the owner/tenant as key to ensuring the expected durability of all system elements and ensuring the performance of the expected technical parameters.

Keeping technical parameters and unchanged aesthetics of a façade intact for a long time requires both: maintenance and renovation work. This instruction contains the most important recommendations for proper execution of both with special regards to external wall rendering coats.

We sincerely believe that information gathered in this brochure will facilitate maintenance and renovation works so the user enjoys unchanged appearance of façade for many years.

1. **Maintenance**
RECOMMENDATIONS

Façade is exposed to weathering and degradation during its entire lifespan, especially in moderate climate, where large temperature amplitudes and frequent precipitation take place. Façade should be periodically inspected to determine the level and range of potential surface damage. This examination allows for elimination of this damage at early stage and to plan renovation works in advance. The assessments should be carried out periodically, preferably in springtime. First of all, appearance of façade should be documented in photos. Further actions and the scope of work should be based on the assessment of the technical condition, potential damage or wear level of thermal insulation system.

Routine care and maintenance of insulation system elements is the responsibility of the property owner/ tenant. It is essential for the durability of the insulation system throughout its expected service life. Failure to take action in this area may not only decrease expected insulative properties of the system but also result in the loss of the warranty.

If you are a property owner/tenant, **do not attempt any repairs yourself**, they should be carried out by suitably trained individuals. If, during a routine inspection, you discover any failures that require repairs, have them done by a professional. However, it is the owner's responsibility to take appropriate measures to protect the insulation system from further damage.

TABLE 1: SCOPE OF ROUTINE INSPECTIONS TO BE CARRIED OUT

	SCOPE OF INSPECTION	FREQUENCY OF INSPECTION				ACTIONS TO BE TAKEN	
		30 DAYS AFTER WORKS COMPLETION	BEFORE END OF MAY		AFTER EACH SEVERE WEATHER EVENT (*)		
			AFTER FIRST WINTER SEASON	MINIMUM ONCE A YEAR			
1	presence of inorganic contaminants on the façade		+	+		according to 2.1	maintenance
2	presence of biological infestation on the façade (fungi, algae)		+	+		according to 2.2	
3	colour change caused by weather conditions, UV		+	+		according to 2.3	
4	presence of salt efflorescence	+	+	+		according to 2.4 and inspection according to p. 9-13 below	
5	quality and effectiveness of seals (mastic sealants)	+	+	+		according to 2.5	
6	presence of scratches, cracks, bubbling	+	+	+	+	according to 3.0: protection against damage progression and water ingress into/under insulation layers; commissioning the finding and removal of causes, and repair by a specialist (**)	repairs
7	damage to façade surfaces		+	+	+		
8	peeling of finishing layers: render/ paint	+	+	+			
9	water stagnation, presence of dampness	+	+	+			
10	tightness of gutters and downpipes, ensuring free water drainage		+	+			
11	whether the elements that determine water drainage fulfil their role (including flashings and windowsills)	+	+	+	+		
12	proper and firm fastening of all finishing elements	+	+	+	+		
13	correct attachment of any additional devices located on the façade	+	+	+	+		

(*) Storms or gusty winds that may damage the finishing elements of the façade or damage them with a thrown/falling object.
(**) In case of devices mounted on the façade and finishing elements, the repair should be carried out by the specialist who installed the elements, or a roofer in the case of flashings & sills. In the case of insulation system elements, the repair should be carried out by an approved contractor, in accordance with the system manufacturer's guidelines.

1.1 **Cleaning of inorganic dirt**

PRESENCE OF DIRT OR STAINS ON RENDER/PAINT COAT

VISIBLE EFFECT:	Presence of dirt or stains on render or paint coats.
CAUSES:	Subsidence of dust, dirt, fumes and other contaminants on a façade.
RECOMMENDATIONS:	Clean the surface with water under pressure, in case of graffiti, surface should be cleaned with dedicated cleaning agents.

INSTRUCTION FOR THE FAÇADE CLEANING

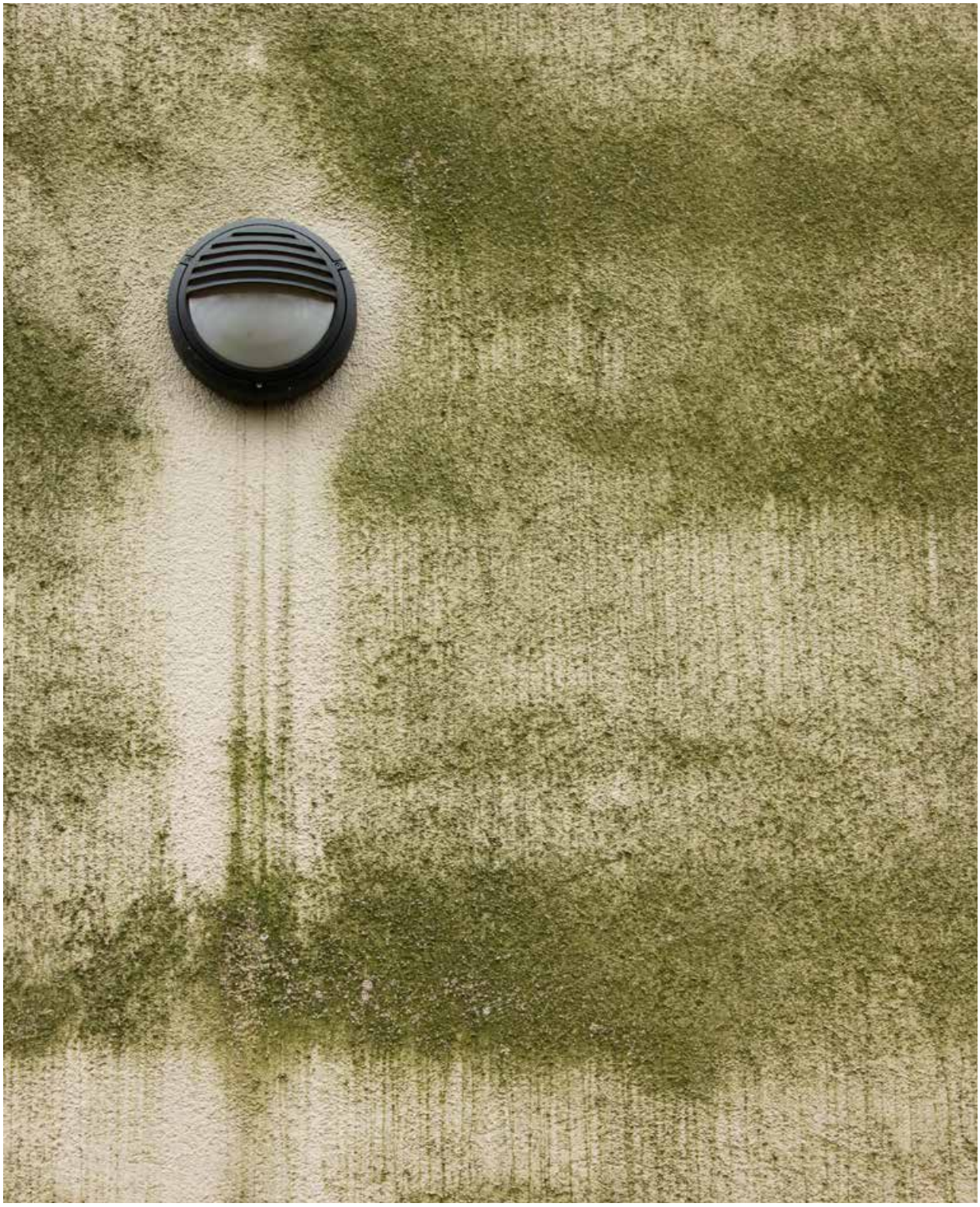
Wash the surface with pressure washers with adjustable pressure and a nozzle with flattened end. If needed, use special cleaning agents.

You can wash the façade with water and household detergent, using a domestic pressure washer (do not use bleach). The effectiveness of this method should be checked on a small test area of the separated surface of the façade.

Caution! The pressure and type of detergent should be selected based on sample application carried out individually for each substrate.

You can use a hand brush but avoid scrubbing too hard or too vigorously.

1.2 **Cleaning of organic dirt**
(BIOLOGICAL CONTAMINATION)



PRESENCE OF ALGAE ON RENDER/PAINT COAT

VISIBLE EFFECT:	Tarnished façade might indicate presence of biological contamination e.g. fungi (black or dark grey tarnish) or algae (green or red tarnish).
CAUSES:	Presence of biological contamination may result from: - secondary effect of presence of inorganic dirt, - building location, Contaminants settling on the surface, e.g. airborne fungi and plant spores combined with high humidity or surface moisture form favourable conditions for the growth of fungi, lichens, algae or mosses.
RECOMMENDATIONS:	Use of ATLAS MYKOS PLUS fungicide, renovative painting with façade paints, if needed. If the origin of the contamination is not known, the case should be consulted with an expert in mycology.

The appearance of algae on the surface of the façade does not result from a system defect and does not constitute a basis for complaint. The cause is always the environment in the immediate vicinity. The presence of greenery, constant increased humidity, and shading of the surface are conducive to the development of algae. Additionally, inorganic dirt allows algae to settle.

Despite the use of newer materials containing biocides that significantly reduce the growth of algae, their effect is not eternal and weakens with time. Areas where signs of algae colonization appear should be cleaned as soon as possible. Left unattended for a longer period, they can contribute to the structural decay of materials and may permanently change the colour of the façade surface. Subsequent actions will have to be more expensive and involve more measures.

INSTRUCTION FOR THE FAÇADE CLEANING

Step 1. Basic examination
Examine the wall, identify and remove any potential sources of dampness at the area of biological contamination. A possible cause may be persistent dampness of the surface caused by improper operation of water drainage elements. If necessary, engage a specialist to replace flashings, seal or replace gutters and downspouts, carry out additional securing works.

Step 2. Removal of biological contamination
Before tarnish is removed, the surface should be initially washed with water and cleaning agent. Technology of cleaning (manual or machine cleaning – with pressure washer) should be adjusted to the current conditions, i.e. location and level of contamination. If the contamination is very strong, it needs to be removed mechanically. When the tarnish is slight, the contamination can be removed with wet brush and dedusted.

ATLAS MYKOS PLUS is recommended for removal of a biological contamination. This product should be applied evenly and abundantly until the whole surface is moistened and left for 6-12 hours. Product can be applied with brush, painting roller or sponge. Contamination soaked with ATLAS MYKOS PLUS should be removed mechanically with e.g. wet brush or water under pressure. Biological contamination may be in various stages of development (easy to remove vegetative mycelium and more persistent spores), it is recommended to apply the product twice or even three times in particular cases. Keep breaks from 12 up to 24 hours between subsequent applications. After the last application, do not rinse and leave to dry.

Step 3. Surface protection
Surfaces cleaned with ATLAS MYKOS PLUS can be painted at least 48 hours after product application. It is recommended to use the silicone paints as depicted in Table 2. Painting coat should be applied in accordance with the instructions described in paragraph 1.3.

1.3 **Renovation painting**

VISIBLE EFFECT:	Façade is locally or entirely discoloured; original colour of render or painting coat is changed with visible spots or stains.
CAUSES:	Ageing and weathering of render and paint caused by UV radiation or air pollution. When the effect is visible after washing a surface infected with algae or fungi, it may be the result of their destructive impact on the structure of the materials used to finish the façade.
RECOMMENDATIONS:	The surface should be painted with silicone, acrylic, or silicate façade paints from ATLAS SALTA line with high coating capacity e.g. ATLAS SALTA or ATLAS SALTA E. If painted surface is coated with mineral render which was not painted originally, then it is recommended but not limited to use silicate paint ATLAS SALTA S.

DISCOLOURATION ON A FAÇADE

Aging is a natural process and the slow change in colour intensity (fading or darkening) caused by, among other things, UV radiation is not a technical problem, but a visual one.

Renewal the paint coat may result in a colour difference compared to the original, even if you choose the same colour from the palette. Partially painting the surface of the façade will certainly stand out. Consider which areas of your façade you want to refresh and if repainting will not cover the entire surface, plan the joints on the façade so that they stand out as little as possible – e.g. in corners, window lines, under drainpipes, etc.

TABLE 2: TYPE OF PAINT FOR RENOVATION PAINTING, DEPENDING ON TYPE OF SUBSTRATE:

SUBSTRATE TYPE	SILICONE PAINT	ACRYLIC PAINT	SILICATE PAINT
	ATLAS SALTA ATLAS SALTA N ATLAS SALTA N PLUS	ATLAS SALTA E	ATLAS SALTA S
Silicone render	+++	++	-
Acrylic render	++	+++	-
Hybrid silicone render	+++	++	-
Silicate render	-	-	+++
Silicone-silicate render	++	+	++
Mineral render	++	++	+++

+++ excellent match ++ very good match + good match – not recommended

INSTRUCTION FOR THE RENOVATION PAINTING

Step 1. Basic examination and substrate preparation
Before painting, type and condition of render should be determined and if the surface was painted. Contamination of the render surface may reduce bonding of paint, make painting difficult and increase paint consumption.

Even if the wall does not appear to be dirty, wash it with a pressure washer as described in paragraph 1.1. If you find signs of biological infestation, be sure to act in accordance with paragraph 1.2 before painting. Leave the façade surface to dry completely before painting.

Step 2. Selection of paint type
In case of renovative painting, it is very important to match the type of paint with the existing substrate. The selection should be in accordance with Table 2.

Step 3. Painting
Paints can be applied with a roller, brush or spraying unit, in one or two layers depending on substrate structure and absorption rate. Technological breaks must be planned in advance, e.g. in the corners and angles of the building, under downspouts or joints between two colours. Application must be done continuously, with no breaks in work. Subsequent layer has to be applied when the previous one is completely dry, crosswise to the first one. Keep the same direction of application for single coating. Protect the painted surface against direct sunlight, wind and precipitation during application and paint drying. Time of drying depends on substrate type, temperature and relative humidity.

Caution! To avoid differences in colour shades, apply paint of the same production date upon each individual surface. As a result of painting, one may notice slight natural smoothening of the substrate texture. Painting of surfaces of different structure and technical parameters can result in various shades of the same paint colour.

DISCOLOURATION ON A FAÇADE

1.4 **Dealing with salt efflorescence**

VISIBLE EFFECT:	Salt efflorescence, streaks, light spots.
CAUSES:	Moisture trapped under the thin-coat render layer – wet base layer before application of thin-coat render, moisture in or under the insulation layer, water getting into the insulation layers. Moisture migrating through the system layers transports salts which crystallize on the façade surface. Excess water added to the mortar mixture during execution of base reinforced layer.
RECOMMENDATIONS:	Improving the tightness of the system, repairing of the flashings work, improving the drainage system, etc., washing the façade.

SALT EFFLORESCENCE,
STREAKS, LIGHT SPOTS

Recognizing the phenomenon associated with the creation of salt deposits is easy and should lead to the fastest possible action to remove the effects and, above all, the causes. The main cause in this situation is always the moisture trapped in the insulation system. Removing moisture from this space is a long-term process. Until it is finished, the efflorescence will continue to reveal itself. The efflorescence cannot be allowed to remain on the surface as it will build up over time, and it will be impossible to remove it. If the system is based on mineral wool insulation, it may be necessary to remove the entire system and make it anew. Wet mineral wool insulation does not fulfil its role and can lead to serious consequences such as the development of a fungal infection in the building structure. If washing the surface and carrying out repairs to protect against water ingress into the system are ineffective, an expert opinion should be commissioned. The decision on what actions to take should result from consultation with a professional, after carrying out the necessary discoveries.

You should order any necessary repairs that are required to protect against water ingress into the system. If you see such places on the façade, before the contractor arrives, perform temporary protection – according to the instructions described at the beginning of section 2.

1.5 **Replacement of mastic sealants**

DEFECTS:	Damaged, eroded or peeled of seals do not fulfil their function.
CAUSES:	The influence of changing weather conditions and the mutual movement and deformation of elements between which the seal is provided by mastic sealants. The slow loss of properties of mastic sealants is a natural phenomenon.
RECOMMENDATIONS:	Replacing plastic sealants with new ones.

SEALANT APPLICATION

The purpose of plastic sealants is to protect against water penetration into the spaces between sheet metal elements, at windowsills, around the passages of installation pipes through walls, etc., in places where the use of typical sealing shapes is impossible. As a rule, these are places of connection/gaps between elements exposed to mutual movement and deformation. These phenomena occur in variable temperature conditions and over time, sealants lose their properties and must be replaced. Lack of maintenance of seals may result in water ingress under the insulation layer, invalidating the warranty and leading to the loss of the declared technical parameters of the insulation system and a reduction in its durability.

2. **Repairs**

All actions requiring repair, which are indicated in points 6 to 13 in table 1 should be performed by professionals who specialise in repair works. It is important to recognize the causes of defects found during inspection. Only the removal of the causes guarantees that repairs will be effective.

ROLE OF PROPERTY OWNER/TENANT

Temporary protection:
Any defects that are noticed and require repairs that go beyond the scope of daily care and maintenance and that could potentially lead to the problem spreading, which could ultimately lead to major repairs, should result in taking action to secure the ETICS/EWI system elements.

If any defect, damage to the ETICS system itself, damage or displacement of flashings, windowsills or water drainage elements could result in water ingress into or under the insulation layer, then this area should be immediately protected by using a plastic protective foil. The installation of such temporary protection from the foil should be carried out using only self-adhesive tape. Alternatively, a rope can be used to secure the foil to solid building elements.

Also, if the damage concerns additional equipment permanently installed on the façade, which could allow water to get into/under the insulation, similar protection should be carried out.

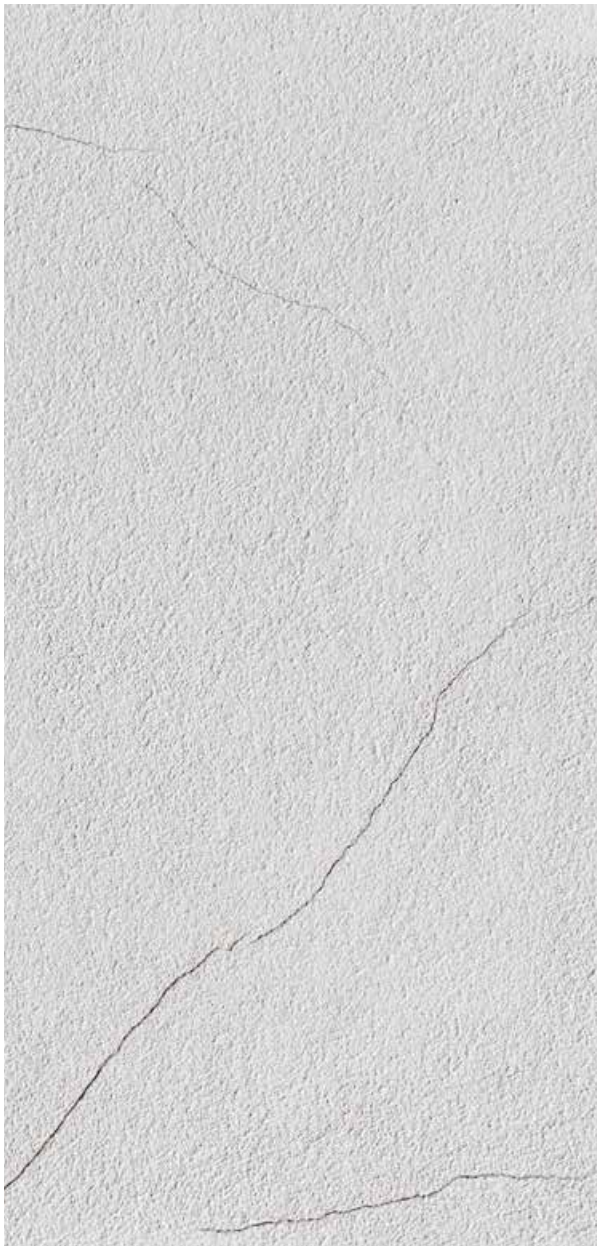
It does not matter whether the damage or defects that require repair were noticed independently of the routine inspections, the necessary actions should be taken immediately.

Do not undertake any repair work by yourself.

Call a specialist:
Contact a specialist who specializes in the given industry. If the expected repair involves improving the flashings, this should be a roofer; in the case of devices or installations mounted on the façade, this should be an installer specializing in the given field. In the case of electrical devices or gas installations, be sure to inform the appropriate services of the supplier of these utilities. In the case of repairs to ETICS systems, this should be done by a contractor approved by the system manufacturer.

2.1 **Repairing of thin, hairline cracks on the façade**

VISIBLE EFFECT:	Irregularly distributed thin microcracks.
CAUSES:	Execution errors, failure to maintain appropriate care conditions during and immediately after application.
RECOMMENDATIONS:	Painting with ATLAS SALTA N or ATLAS SALTA N PLUS – paint with ability for bridging cracks up to 500 µm.



THIN MICROCRACKS

INSTRUCTION FOR REPAIRING OF SURFACE

Step 1. Basic examination
In this case, the examination consists of a visual inspection of the façade, to confirm cracks width and check if the render is properly bonded to the substrate. If the cracks are wider than 0.2 mm, proceed in accordance with paragraph 2.2.

Step 2. Substrate preparation
The façade surface must be thoroughly washed, degreased, and left to dry.

Step 3. Renovative painting
Renovative painting should be carried out in accordance with the principles described in paragraph 1.3.

2.2 **Repairing of local cracks on the façade**

VISIBLE EFFECT:	Local, single cracks wider than 0.2 mm irregularly distributed.
CAUSES:	Specialist inspection required to determine causes. The most probable execution errors during the execution of the reinforced layer, also possible causes related to the attachment of thermal insulation, and even failures of the structure of the facility.
RECOMMENDATIONS:	To prevent damage progression due to water penetration into the insulation layers, the cracks should be filled with a permanently elastic material and painted with a façade paint with high covering capacity – ATLAS SALTA N. **Note!** Such intervention is temporary, the actual causes should be determined, and appropriate steps should be taken. In the event of a probable lack of adequate reinforcement with glass fibre mesh in the main layer, it may be necessary to repair it in accordance with the procedure described in paragraph 2.4. More serious causes may lead to the requirement for major repairs.

SINGLE CRACKS WIDER THAN 0.2 mm

INSTRUCTION FOR REPAIRING OF SURFACE

Step 1. Basic examination
In this case, the examination consists of a visual inspection of the façade, to confirm cracks width and check if the render is properly bonded to the substrate. If the cracks are wider than 0.2 mm, proceed in accordance with paragraph 2.2.

Step 2. Substrate preparation
The façade surface must be thoroughly washed, degreased, and left to dry.

Step 3. Renovative painting
Renovative painting should be carried out in accordance with the principles described in paragraph 1.3.

2.3 **Repairing of damaged render and base coat**

DEFECTS:	Minor mechanical damage to the surface; the render layer is chipped and loose, the reinforced layer of adhesive is crushed (broken into small pieces), but the reinforcing mesh is not damaged. Make sure that the insulation layer was not damaged but deformed at the moment of impact; after the force was removed, its shape elastically returned to its original state.
CAUSES:	Hit with a hard object.
RECOMMENDATIONS:	Non-invasive application of a base layer with embedding of the existing reinforcing mesh in it (without replacing it), reconstruction of the render layer.

DAMAGED RENDER AND BASECOAT

INSTRUCTION FOR REPAIRING OF SURFACE - FOR PROFESSIONAL CONTRACTOR

Step 1. Basic examination

First of all, it is recommended to find the causes of the damage and determine its scale or the loosening of the render around the damaged places. If the damage is regularly distributed and overlaps the thermal insulation board system or the joints between the next strips of reinforcing mesh, it may indicate incorrect application of the thermal insulation system. In such a case, repairing the surface may not be effective. It is necessary to make sure that the diagnosis is correct and that the effects of hitting with a hard object are a certain cause. This assumption may be confirmed by violent weather events preceding the detection of damage. It could have been a storm or strong wind, which, for example, breaks branches and throws them at the façade. It is worth checking if there was any construction work carried out nearby. Façades near passages, entrances to buildings, parking lots, and playgrounds are susceptible to this type of damage.

Step 2. Substrate preparation

In the event of damage involving the thin-coat render and the base layer without interruption of the reinforcing mesh, the preparation of the substrate comes down to removing the already detached layers of render and mechanically exposing the reinforcing mesh around the damaged area – about 10 cm around. This should be done as carefully as possible with a low-speed angle grinder. It is worth considering in advance what area the “patch” will be made on, in order to give it a regular shape that will not mar the appearance of the façade after the repair. Clean and remove dust from the prepared repair area.

Step 3. Reconstruction of the reinforced layer

Fill the prepared area using adhesive for making the reinforced layer (*). This should be done in such a way that the adhesive gets under the reinforcing mesh – by pressing it with a putty knife through mesh net, and that the mesh should be embedded in the adhesive layer and is invisible on its surface. The adhesive pressed through the reinforcing mesh on a relatively small area should ensure sufficient bonding with the insulation layer. Level the adhesive surface with a spatula or trowel so that it is smooth and does not protrude beyond the surface of the original reinforced layer (it should be recessed in relation to the façade surface by approx. 2 mm – the thickness of the thin-coat render layer). Allow the patch to dry – depending on the type of adhesive used this may require 2 or 3 days.

Step 4. Application of rendering coat

Select the same render (*) as the original to minimize differences in appearance on the façade. The application procedure is the same as for new render. Remember that before applying the render, the base coat must be primed with a suitable agent (*) ensuring adhesion.

Consider that the repair spots will be visible on the façade after they are done. This cannot be avoided, but you can always improve the appearance of the façade by repainting.

(*) A list of ATLAS products necessary for maintenance and repair can be found at the end of this brochure.

2.4 **Repairing of damaged render, base coat and thermal insulation**

DEFECTS:	Greater mechanical damage of thermal insulation system: destruction of rendering coat, breaking of the continuity of reinforced layer and damage of thermal insulation material. Also damage to a larger surface, including destruction of thin-coat render and base layer, even if the continuity of the reinforcing mesh has not been interrupted but has been detached from the insulating layer and the insulating layer has been damaged or crushed.
CAUSES:	Hit with a hard object.
RECOMMENDATIONS:	Local reconstruction of the ETICS including all its layers.

DAMAGED RENDER, BASECOAT AND THERMAL INSULATION

INSTRUCTION FOR REPAIRING OF SURFACE - FOR PROFESSIONAL CONTRACTOR

Step 1. Basic examination

Recognizing the type of damage and indicating the cause in such a situation should not raise doubts. The place of impact can be clearly recognized, which most often reflects the shape of the object that caused the damage. The causes will be similar to the case described in paragraph 2.3.

Step 2. Substrate preparation

Depending on the size of the damaged surface, all damaged elements should be removed by cutting out a specific fragment from the façade. To determine the extent of the repair, it is best to start by cutting out the reinforcing mesh, which has been "released" from the material in which it was embedded and separated from the damaged insulation layer during impact. The mesh should be uncovered and cut around the damaged insulation layer with a margin of about 10 cm. Around this repair area, the remaining part of the undamaged mesh should be additionally uncovered in a width of another 15 cm using a low-speed angle grinder to remove the render layer and the top part of the base layer. Now you need to remove the damaged insulating material. It is good to cut out a shape that can be easily recreated. Therefore, it is worth making it a little larger than the part that is actually damaged, but in a regular shape – preferably rectangular. In advance it is good to mark the repair area in a regular shape, which will not significantly spoil the appearance of the façade during the work. After removing the damaged elements, be sure to thoroughly remove all loose debris and vacuum the repaired surface.

Step 3. Reconstruction of the ETICS

Repair should be started by cutting the appropriate shape of the insulating material, of the same thickness – to replace the damaged insulation removed in the previous stage. Use the same insulating material as the original: EPS, mineral wool or other appropriately selected material. The polystyrene shape can be slightly smaller, and the gaps left should be filled with low-pressure assembly foam. With mineral wool, more precision is needed – if any gaps remain, they should be sealed and filled with soft mineral wool. The gaps left must not be filled with insulation adhesive. The entire installation technology is the same as for a newly made system. Remember to prime the substrate. Attach the insulation cut to size in the same way as for normal installation – EPS using the 'strip-point' method, and mineral wool – full-surface adhering with appropriate mortar. The surface of the adhered patch of insulating material should be uniform with the surface of the original reinforced layer. After reconstructing the insulation layer, protect it from atmospheric conditions and leave it for the time the adhesive sets – usually 2 days. If the surface is large and mechanical fasteners were originally used, they should also be used – after two days. Then you can also start applying the reinforced layer. First, prepare the reinforced mesh. Its surface should cover the entire repaired area and overlap the old reinforcing mesh by 10 cm on each side. With such overlaps, the reinforced layer is made – embedding the prepared fiberglass mesh in the adhesive layer in the same way as originally.

Step 4. Application of rendering coat

Further work can be continued after 2 days, this stage proceeds the same as in paragraph 2.3. Select the same render (*) as the original to minimize differences in appearance on the façade. The application procedure is the same as for new render. Remember that before applying the render, the base coat must be primed with a suitable agent (*) ensuring adhesion.

Consider that the repair spots will be visible on the façade after they are done. This cannot be avoided, but you can always improve the appearance of the façade by repainting.

(*) A list of ATLAS products necessary for maintenance and repair can be found at the end of this brochure.

2.5 **Repair of a peeling thin-coat render layer**

DEFECTS:	Loosening of the rendering coat, peeling from the substrate.
CAUSES:	Execution errors, possible lack of primer underneath the render, etc.
RECOMMENDATIONS:	Depending on the size of damaged area: local or full-surface restoration of the finish layer.

PEELING RENDERING COAT

INSTRUCTION FOR REPAIRING OF SURFACE - FOR PROFESSIONAL CONTRACTOR

Step 1. Basic examination
Examine the façade carefully, find all the places where the render is detached from the substrate. Determine what type of render was originally used on the façade, and what is the aggregate size. Check whether there are no signs of other malfunctions, whether there are no faults in the flashing or other elements above the damaged area that should protect the system against water ingress. Make sure that the problem is with the adhesion between the base reinforced layer and the top layer of render. This solution will only work if the reinforced layer has not been degraded and would require repair itself.

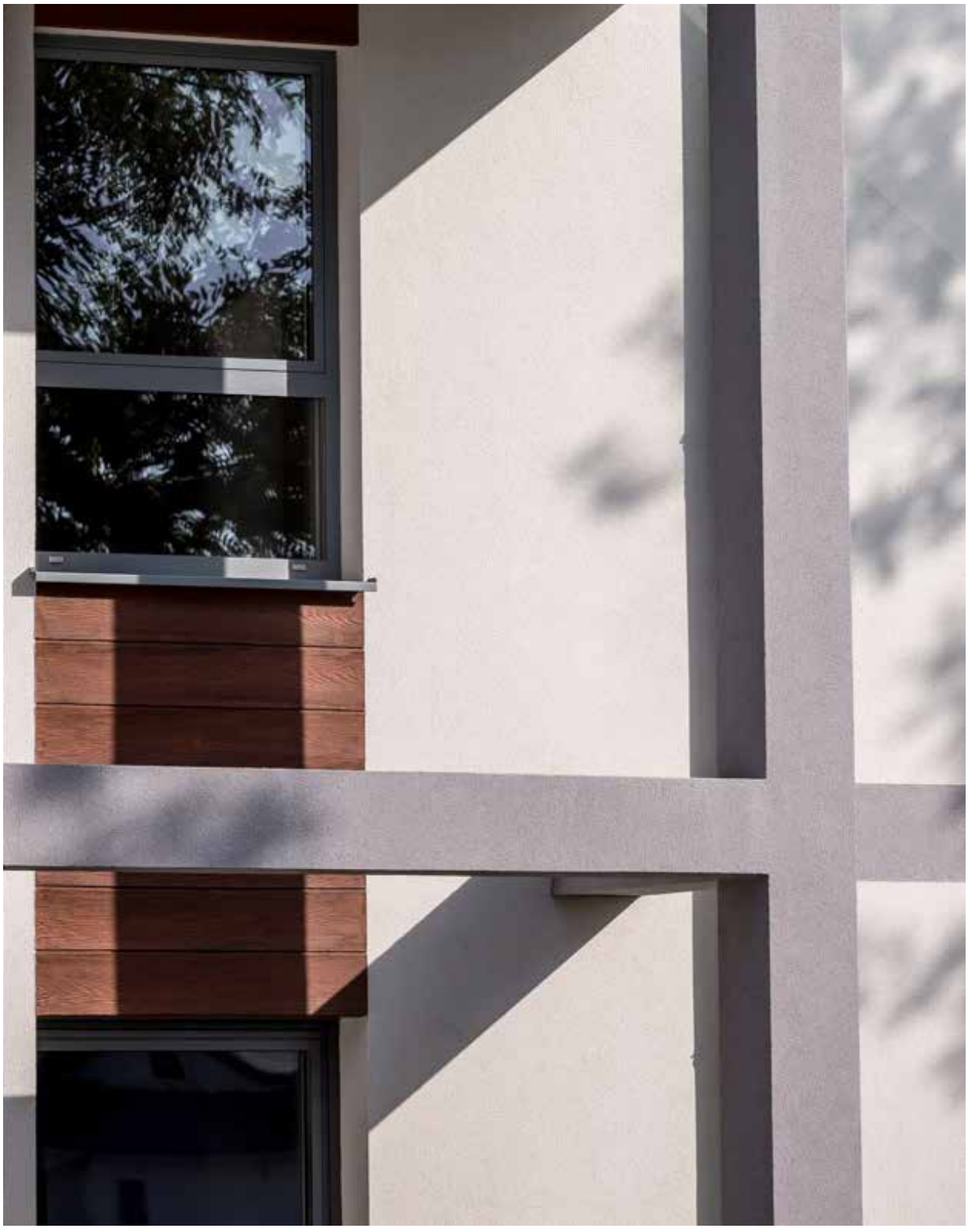
Step 2. Substrate preparation
Remove all loose fragments of render on entire façade, grind render poorly bonded to the substrate. Be careful not to damage the reinforced layer. The façade surface should be thoroughly washed, degreased and left to dry.

Step 3. Repairing
In case of local repairs, apply the proper priming mass (*) upon the area of loosened render and leave it to dry. Apply thin-coat render of the same type and thickness as the one used originally on the façade. The render texture should be unified between the old and the new rendering coat. Finally, the façade should be painted to merge the colours – the painting should be carried out in accordance with paragraph 1.3.

In case of many random spots with loosened render, it is recommended to remove loose fragments, apply base coat on the entire façade and apply of new rendering coat. The work should be carried out in accordance with paragraph 2.3.

(*) A list of ATLAS products necessary for maintenance and repair can be found at the end of this brochure.

3. **Product recommendations**



Priming agents

ATLAS CERPLAST
priming mass for renders
- ensures perfect bonding of renders
- reduces absorptiveness and strengthens substrates
- facilitates render application and texture forming
- unifies substrate colour
- available in full range of colours

ATLAS SILKON ANX
priming mass for silicone and silicone-silicate renders
- ensures perfect bonding of renders
- reduces absorptiveness and strengthens substrates
- facilitates render application and texture forming
- unifies substrate colour
- water vapour-permeable
- available in full range of colours

ATLAS UNI-GRUNT
fast drying priming emulsion
- superficially reinforces porous substrates of any type
- high yield, fast drying
- reduces and unifies substrate absorptiveness
- for application in temperature up to +30°C
- improves adhesion to the substrate
- under floors and screeds, beneath adhesives, plasters, top finishes, paints

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Cleaning agents

ATLAS MYKOS PLUS
concentrated agent for elimination of algae, fungi and lichen
- cleans façades, terraces and roofs
- protects against secondary biological infestation
- safe for cleaned surfaces

ATLAS SZOP 2000
concentrated polymer dispersion residues remover
- removes residues of priming emulsions, paints and dispersion renders
- for ceramic, stone, clinker, chrome plated, varnished, stainless steel and plastic surfaces

ATLAS SZOP
concentrated cement and lime residues remover
- for surfaces resistant to acids, ceramic, stone, chrome plated, varnished, stainless steel and plastic
- removes rust and water stains
- concentrate, can be diluted

Reinforcing meshes

ATLAS 150
REINFORCING MESH
reinforcing fibreglass mesh
- resistant to alkali
- durable
- elastic

ATLAS 165
REINFORCING MESH
reinforcing fibreglass mesh
- resistant to alkali
- durable
- elastic

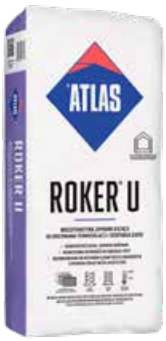
Foam adhesive

ATLAS GRAWIS P
graphite foam adhesive for thermal insulation
- for adhering white and graphite expanded polystyrene and other thermal insulation materials
- for filling gaps between thermal insulation materials
- for layer sealing installation of window and door frames
- high thermal insulation $\lambda = 0.034$ W/mK
- minimum level of expansion and post-expansion
- board adjustability time: 12 min.

Adhesive mortars

ATLAS STOPTER K-50
white general use adhesive for external wall insulation
- no priming mass required
- for mineral wool and polystyrene (also for graphite polystyrene)
- for boards fixing and for the reinforced layer
- use of white cement reduces the appearance of discolouration or translucence on the render
- reinforced with microfibers
- high resistance to microscratch formation

ATLAS STOPTER K-20
specialized adhesive mortar for thermal insulation and for mesh embedding
- recommended for application at low temperatures (even from 0°C
- for white and graphite polystyrene and also XPS
- very high adhesion to substrates
- flexible, fibre-reinforced
- resistant to cracks and scratches



ATLAS ROKER U
general-purpose adhesive mortar for thermal insulation fixing and mesh embedding
- for fixing mineral wool, white and graphite EPS boards
- very high adhesion to difficult substrates
- perfect workability
- vapour-permeable
- fibre-reinforced

ATLAS HOTER U
adhesive mortar for EPS and XPS and for mesh embedding
- rapid strength build-up
- high adhesion
- ncreased durability thanks to microfibres
- crack- and scratch-resistant

ATLAS GRAWIS U
adhesive mortar for polystyrene boards and mesh embedding
- for white and graphite polystyrene boards
- fast increase in strength
- maximum adhesion after 24 hours
- also for mechanical application
- flexible – has 3D reinforcement
- scratch- and crack-resistant

Renders

ATLAS GEMINI RS
silicone render
- easy application
- simple and quick texturing
- ATLAS CAPS – long-term façade protection
- pigment protection system
- increased protection against dirt
- ATLAS 3D-flex – highly flexible, fibre-reinforced

ATLAS SILICONE RENDER
- water vapour-permeable
- low water absorptiveness
- very high resistance to soiling
- very good bonding to substrates
- increased resistance to biological contamination
- self-cleaning properties
- high resistance to UV

ATLAS SILICONE HYBRID RENDER
- vapour-permeable
- very low water absorptiveness
- highly resistant to dirt
- high adhesion to the substrate
- bio ptotection
- colour durability

ATLAS ACRYLIC RENDER
- low water absorptiveness
- resistant to soiling
- very good bonding to substrates
- easy texture forming
- improved resistance to mechanical damage

ATLAS SILICONE-SILICATE RENDER
- very high water-vapour permeability
- low water absorptiveness
- resistant to soiling
- very good bonding to substrates

SEE ALL COLOURS

almost 500 colours, including fashionable shades of grey, graphite and white

Façade paints

ATLAS SALTA
façade silicone paint
- outstanding colour durability
- well coating
- highly resistant to soiling
- no primer required
- low absorptiveness

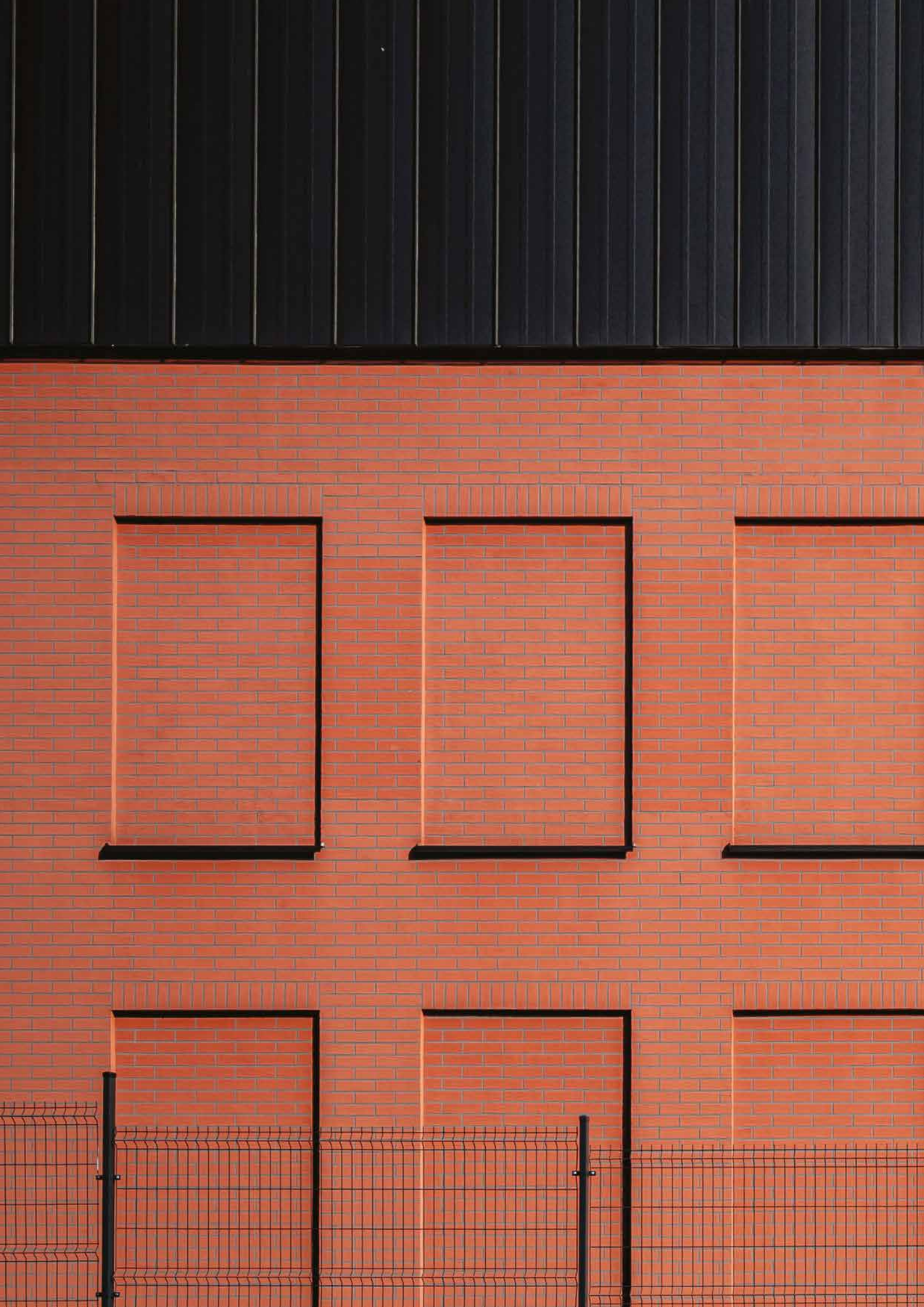
ATLAS SALTA N
façade silicone paint
- for the renovation of old building façades
- façade self-cleaning ability
- low absorptiveness
- no primer required
- resistant to biological infestation

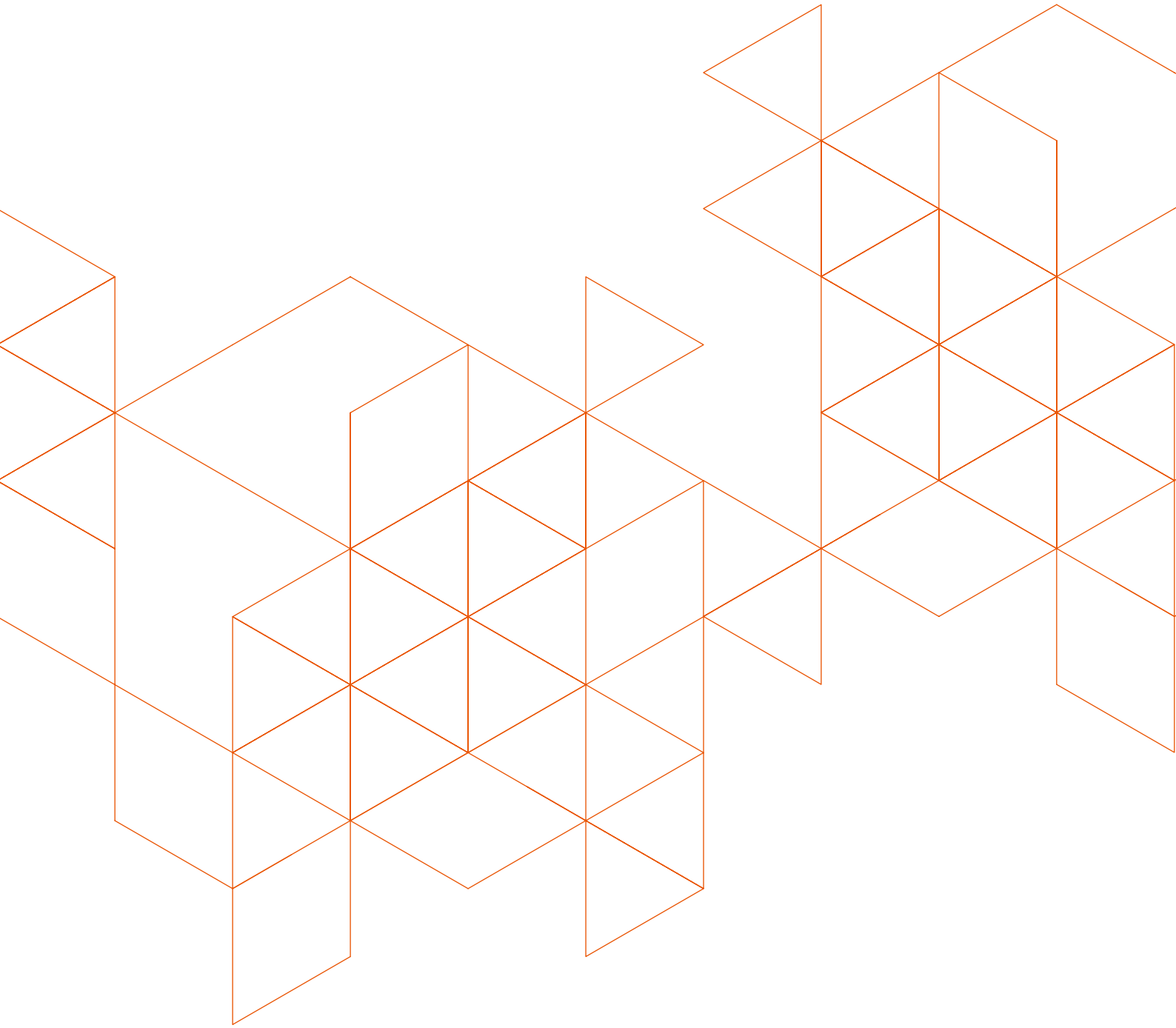
ATLAS SALTA N-PLUS
façade silicone paint
- outstanding self-cleaning ability
- superhydrophobic and vapour-permeable
- UV and weather resistant
- does not discolour when exposed to moisture
- no primer required

ATLAS SALTA E
façade acrylic paint
- excellent coverage and efficiency
- rich colour palette
- self-cleaning

ATLAS SALTA S
façade silicate paint
- water repellent
- perfectly vapour-permeable
- ensures long-term durability and protection of the façade
- for painting fresh mineral renders

SEE ALL COLOURS





ATLAS

BUILDING TOGETHER

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