



For The Attention
Of Mr Ian Edwards

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20 May 2022

Dear Mr Edwards,

**Ref – KEIM MINERAL PAINTS – MANCHESTER OPERA HOUSE,
3 QUAY STREET, MANCHESTER, M3 3HP**

Further to our recent conversation and my site inspection of the external surfaces at the above-named project, please find enclosed our proposals and recommendations for the pre-treatment and decoration of the same using Keim Mineral Paints.

If we can be of any further assistance, please do not hesitate to contact us.

Best Regards

Paul Milligan
Area Business Development Manager
Keim Mineral Paints Ltd



KEIM MINERAL PAINTS LTD

PROPOSAL REPORT FOR MANCHESTER OPERA HOUSE,
3 QUAY STREET, MANCHESTER

P. MILLIGAN
20 May 2022



1. PROJECT SUMMARY

This proposal report has been produced by Keim Mineral Paints in order to give advice on the application of Keim products.

Site Visit by: Paul Milligan

Site Inspection Date: Wednesday 18th May 2022

Surfaces for Decoration: External, previously painted smooth render

Additional Information

During my inspection it was noted that the building has a smooth stucco with multiple layers of modern paint coatings which are failing badly. There was also evidence of failing render which will need to be replaced using Keim Universal Render. The existing coatings should also be removed with use of Keim STS 7M paint softener and Doff/ThermaTech. There is also a possibility of staining, so I have included Keim I.G. Primer for any staining.

2. PRE-TREATMENT

Keim STS 7M should be liberally applied by brush, the coat of paint stripper should be thicker than the coat of paint that is to be removed. Where there are multiple layers of paint we would advise scoring the surfaces to aid penetration through the layers. To get the best performance, once applied, the surfaces should be covered in thin protective plastic film to prevent the product from premature drying out.

Keim STS 7M should be allowed to remain undisturbed for between 30 minutes and 30 hours depending on the number and thickness of paint layers. It is common to apply Keim STS 7M and leave protected overnight.

Paint should then be dissolved and easily removed using ThermaTech equipment (a modular range of equipment producing superheated water at temperatures up to 150°C, for the purpose of masonry cleaning, paint removal and coatings removal on heritage and other structures).

Please note that operatives should wear rubber hand protection and eye protection during operations and all surrounding materials should be well protected. Operatives should wear light breathing masks during operations.

All loose, flaking and unstable material must be identified and then thoroughly removed using stiff brushes and broad bladed scrapers to get back to a sound edge; these edges should then be feathered in. Ensure that any paint materials left remaining, and the underlying substrate is sound and adhering well. Any gloss or shiny surfaces should be thoroughly flatted down using sand or emery paper to create a good key.

All surfaces should be washed down with clean cold water to remove all surface dirt and dust.

The first coat of Keim Royalan Grob will obliterate any hairline cracks. Any larger cracks over 1mm in width or where there is a need to equalise the surface should be filled using Keim Spachtel, a ready to use silicate mineral filler, brush or trowel applied to a pre-wetted surface and dressed back to the required level.

For larger repairs we would recommend Keim Universal Render, Apply to pre-wetted surfaces in layers from 4mm minimum to 10mm maximum. For subsequent applications do not scratch up between coats and leave for a minimum period of at least 12 hours between coats. Finish off using a float appropriate to the required surface finish (i.e. sponge faced float such as Keim Hydro Sponge Float).



Keim Glassfibre Reinforcing Mesh may be incorporated if required by pressing into newly applied Keim Universal Render.

A typical specification would be to apply to pre-wetted surfaces an initial layer of Keim Universal Render of 4-10mm thickness with Keim Glassfibre Reinforcing Mesh incorporated by pressing into newly applied Keim Universal Render. After a minimum period of 12 hours a finishing layer of 4mm thickness should be applied. The overall thickness should be a minimum of 8mm. Do not scratch the base coat and finish using a Hydro Sponge Float.

Mix in the ratio of 1 kg Keim Universal Render to 0.24 litres of clean cold water (approximately 6 litres per 25kg bag) using a mechanical stirrer or plaster mixing machine/sprayer, e.g. Putzmeister or similar.

Any newly rendered/repared areas must be allowed to dry out for a minimum period of 15 days prior to the application of Keim Mineral Paints.

All mould and fungal growth must be thoroughly removed by pressure washing and a stiff brush (steam cleaning where possible). Once the prepared surfaces have dried, they should be uniformly soaked with undiluted KEIM Algicide-Plus by brush or flood coating (do not spray). Subsequent washing down is not necessary. Once the product has been allowed to act for at least 24 hours, KEIM coating systems can be applied onto the cleaned surface.

When all surfaces are clean, sound, wind dry, dust free and free from all surface contaminants, decoration using Keim Mineral Paints may proceed.

3. DECORATION

Any areas exhibiting staining should be coated with a two-coat application of Keim I. G. Primer, brush applied with 4 hours between coats. After a minimum period of 5 hours decoration using Keim Mineral Paints may proceed.

We would advocate a two coat Keim Royalan system the first coat to comprise Keim Royalan Grob diluted with approximately 20% by weight Keim Royalan Dilution, applied by brush, roller or airless spray and worked well into the surface. After a minimum period of 12 hours a final undiluted coat of Keim Royalan in the chosen colour shall be applied in a like manner.

Typical consumption rates onto a previously painted smooth surface would be as follows:

Keim STS 7 M	0.3-1 kg per square metre depending on paint layers
Keim Algicide	0.2 lt per square metre
Keim Spachtel	10 kg per square metre for 5mm thick repair
Keim Universal Render	1.1 kg per square metre per mm thickness
Keim Glassfibre Reinforcing Mesh	1.1-metre-wide, 55 square metre rolls
Keim I. G. Primer	0.1 lt per square metre per coat

First Coat

Keim Royalan Grob	0.2 kg per square metre
Keim Royalan Dilution	0.04 lt per square metre

Second Coat

Keim Royalan	0.2 kg per square metre
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Please note that these consumption rates are offered for guideline purposes only and should more accurate measures be required then site trials must be conducted. We would be pleased to provide samples in order for contractors to verify consumption rates and/or colour choice.

4. COST CONSIDERATIONS

2022 UK costs are as follows:

Keim STS 7 M	£24.50/kg
Keim Algicid	£11.75/ltr
Keim Spachtel	£5.60/kg
Keim Universal Render	£2.25/kg (25kg Pack Size)
Keim Glass Fibre Reinforcing Mesh	£3.30/m (55m ² Roll)
Keim Hydro Sponge Float	£23.60 each
Keim I. G. Primer	£27.80/ltr
Keim Royalan Grob	£17.35/kg
Keim Royalan Dilution	£14.75/ltr
Keim Royalan White	£16.75kg
Keim Royalan Group 1	£17.35/kg
Keim Royalan Group 2	£19.85/kg
Keim Royalan Group 3	£24.10/kg
Keim Royalan Group 4	£26.30/kg

Please note that these prices are exclusive of VAT. Delivery is charged at £19.00, excluding VAT per invoice to one named site. Delivery is normally within 7-10 working days from receipt of order. When ordering please round up to the nearest 5 lt or 5 kg.

5. SCOPE OF ADVICE

The key to optimum performance with Keim products is preparation prior to decoration. Please ensure that all recommendations in the General Considerations Section are followed.

For previously painted surfaces where stripping and removal of unstable surfaces is recommended it should be noted that once stripped there is the potential for impurities such as salts and staining to emerge as the surface dries.

Please note that unless otherwise stated a visual inspection has been carried out from ground level only. The inspection has been carried out in order to give advice regarding application of Keim products, and we can only comment on the state of the substrate at the time of the visit with regard to application of Keim products. This report is not in any way intended to be a survey of the building itself.

Please note that Keim are not responsible for identification of any underlying defects which were not visible at the time of inspection, this includes any defects which may be hidden underneath existing paint layers.

Consumption rates given are typical consumption rates for the surfaces described. Samples can be provided free of charge in order to verify consumption rates.

6. GENERAL

General points to be borne in mind when using Keim Mineral Paints are:



In order for Keim Mineral paint to achieve its permanent bond with the surface it is essential that the following recommendations are followed.

Pre-treatment –

- all areas to be decorated should be free from all surface contaminants, sound, dry and dust free
- all loose, flaking and unstable material must be identified and then thoroughly removed using stiff brushes and broad bladed scrapers to get back to a sound edge; these edges should then be feathered in
- ensure that any paint materials left remaining and the underlying substrate is sound and adhering well
- caution should be taken with the removal of any pre-1960's coatings as they may contain lead
- any gloss or shiny surfaces should be thoroughly flatted down using sand or emery paper to create a good key
- if the surfaces are being chemically stripped ensure that they are thoroughly washed down of all residue prior to decoration. Due to the potential for an osmotic drawing reaction, which can bring contaminants to the surface, we do not recommend the use of poultice based strippers if the surfaces are to be redecorated
- any powdery or chalking surfaces will require treatment prior to decoration – contact Keim to ascertain the appropriate product
- use only Keim recommended fillers and sealers. Acrylic, resin and gypsum based fillers particularly are not recommended for use with mineral paints

Material Application –

- always maintain a wet edge and work materials out well
- all materials must be thoroughly mixed beforehand, and periodically during decoration, using a mechanical mixer. We do not recommend intermixing packs, however if this is necessary ensure that products are thoroughly mixed beforehand to ensure even pigment dispersion, prior to mixing
- materials must not be applied at temperatures below 5°C nor those in excess of 30°C
- materials must not be applied if it is raining or if there is an immediate likelihood of rain
- Keim Mineral Paints should be applied onto wind dry surfaces where the moisture content on or near the surface (to a depth of 5mm approximately) should be no greater than 18% by volume. For on-site purposes a moisture meter may be used to give a qualitative reading – if the reading is in the green zone decoration may proceed
- on newly rendered surfaces we would suggest that a period of at least 15 days (30 days for lime render) is allowed following rendering, prior to the application of Keim paints
- mineral paints are manufactured using natural components and as such can appear to dry out unevenly. This is the way in which they dry, once fully dried any unevenness will disappear. Do not over-roll or touch up the paint during the drying process as this may inadvertently create patching once dry
- mineral paints will lighten as they dry, with a corresponding increase in opacity
- if airless spraying, please contact Keim for details of the appropriate nozzle sizes and optimum mesh and filter types

Housekeeping –

- all adjoining surfaces must be protected during decoration, any splashes/unwanted paint removed immediately, before it is able to completely dry and bond to the surface
- any splashes or spillage should be removed immediately using water - particular note needs to be taken of this in respect of Keim on glass, as it has a slight etching effect if allowed to dry hard



- clean all brushes and tools immediately in water (some ancillary products containing solvents may require white spirit or turpentine, if in doubt please consult the relevant product technical data sheet)
- always store materials upright and secure. Protect from extremes of temperature and store in frost-free conditions

General –

- when ordering reference to the project should be made, to ensure that in the event of re-ordering a colour match can be supplied
- to avoid confusion, the recommendations within this specification should be followed where there are any minor differences between this document and the standard advice on packaging and technical data sheets
- Keim Mineral Paints Ltd operates a policy of 'sale and no return' on all goods supplied in good faith