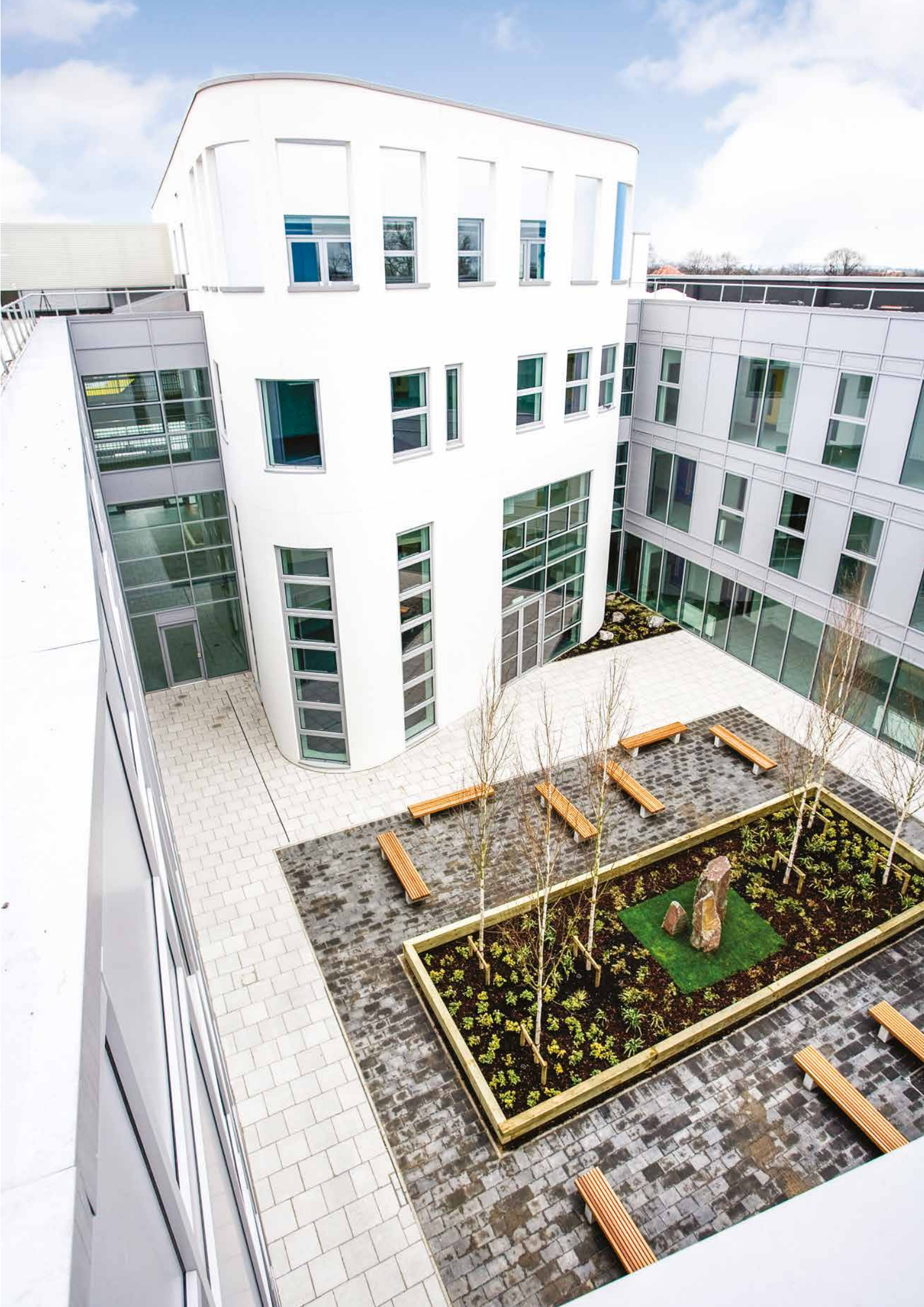


KEIM MINERAL PAINTS

EXTERNAL PAINT SYSTEMS



KEIM MINERAL PAINTS

KEIM Mineral Paints were developed over 140 years ago and are used globally to provide extremely long lasting, protective and durable coatings with a reputation for being the best paints in the world.

KEIM paints penetrate and chemically bond with the mineral substrate onto which they are applied, becoming an integral part of the surface, whereas oil based paints merely form a skin on the surface. KEIM Mineral Paints are natural, water-borne liquid silicate paints which produce an extremely durable, colourfast, sustainable protective finish with high vapour permeability, which work in harmony with the environment.

KEIM Mineral Paints was established in the UK in 1987.

Offering a full range of KEIM products encompassing pre-treatments, external and internal paints, renders, concrete repair systems, and mineral restoration materials, KEIM Mineral Paints are the UK's acknowledged experts in mineral paints, renders and repair systems. KEIM Mineral Paints provide a technical and support service encompassing project specifications, application and colour advice to a diversity of projects, from historic to modern, restoration to new build, private and public. To date, KEIM Mineral Paints have been applied on over 15 million square metres of surfaces within the UK.

KEIM – Unparalleled performance and durability.





WHAT ARE KEIM MINERAL PAINTS ?

Environmentally Friendly –

KEIM Mineral Paints are water borne, odourless, non-toxic and manufactured with natural ingredients using a low energy manufacturing process. KEIM Mineral Paints contain neither solvents nor any petro-chemical derivatives, are inherently non-combustible and do not give off any toxic gases. Over their entire life cycle from raw material extraction to production, processing and ultimate disposal, mineral paints have an excellent environmental profile.



Durable -

Mineral paint systems are based upon penetration (silicification) of the binder into the substrate. A strong, permanent bond is created between the paint and the underlying substrate (e.g. render, natural stone, concrete). This potassium silicate binder is highly resistant to weathering, ensuring an extremely long-life protective finish, reducing the frequency of re-decoration cycles. KEIM Mineral Paints do not flake and the binder does not disintegrate under the effect of UV light. They are resistant to acid rain and industrial pollution.



Cleanliness -

KEIM Mineral Paints have no residual electrostatic charge, unlike oil based paints, and therefore do not attract dust. Over time they remain cleaner than oil based paints. The silicate structure is highly stable and able to resist acid and alkali attack, while the inherent alkaline nature of KEIM Mineral Paints means they are resistant to the growth of fungi and algae spores.





Colour stability -

KEIM Mineral Paints contain exclusively high-quality, lightfast, mineral pigments and binders which exhibit the greatest UV resistance of all paint systems, and are highly weather-resistant. All KEIM colours are unaffected by weathering and UV radiation, ensuring no colour fade with the passage of time. Having a bright matt appearance, the crystal structure of KEIM Mineral Paints gives a high level of light reflectance compared to oil based film forming paints of a similar colour



Incombustible -

KEIM Mineral Paints are inherently non combustible, do not support the spread of flame and give off no noxious emissions due to their inorganic composition. Mineral paints are therefore ideal for use in safety critical public areas such as underground stations and tunnels, airports, schools and flats.

Breathable -

The micro-crystalline nature of the KEIM coating system creates finite spaces between adjacent crystals, which are large enough to allow the free passage of vapour, but small enough to prevent the ingress of driven rain. This imparts the KEIM Mineral Paint system with high water vapour permeability. This high breathability enables moisture vapour contained in building structures to be quickly released unhindered into the environment, avoiding moisture build up between coating and substrate, and preventing damage to the surface and building structure resulting from trapped moisture.





EXTERIOR SURFACES

There are a variety of exterior mineral finishes used on buildings in the UK. Some buildings are single skin and others have double layers with or without cavities in between. Some substrates will be new, and therefore unpainted, and others will have any number of layers of existing paint coats applied. In all, there are many different materials which can be used to compose the exterior of a building. The main two reasons for using a paint on top of the construction material are to offer protection and to improve the aesthetic appearance.

In relation to KEIM's exterior product range we are concerned with mineral substrates such as renders including sand/cement, cement, lime (with or without an underlying insulation systems), brickwork, blockwork and concrete. This list also includes all types of stone including sandstone, limestone, rubble stone, flint and granite (to name a few), terracotta and faience, and even glass. KEIM paints are not suitable for plastic (including GRP), metal (with the exception of zinc and lead) or wood. Depending on the condition of the substrate, different pre-treatment will be required. Pre-treatment is discussed on more detail later in this brochure.

When applied to external mineral substrates, KEIM paints not only offer beautiful flat matt mineral finishes but, as well as being extremely durable, offer a high degree of protection to the underlying substrate. Unlike conventional paints, KEIM Mineral Paints become an integral part of the substrate, rather than merely a surface coating, which gives the best possible protection.

External Product options:



KEIM Soldalit



KEIM Granital



KEIM Soldalit-ME



KEIM Twinstar



KEIM Concretal-Black



KEIM SOLDALIT®

KEIM Soldalit is a modern sol-silicate based paint for use on mineral and previously painted substrates.

KEIM Soldalit is a highly developed multi purpose exterior sol silicate paint system based on a combination of KEIM potassium silicate and silica sol binding agents, forming a chemical bond to mineral substrates and a mechanical bond to existing paint coatings.

KEIM Soldalit is ideal for application onto both previously painted and mineral substrates, combining the benefits of a classic mineral paint with simplicity of application.

KEIM Soldalit is a modern, innovative mineral paint which creates lightfast and UV resistant coatings with enhanced condensation resistance which are extremely durable and resistant to weathering.

KEIM SOLDALIT® TECHNICAL INFORMATION

1 Field of application

For all mineral, absorbent surfaces, in particular suitable for restoration coatings on repaired and stripped surfaces, suitable for application onto previously painted surfaces.

2 Product properties

- Water vapour permeable, non film forming, and micro-porous
- Multi purpose application
- High weathering resistance
- Non flammable - A2-s1, d0
- Lightfast
- Water repellent
- No solvents and plasticisers added
- Resists algal and fungal growth
- Natureplus certification
- Cradle to Cradle Certified®

Colour shades
White and in accordance with the KEIM Exclusiv and Avantgarde colour swatches.

VOC Content: 0-2 g/l VOC

3 Application instructions

Substrate preparation
Highly absorbent or friable substrates should be treated with KEIM Soldalit Fixativ. A base coat of KEIM Soldalit Grob is recommended for substrates which have repaired or filled areas.

Application
KEIM Soldalit should be applied as a two coat undiluted system. KEIM Soldalit can be applied by brush, roller, or, air-less spray with a minimum period of 12 hours between coats.

Consumption
Approx. 0.45kg/m2 for two coats onto a smooth surface.

Consumption rates are offered for guideline purposes only and are quoted for smooth rendered surfaces. Actual rates are the responsibility of the applicator. Project specifications should be referred to for specific rates.

Cleaning of tools
Clean immediately after use with water.

4 Packaging
5kg & 18kg containers

natureplus®

CERTIFIED cradle to cradle SILVER



KEIM GRANITAL®

KEIM Granital is a classic mineral, matt finish silicate based paint for use on all forms of mineral substrates.

Extremely long lasting, environmentally friendly, vapour permeable and lightfast, KEIM Granital is suitable for all forms of unpainted mineral substrates and for redecoration of sound, previously painted surfaces (bridging coat required).

The crystalline nature of KEIM Granital allows vapour to pass freely through the coating from the substrate whilst at the same time protecting against the ingress of moisture, eliminating blistering and flaking associated with conventional paints.

KEIM Granital is manufactured using natural earth oxide pigments which are UV stable and do not fade with time, providing a high light reflecting matt appearance, which remains bright and vibrant, even on dull days.

KEIM GRANITAL® TECHNICAL INFORMATION

1 Field of application

Exterior mineral paint for all mineral, absorbent surfaces, in particular suitable for the renovation of old surfaces where the highest degree of breathability is required.

2 Product properties

- Water vapour permeable, non film forming, and micro-porous
- Highly breathable
- High weathering resistance
- Non flammable - A2-s1, d0
- Lightfast
- Water repellent
- No solvents and plasticisers added
- Resists algal und fungal growth
- Natureplus certification
- Cradle to Cradle Certified®

Colour shades
White and in accordance with the Keim Palette Exclusiv swatch.

VOC Content: 0-1 g/l VOC

3 Application instructions

Substrate preparation
Highly absorbent or friable substrates should be treated with KEIM Granital Dilution. A base coat of KEIM Granital Grob is required for previously painted/ stripped surfaces or as an option onto substrates which have repaired or filled areas.

Application
Onto unpainted surfaces KEIM Granital should be applied as a two coat system, the first coat to be diluted with 20% by weight KEIM Granital Dilution and applied by brush or roller, working well into all surfaces, with a minimum period of 12 hours between coats.

For previously painted surfaces KEIM Granital Grob should be used as a first coat (diluted 20% with KEIM Granital Dilution as detailed above).

Consumption
Approx. 0.4kg/m2 KEIM Granital and 0.04lt/m2 KEIM Granital Dilution for a smooth surface.

Consumption rates are offered for guideline purposes only and are quoted for smooth rendered surfaces. Actual rates are the responsibility of the applicator. Project specifications should be referred to for specific rates.

Cleaning of tools
Clean immediately after use with water.

4 Packaging
5kg & 25kg containers

natureplus®

CERTIFIED cradle to cradle SILVER

KEIM SOLDALIT®-ME

KEIM Soldalit-ME is an exterior sol-silicate photocatalytic mineral paint.

KEIM Soldalit-ME is a variation of KEIM Soldalit which offers sustainable exterior protection for buildings with the additional environmental benefit that it helps to degrade nitrogen oxide pollutants from the atmosphere.

Photocatalytic mineral paints use light energy to neutralise pollution by the addition of the catalyst titanium dioxide. The photocatalytic reaction converts Nitrogen Oxides and other harmful pollutants such as formaldehyde and acetaldehyde into harmless nitrates. The reaction also helps to breakdown organic material and contaminants, keeping surfaces cleaner. The catalyst is not used up by the reaction and will continue to react for the life of the paint.

KEIM Soldalit-ME will withstand harsh climatic conditions, ranging from hot, humid tropical conditions to harsh cold environments, ideal for severe and coastal UK weather. It is suited for use in exposed and coastal locations such as marine environments.



KEIM SOLDALIT®-ME TECHNICAL INFORMATION

1 Field of application

For all mineral, absorbent surfaces, in particular suitable for restoration coatings on repaired and stripped surfaces, suitable for application onto previously painted surfaces.

2 Product properties

- Reduces toxic gases (e.g. NOx, VOCs) and organic pollutants
- Water vapour permeable, non film forming, and micro-porous
- Multi purpose application
- High weathering resistance
- Non flammable - A2-s1, d0
- Lightfast
- Water repellent
- No solvents and plasticisers added
- Resists algal und fungal growth
- Cradle to Cradle Certified®

Colour shades
White and in accordance with the Keim Exclusiv and Keim Avantgarde swatches, with specials available. No monochrome or dark colour shades available.

VOC Content: 0-2 g/l VOC

3 Application instructions

Substrate preparation
Highly absorbent or friable substrates should be treated with KEIM Soldalit Fixativ. A base coat of KEIM Soldalit Grob is recommended for substrates which have repaired or filled areas.

Application
KEIM Soldalit-ME should be applied as a two coat undiluted system. KEIM Soldalit-ME can be applied by brush, roller, or, air-less spray with a minimum period of 12 hours between coats.

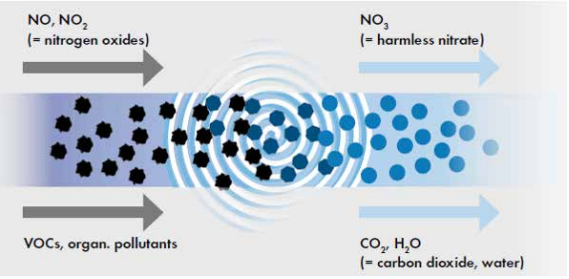
Consumption
Approx. 0.45kg/m2 for two coats onto a smooth surface.

Consumption rates are offered for guideline purposes only and are quoted for smooth rendered surfaces. Actual rates are the responsibility of the applicator. Project specifications should be referred to for specific rates.

Cleaning of tools
Clean immediately after use with water.

4 Packaging

5kg & 18kg containers



CERTIFIED
cradle to cradle
SILVER

KEIM TWINSTAR®

KEIM Twinstar is an exterior breathable masonry paint that can be applied two coats, 'wet on wet' eliminating the need for waiting and drying time. By reducing a work step it significantly speeds up project completions, to deliver substantial savings in both application and access costs.

It provides reliable protection without the addition of biocides, and its water vapour permeability allows painted surfaces to breathe.

Its antistatic, non-thermoplastic behaviour reduces dust and dirt attraction, and is colour stable, unaffected by UV light.

Its innovative sol-silicate formulation makes it ideal for use on mineral and previously painted substrates.



KEIM TWINSTAR® TECHNICAL INFORMATION

1 Field of application

For all mineral surfaces, suitable for application onto unpainted and previously painted surfaces.

2 Product properties

- Multipurpose application
- 2 in 1 paint coating
- UV stable, anti-static
- High weathering resistance
- Non-flammable, A2-s1,d0
- Lightfast
- Mineral matt, ultra fine smooth finish
- Water vapour permeable, microporous
- Water repellent
- No solvents and plasticisers added
- Resists algal and fungal growth, biocide free
- Natureplus certification
- Cradle to Cradle Certified®

Colour shades
White, light and medium shades in accordance with the KEIM Exclusiv Palette with specials available.

KEIM Twinstar s_d: ≤ 0.01

VOC Content: 0-3 g/l VOC

3 Application instructions

Substrate preparation
Highly absorbent or friable substrates should be treated with KEIM Fixativ, diluted 50:50 with clean cold water.

Application
A 2 in 1 coat system to be applied undiluted by brush, roller or airless spray. Firstly, apply and spread KEIM Twinstar with a roller crosswise to saturation. Once the first portion is applied, pick up more paint and apply it over the wet coat vertically up and down. There is no intermediate drying time.

Consumption
Approx. 0.45kg/m² KEIM Twinstar for a finished coated surface

Consumption rates are offered for guideline purposes only and are quoted for smooth surfaces. Actual rates are the responsibility of the applicator. Project specifications should be referred for specific rates.

Cleaning of tools
Clean immediately after use with water.

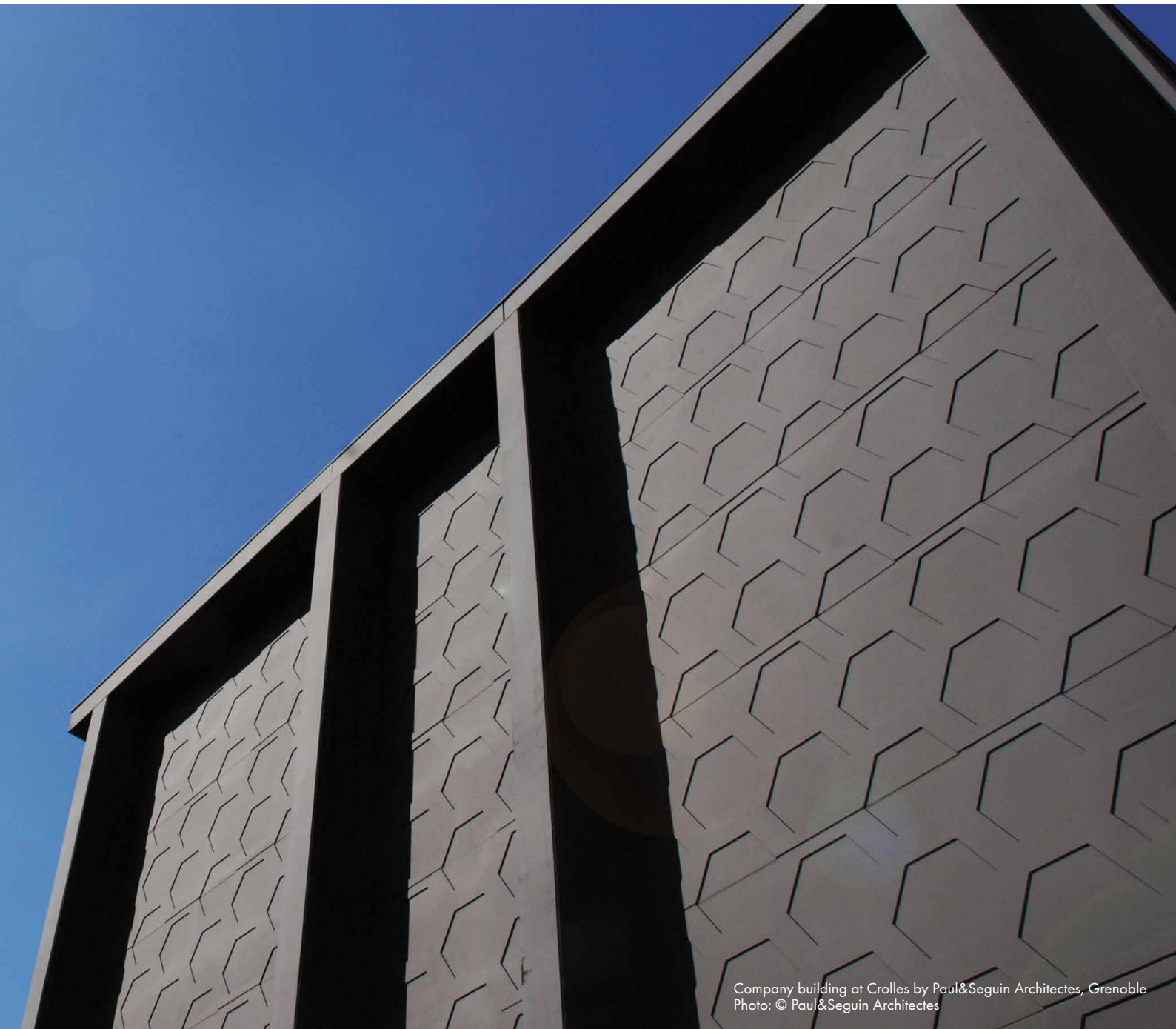
4 Packaging

5kg and 18kg containers

KEIM CONCRETAL®-BLACK

KEIM Concretal Black is a sol-silicate based paint formulated to protect from weathering and has an opaque intensive black finish.

KEIM Concretal Black is available in five black shades for different colour effects.



Company building at Crolles by Paul&Seguin Architectes, Grenoble
Photo: © Paul&Seguin Architectes

KEIM CONCRETAL®-BLACK TECHNICAL INFORMATION

1 Field of application

For all internal and external mineral surfaces. Suitable for application onto unpainted and previously painted surfaces.

2 Product properties

- Multipurpose application
- UV and acid resistant, anti-static
- High weathering resistance
- Alkaline
- Non-flammable - A2-s1, d0
- Lightfast
- Mineral matt
- Water vapour permeable, microporous
- Non film forming
- Highly water repellent
- No solvents and plasticisers added
- Resists algal and fungal growth
- Intensive black in five different black shades
- Cradle to Cradle Certified®

Colour shades
Intensive black in five shades
- Purity
- Pearl
- Aurora
- Forest
- Eclipse

KEIM Concretal Black s_d: ≤ 0.01m

VOC Content: 0-3g/l VOC

3 Application instructions

Substrate preparation
Highly absorbent or friable substrates should be treated with KEIM Concretal Dilution.

Application
KEIM Concretal Black should be applied as a two coat system with a minimum period of 12 hours between coats. KEIM Concretal Black can be applied by brush, roller or airless sprayer.

Base coat:
Dilute KEIM Concretal Black with maximum 10% KEIM Concretal Dilution.

Top coat:
Apply KEIM Concretal Black undiluted.

Keep diluted KEIM Concretal Black well stirred before and during work. Neither water nor any other materials must be added.

Consumption
For a two-coat KEIM Concretal Black finish per m²: approx. 0.4kg KEIM Concretal Black and up to 0.02lt KEIM Concretal Dilution.

Consumption rates are offered for guideline purposes only and are quoted for smooth surfaces. Actual rates are the responsibility of the applicator. Project specifications should be referred for specific rates.

Cleaning of tools
Clean immediately after use with water.

4 Packaging

5kg & 18kg containers

CERTIFIED cradle to cradle SILVER

PRE-TREATMENT

Prior to decorating external surfaces, ensuring effective pre-treatment will significantly extend the longevity and protection of the painted system. This is particularly important when redecorating previously painted surfaces.

- All loose, flaking and unstable material must be identified and thoroughly removed. Unstable paint coatings should be identified and removed (KEIM Dispersion Remover Paint Stripper available).
- Any mould and fungal growth must be thoroughly removed using wire brushes to remove all growths and then treated with KEIM Algicid.
- Surfaces should be repaired/re-rendered using appropriate mineral based materials and dressed back to the surrounding substrate. KEIM range of fillers and render materials available.
- Any newly repaired areas must be allowed to dry out for a minimum period of 15 days (28 days for NHL (Natural Hydraulic Lime) prior to the application of KEIM Mineral Paints.
- 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.
- Specific substrate issues such as friable surfaces, efflorescent salts and added water repellence can be addressed using the range of KEIM primers and treatments.
- All surfaces must be thoroughly washed down with clean cold water to remove all surface dirt and dust.

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



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Version 02/2024