



Klima | Interior Coatings | Plasters



For a natural and healthy living

# Interior Values



"We want people to live in healthy, energy-efficient and beautiful homes."

## Explore the world of Healthy Living

Our health is founded on 3 key factors: nutrition, exercise and lifestyle. Each of these improve our general well-being. Lifestyle is directly linked to living spaces therefore our spaces should be optimally designed with the right vision and building materials.

Factors that contribute towards physical well-being include a comfortable room temperature, indoor air humidity, air quality, etc. We spend most of our lives indoors that is why our "living spaces" are so important for our health.

### **Healthy building**

The true quality of building materials becomes clear when they are used. Only if properties are built with health in mind, can we live in a healthy environment and live a healthy life.

### **Healthy living = a healthy life**

An insulated property provides a beautiful, clean environment that enhances the occupant's general comfort and health.

After years of intensive research, it's clear to us that construction methods and materials have a significant impact on occupier health. Regardless of style, all properties have one common goal to create a healthy building.



# 7 factors for a healthy building

The term "indoor climate" describes the interaction of various influencing factors, which affect the quality of life, comfort and - consequently - the health of people living in these rooms. Not only well known factors like air temperature and air humidity, but also other less known factors affect your indoor climate.

## 1. Temperature

How warm or cold we find a room depends on the perceived temperature, which is determined by two factors: the air temperature and the surface temperature

(thermal radiation).

## 2. Air humidity

In order to feel comfortable indoors, in addition to a pleasant room temperature, you also need the right amount of air humidity. We believe a humidity of between 40-60% as optimal.

## 3. Mould

Mould is one of the most dangerous factors affecting healthy living. If air humidity is too high, it can lead to the formation of mould. This increases the risk of respiratory diseases, infections and allergies.

## 4. Noise

Noise is considered to be one of the greatest environmental stress factors that can have a negative impact on well-being.

## 5. Emissions

A variety of polluting emissions can adversely affect the quality of indoor air including construction products, furniture and other furnishings, which often release chemical substances (VOCs).

## 6. Odour

Unwanted odours caused by building materials are not only unpleasant but in the worst case, can also lead to health conditions such as headaches and tiredness.

## 7. Light

Bright, light-filled living spaces are vitally important for health and a positive mood.



## If walls could talk...

...what would they tell us? By deciphering more than 1.5 million data points a year, the largest research project in Europe, the Baumit Viva Research Park gives walls a voice.



- 
- Europe's largest comparative research project for building materials
  - 1.5 million measurement points a year
  - Supported by external analysis from research partners
- 

### **VIVA Research Park**

For over 25 years, we have been researching what 'healthy living' means and from our findings, we have launched numerous innovative products to make healthy living a reality.

Over the years, it became clear that there are few scientifically substantiated conclusions about the effects of building materials on health and well-being. In 2015, we launched a unique Europe-wide research project to fill the gaps.



### Research and discovery

Located next to the Friedrich Schmid Innovation Centre in Austria, there are 13 research houses each built using different construction methods. From solid construction, concrete and brick to timber and lightweight timber frame constructions. Each building has been completed with different interior and exterior finishes.

The houses have internal dimensions of three by four metres and they each have a window and a door. All the houses have the same external climatic conditions. The building materials selected reflect contemporary products that are available on the market. This provides a real-life illustration of the

range of possible construction methods that builders may encounter.

### User behaviour & habits

In each house, user behaviour is simulated. For example, we replicate steam and moisture created from showering and cooking along with typical ventilation you may find in a building.

There are over 30 measuring sensors in each house, which record a wide range of physical parameters around the clock.

The different building materials are regularly analysed for toxicological interactions, well-being, comfort and effects on health. An in-

house measuring station records and stores all collected data digitally.

### Scientifically proven

To ensure data integrity, the results are further analysed by our research partners at the Austrian Institute for Building Biology and Ecology (IBO), the University of Applied Sciences Burgenland and MedUni Vienna.

Our continued investment in research and development allows us to thoroughly understand the impact building materials have on the interior of a building and ultimately the end-user. Our long-standing commitment enables us to develop products of the future that deliver a safe and healthy environment to all.





# 3 Elements of Healthy Living



After many years of intensive research analysing and evaluating millions of data points, it is clear that construction methods and building materials have a significant impact on health and quality of life. Regardless of which architecture you choose, to create a healthy construction, consider three key elements:



- INSULATION FIRST – Protection and cosiness
- INTERIOR VALUES – Natural and healthy living
- SOLIDITY COUNTS – Safety and comfort

**INSULATION  
FIRST**



**INTERIOR  
VALUES**



**SOLIDITY  
COUNTS**



## INSULATION FIRST



## Protection and cosiness

Insulated buildings provide spaces that bring maximum comfort for all that live in it. Baumit EWI systems ensure that walls are warm in winter and cool in summer, making a significant contribution to energy efficiency.



## INTERIOR VALUES



## Natural and healthy living

A good mineral internal plaster system acts as a buffer for peaks in humidity by absorbing excess moisture and releasing it again later when needed. This guarantees a constant level of comfort to building occupants.



## SOLIDITY COUNTS



## Safety and comfort

Walls constructed on a solid foundation perform better for a healthy indoor climate. Thermal insulation enhances the performance of walls, ceilings and floors so that optimum room temperature is achieved whatever the season.





Healthy living space

## Interior Values

People now inhale up to 13.5 kg of indoor air and 1.5 kg of fresh air per day – with such large quantities, the quality of the air is vitally important. Air humidity, purity and temperature have a crucial impact on our quality of life, and consequently our health.

In order to save energy, our living spaces are becoming more and more tightly sealed. To ensure that indoor air remains “healthy” and our health is not compromised, it is essential to give due consideration to the quality and function of the construction materials used. For the most part, these remain within the building forever and must not emit any

pollutants, as bad air causes illness.

### **90 % of the time is spent in enclosed spaces**

People spend approximately 90% of their lives in enclosed spaces. It is therefore worth paying particular attention to the interior walls and the indoor climate.

### **Tightly sealed building designs**

A consequence of tightly sealed building designs is that insufficient ventilation results in an accumulation of released chemical and biological substances in the indoor air. To avoid this, in addition to increased ventilation, it also helps to use low-emission construction products.

### **Climate regulation**

The skin is the largest organ in the human body. If skin functions are impaired, this has an impact on our well-being. The interior walls constitute the largest surface in a house. Like the skin, the interior walls undertake a variety of tasks. They are not just a functional and creative element, but can also have a particularly important, but often underestimated, capacity: climate regulation. However, the inner walls can only take on this function if the materials used are suitable for this purpose, are compatible in terms of their composition and have been carefully tested. Optimum, stable humidity and room temperature make a significant contribution to well-being.







**BENEFITS & POSITIVE EFFECTS**

**Healthy building materials**

Energy-efficient construction also often means airtight building designs. As a result, any pollutants remain in the room for longer. The replacement of internal air with external air is now much lower than in old buildings. Modern buildings therefore place much higher demands on building materials than before.

This makes it all the more important to choose the right building materials, which should be free of pollutants, mineral-based and breathable. For many years, Baumit has been creating long-term healthy living and environmentally-friendly system solutions with its products for healthy indoor air, comfortable living and better relaxation.

**HUMIDITY CONTROL**

A good mineral plaster system can act as a buffer for any peaks in humidity by absorbing excess moisture into the first few centimetres and releasing it again. This guarantees a constant level of humidity, ensuring a healthy indoor climate.

**CLEAN INDOOR AIR**

The cleanness of indoor air is determined by 3 factors. Physical (air humidity, temperature etc.), biological (mould, viruses, bacteria etc.) and chemical (VOC, softeners, fragrances etc.).

**COMFORTABLE LIVING**

Not too hot and not too cold. Not too dry and not too humid. A comfortable living environment is only created with the right interaction of various factors.





Healthy indoor climate

## Humidity control

In addition to the optimum room temperature, air humidity also plays an important role in making you feel comfortable within your own four walls. As a general guide, relative humidity values of between 40 and 60% are considered healthy and pleasant.



### Relative humidity

#### Effects of air humidity

The development of harmful organisms depends largely on the air humidity. Bacteria, viruses as well as allergies and asthma are able to develop particularly well if the air humidity is too high, but also if it is too low. If the air humidity is too high, it also encourages the growth of mould, while if it is too low, it can lead to respiratory infections.

#### Effect of interior plaster on indoor air humidity

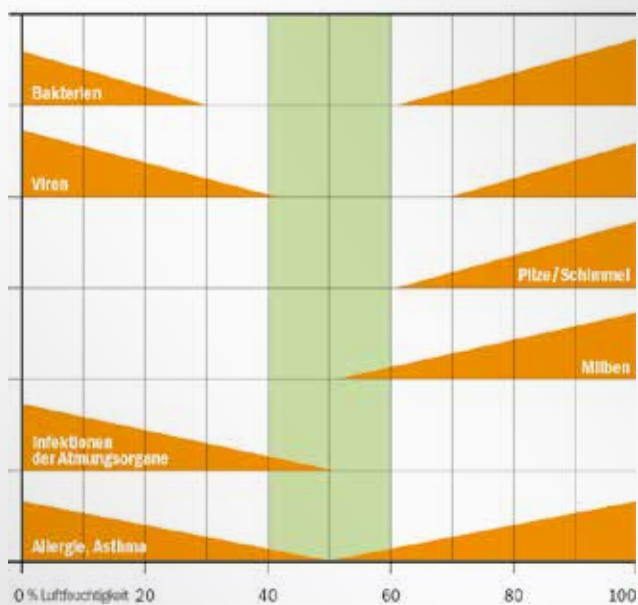
Interior plasters have a noticeable moisture buffering effect. In times of high air humidity, the humidity is absorbed so that it can be released again in times of low air humidity. The fluctuations in air humidity are therefore significantly evened out by the interior plaster. The layer thickness of the interior plaster also plays an important role here. The optimum moisture absorption capacity occurs at a layer thickness of 1.5 cm. Choosing the right interior plaster makes the indoor climate more balanced and creates a healthier living environment.



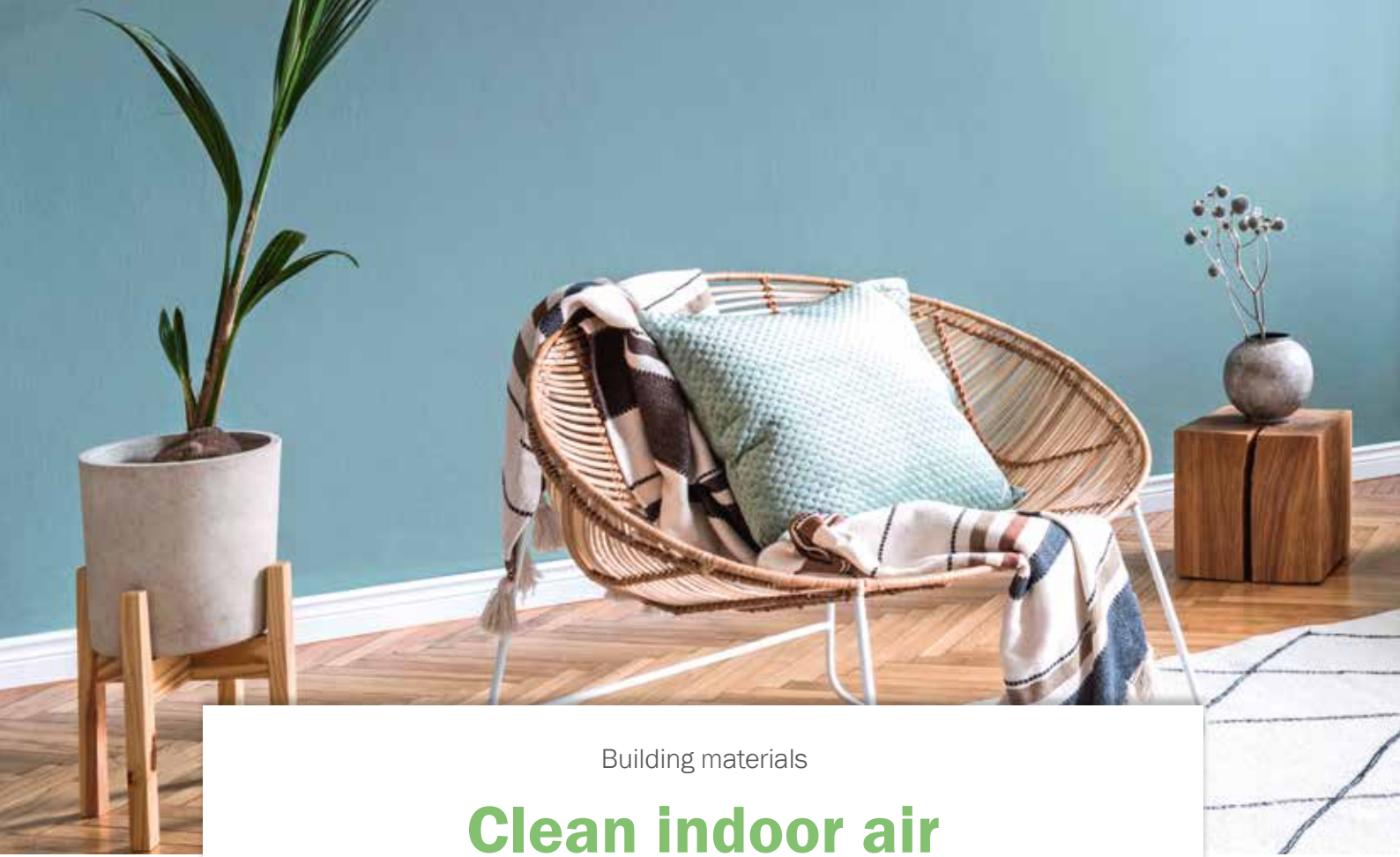
### Mould formation

If the air humidity is above the limit of 60%, there is a risk of an increase in the formation of harmful organisms such as bacteria, viruses, moulds, etc.

### DEVELOPMENT OF ORGANISMS AND INFLUENCE ON HEALTH AND THE ENVIRONMENT



Particularly in rooms that are exposed to large fluctuations in humidity, such as during cooking or showering, peaks in humidity can occur, leading to an increased risk of mould.



Building materials

## Clean indoor air

Good air – good mood. In addition to temperature and air humidity, there are other criteria that affect the quality of indoor air. These can be divided into 3 main categories

### 1. Physical factors

As well as air humidity and temperature, physical factors include air circulation, dust, noise, light, electromagnetic pollution, etc. In some cases, these can be accurately measured using commercially available measuring devices, such as thermometers or hygrometers, allowing critical levels to be detected.

### 2. Biological factors

Viruses, bacteria, allergens, mites and mould spores are the typical biological factors. If they are not visible as a result of active mould on the walls, they are difficult to detect. However, they can pose a high risk to health and in particular lead to respiratory diseases.

### 3. Chemical factors

These include in particular volatile organic compounds (VOCs) and CO<sub>2</sub>, tobacco smoke, fragrances and gases. We generally already perceive this type of substance by smell, even if it is only present in very small quantities - often before they have reached harmful concentrations. It becomes problematic if, even after ventilation, harmful odours are still

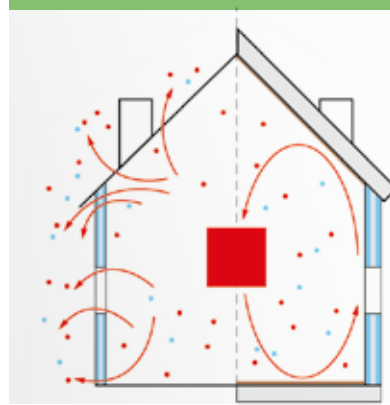
noticeable after several months and at the same time symptoms such as headaches, fatigue or irritation appear. In this case, it is necessary to identify the cause.

### The right building materials

Energy-efficient construction also often means airtight building designs. As a result, any pollutants remain in the room for longer. By choosing the right building materials, it is possible to mitigate the effects of these 3 influencing factors.



### AIR CIRCULATION



Left: New building today: more airtight building design

Right: New building in the past: "leaky" building design

- Air polluted with harmful substances
- Humidity



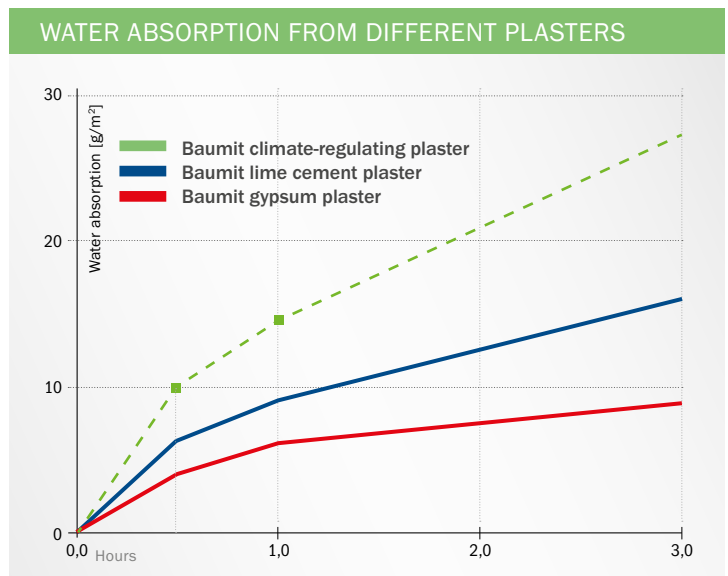
The replacement of internal air with external air is now much lower than in old buildings. Modern buildings therefore place much higher demands on building materials than before. This makes it all the more important to choose the right building materials, which should be mineral-based, breathable and free of pollutants. For many years, Baumit has been creating long-term healthy living and environmentally-friendly system solu-

tions with its products for healthy indoor air, comfortable living and greater well-being.

#### Measuring absorption

A 4-person household produces about 5 litres of moisture per day in the form of water vapour from cooking, showering, breathing, drying laundry, house plants, etc. As a result of our daily routine, more moisture is created in the mornings and evenings than during the

day. This naturally has an effect on indoor air humidity and well-being. Therefore, the moisture absorption capacity in the first few hours is much more important than the absolute moisture absorption capacity after 24 hours or more. With their combination of absorption rate and absorption amount, Klima plasters offer a decisive advantage.





Comfortable living

## Room Temperature

Comfortable living means being able to relax better at home. Relaxation helps you to recover more quickly so you can best meet the challenges of everyday life. Well-being is therefore an essential component for a healthy life.



A comfortable climate in living spaces depends largely on factors such as the temperature, the temperature of the surfaces such as the walls, air humidity, air movement in the room and the air exchange rate. The interaction of these criteria with each other affects whether people feel comfortable in a room or not. In addition, clothing and physical activity play a role in the home.

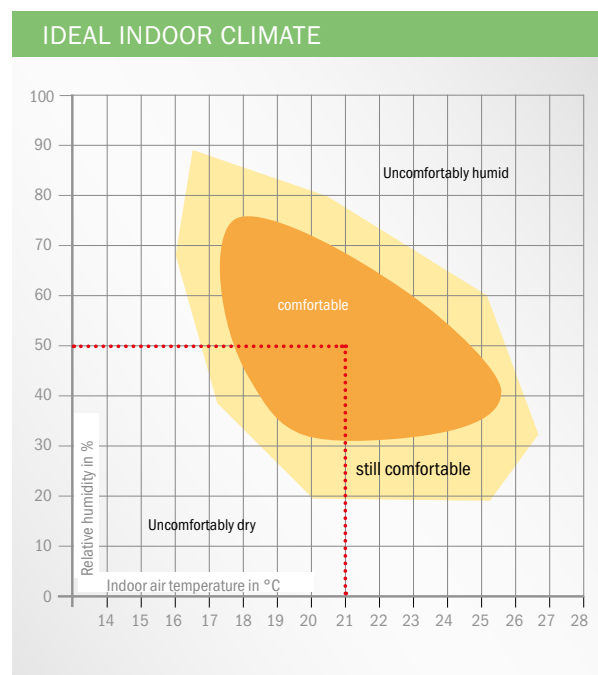
### Room temperature

Depending on the season, the temperature in the room is altered either by heating, ventilation or cooling. The most comfortable temperature for indoor air is usually between 20°C and 22°C in the living room and between 17°C and 18°C in the bedroom. However,

in reality, a comfortable temperature always depends on the person and is perceived subjectively. It can be thought of as the average of the air temperature and the surface temperature of the inside surfaces of the room. In the summer, when it is hot outside, higher values are generally tolerated.

### Effect of surfaces

The temperature of the surfaces also has an effect on the comfort. The surfaces include walls, windows, floors and radiators. Cold walls are perceived as unpleasant. In such cases, thermally upgrading the building increases the surface temperature of these areas and has a very positive effect on comfort and health. However, the difference between the wall surface temperature and the room temperature should not be greater than 3°C.





### Air humidity

Comfort depends on the actual room temperature and the air humidity. In living rooms, the air humidity at a room temperature of between 20 and 22°C should be between 40 and 60%. The relative humidity can be checked with a commercially available hygrometer. If the room air is too dry, this is perceived as unpleasant and the mucous membranes may dry out.

### Air exchange rate

If the air exchange rate is too low, for example due to infrequent ventilation and a very airtight construction, metabolic products from people and other chemical substances released during use of the house accumulate in the indoor air. These have a negative effect on the air quality. Stale air is perceived as unpleasant.

### Air movement

In combination with the criteria mentioned, the air speed also influences the sense of comfort. If the indoor air moves too much, this is usually perceived as an unpleasant draught, also known as convection.

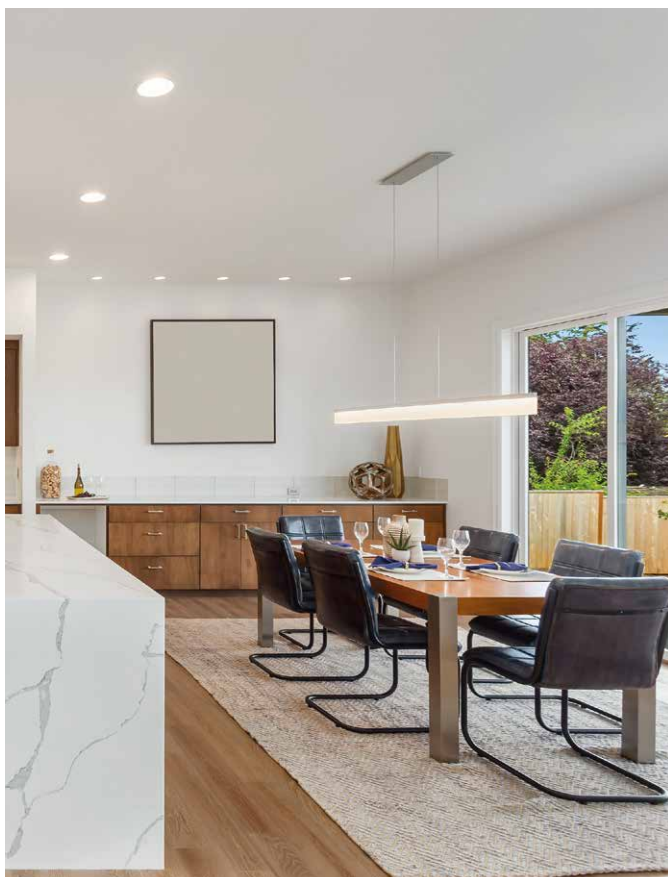
INDOOR CLIMATE	AIR CIRCULATION	AIR QUALITY
Relative humidity 40-60%	Wall surface temperature = radiant heat, cold	CO <sub>2</sub> content ≤ 0.1 vol.% = 1,000 ppm
Room temperature 20-22°C	Air flow rate (draughts) ≤ 0.20/s	Fresh air consumption 20-30 m <sup>3</sup> /hour and person
	Temperature difference between floor and ceiling ≤ 4°C	TVOC (total volatile organic compounds)



Natural & Healthy Interiors

## Baumit Healthy Living

Healthy living starts with the right choice of building materials. The most important thing is a beneficial indoor climate. Optimum, stable humidity and room temperature make a significant contribution to well-being. Baumit Healthy Living products are proven to promote these properties.







- Healthy living paints and plasters
- Durable and beautiful finishes
- Easy and precise application
- Individual and creative style
- Modern and decorative finishes
- Vapour storage and release
- Ready to use products

### HEALTHY LIVING

With 90% of our time spent indoors, the air quality inside our homes is important for maintaining good health. Achieving an optimum, stable humidity and room temperature makes a significant contribution to well-being, so it is essential to consider the quality and function of the construction materials used.

### BAUMIT KLIMA

Baumit Klima products stabilise the moisture content of our indoor air. They quickly absorb excess moisture, store it and, if necessary, quickly release it back into the indoor air. Whether they are used to create a smooth surface, or are finely or heavily textured, Baumit Klima systems combine individual effects with an optimum room climate. For a healthy home.



Healthy and Reliable

# Baumit Klima

It's estimated we spend at least 90% of our lives indoors, therefore the creation of interiors that promote occupier comfort and well-being ought to be of the highest priority.

Baumit's healthy living Klima product range helps stabilise the humidity of indoor air, quickly absorbing excessive moisture, storing it and, if necessary, quickly releasing it back.

## KlimaGlätt W

LIME PLASTER



- For smooth surfaces
- Highly permeable\*
- Contaminant-free & mould resistant

### The fine one.

Baumit KlimaGlätt W is a natural white, powdered lime plaster for indoor use. Use to achieve a high-quality, smooth surface on lime / cement-based plaster, concrete and aerated concrete. It is ideal for manual and mechanical processing.

\*in combination with Baumit KP 36 W.

## KlimaFinish

SKIMMING PLASTER



- Ready to use & highly breathable
- High-quality smooth surface
- Contaminant-free & mould resistant

### The quick one.

Baumit KlimaFinish is a ready-mixed, natural white lime plaster for internal walls. Use as a skimming plaster to achieve a high-quality, smooth surface on lime and cement-based plaster, concrete and aerated concrete. It is ideal for manual and mechanical processing.



Project by: Munday Finishes Ltd - Baumit Approved

## Klima KP 36 W

WHITE LIME PLASTER



- Breathable & regulates indoor climate
- Naturally white
- Pollutant-free, with mould protection

### The white one.

Baumit Klima KP36 W is a vapour-permeable, natural white lime light plaster, which actively regulates indoor air humidity, including in wet rooms. The natural microporous structure ensures rapid absorption and release of water vapour for an excellent indoor climate. Baumit Klima KP 36 W is suitable for machine application.

Surface: sanded, Grain size: 1mm

## KlimaDekor

TOPCOAT LIME PLASTER



- Highly breathable
- Provides texture & can be coloured
- Contaminant-free & mould resistant

### The beautiful one.

Baumit KlimaDekor is a mineral, breathable, naturally white lime-based textured plaster. Emission and solvent-free and free of preservatives. Ready to use and available in all Baumit Life colours ending with 8-9.

Scratch texture: 1mm



## KlimaColor

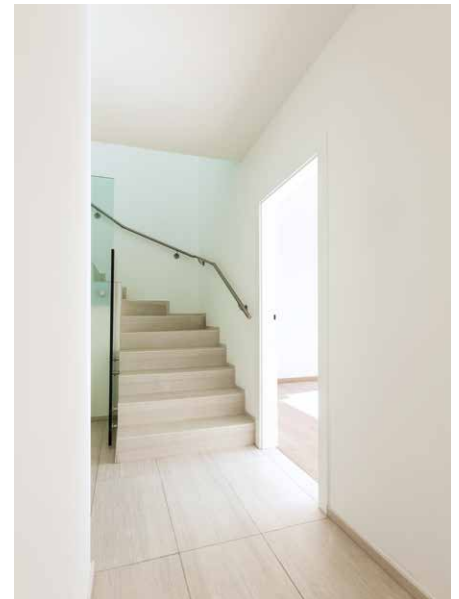


SILICATE INTERIOR PAINT

- **Highly breathable**
- **Emission & solvent-free**
- **Good coverage properties**

### The colourful one.

Baumit KlimaColor is a breathable single-component silicate paint with good covering power. It is also very low-odour, emission and solvent-free and free of preservatives. The ready-to-use paint can be either rolled on, painted on or applied using an airless machine. Available in Baumit Life colour shades ending with 7-9.



## EasyPrimer

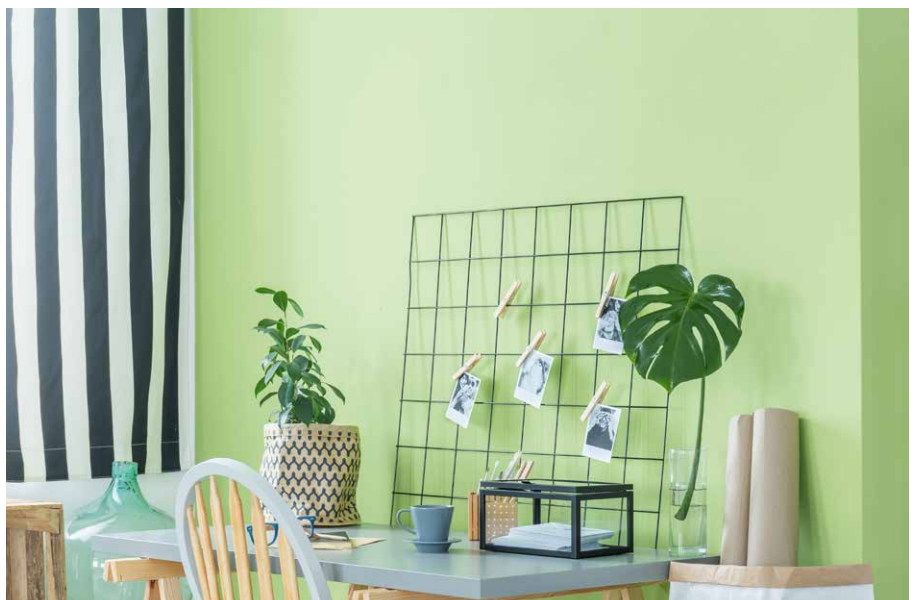


PRIMER

- **For absorbent and chalking substrates**
- **Emission & solvent-free**
- **Primer for optimal adhesion**

### The even one.

Baumit EasyPrimer serves to combat porosity and acts as a bonding agent prior to the application of Baumit KlimaColor. The low-odour, emission and solvent-free formulation has a positive effect on the indoor air quality.





Breathable & Pleasant

## Klima Systems

Baumit Klima products are impressive when used in a system, and they offer the perfect solution for every taste.



- **Modern and individual**
- **Fast application**
- **Enhances indoor air quality**

Whether you require the interior walls to be smooth, lightly or highly textured, the products in the Baumit Klima range with their indoor climate-regulating properties, when used together as a system offer the ideal solution.

### **Klima smooth system**

This system transforms interior walls into uniquely smooth surfaces, giving them an exceptionally modern look. Baumit Klima KP 36 W is used as a plaster undercoat. With its moisture regulating properties it ensures an excellent indoor climate. With a grain size of 0.1mm, Baumit KlimaGlätt W provides our

smoothest finish. To complete the system add an individual touch with two coats of Baumit KlimaColor. This high-quality, natural, mineral and silicate-based paint impresses with easy application and high level of opacity.

### **Klima fine textured system**

If you want a light texture for your interior walls, we recommend Baumit Klima KP 36 W. With a grain size of 1.0mm, you can use it to create fine textures. Once you have applied Baumit Klima KP 36 W, you can then prime and paint it with two coats of Baumit KlimaColor. Available in Baumit Life colours ending with 7, 8 or 9. See page 18 for Baumit Life colours.




### **Klima textured system**

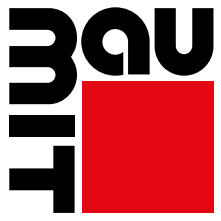
Baumit KlimaDekor produces textured, clean and beautiful surfaces. This ready-to-use, low-emission and solvent free thin-layered finishing coat can be applied easily and quickly. Baumit Klima KP 36 W is also used as a basecoat for this system. You can then add a coat of Baumit EasyPrimer to create the perfect substrate. Its high-quality formula guarantees a high level of opacity and optimal adhesion.



Project by: Munday Finishes Ltd - Baumit Approved



SMOOTH	FINE TEXTURED	TEXTURED	
			
<ul style="list-style-type: none"> <li>■ Our smoothest finish</li> <li>■ Modern and individual</li> <li>■ Indoor climate-regulating</li> </ul>	<ul style="list-style-type: none"> <li>■ Fine textures</li> <li>■ Fast implementation</li> <li>■ Creative design</li> </ul>	<ul style="list-style-type: none"> <li>■ Vibrant, beautiful surfaces</li> <li>■ Simple and quick application</li> <li>■ Natural</li> </ul>	
2x KlimaColor	2x KlimaColor	KlimaColor	PAINT
KlimaGlätt W	---	KlimaDekor	FINAL COATING
---	EasyPrimer	EasyPrimer	PRIMER
Klima KP 36 W	Klima KP 36 W	Klima KP 36 W	BASECOAT



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**Baumit. Your home. Your walls. Your health.**