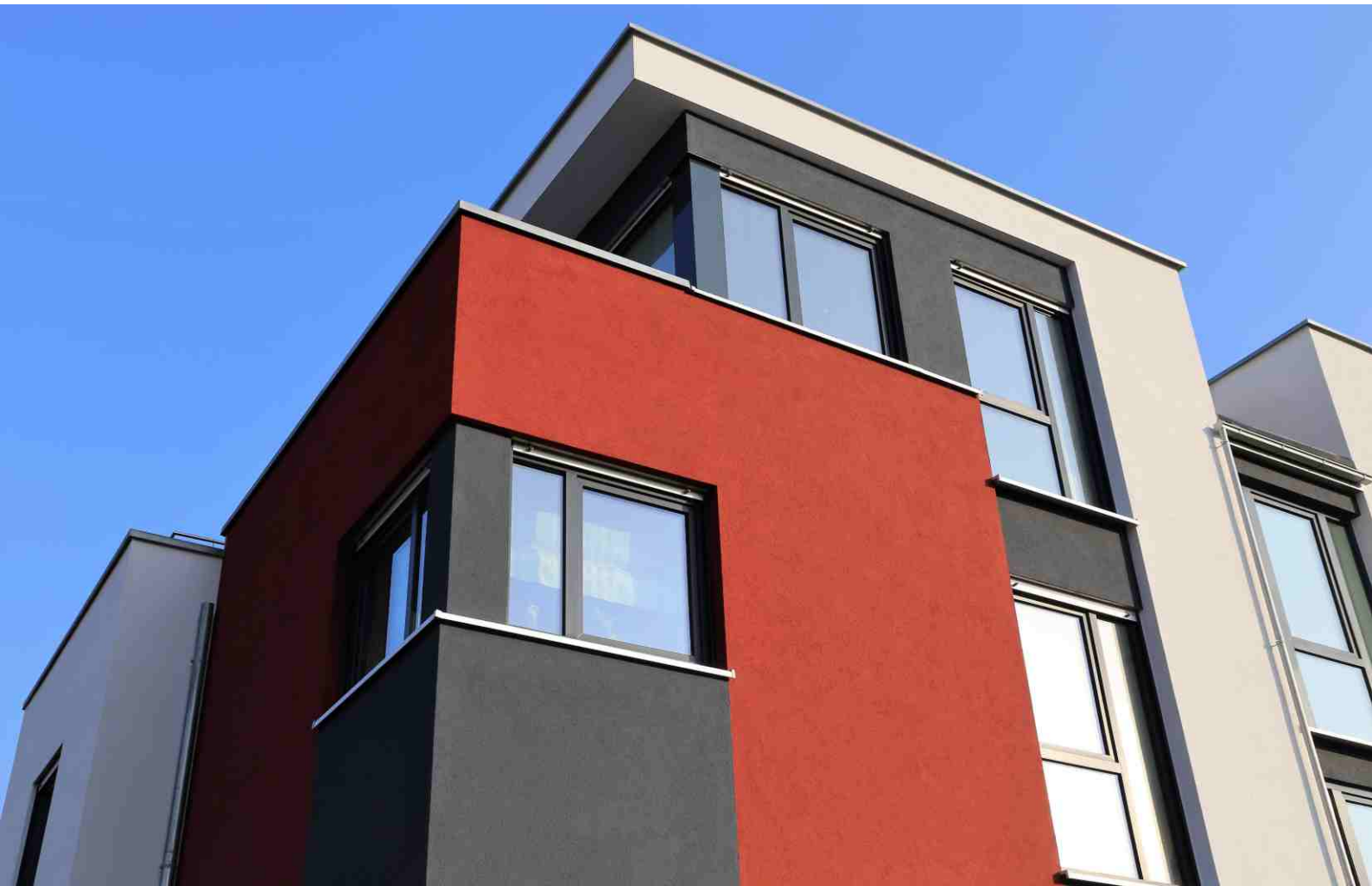


**ULTRA-DURABLE
EXTERIOR & INTERIOR
MINERAL PAINTS**



Stonix | OptiSil

**INSPIRED
BY THE PAST.**

**DESIGNED
FOR THE FUTURE.**

PROBLEMS WITH POLYMER-BASED PAINTS

In a world becoming resource scarce, yet increasingly differentiated it becomes ever more important to design products that are not only captivating but ultra durable. Easy on the environment to produce but durable enough not to become a victim to nature's forces.



Acrylic Paints weather and deteriorate due to atmospheric influences such as UV, rain, pollution and require repainting every 5 - 10 years.



Acrylic paints are prone to discolouration due to fading and biological attack due to their high organic content.

Although, acrylic latex paints with their convenience, ease of application, relative inexpensiveness, and wide range of colors have become the modern paint of choice, they are well known in their tendency to weather, be prone to algal / fungal attacks, fading and dust accumulation, turning into an ugly sight that requires repainting every 5 years or so.

MINERAL PAINTS: A LOOK BACK IN TIME

Some of the oldest surviving paintings in the world today are those of mineral origin. From cave paintings to historical buildings that haven't been painted in over a 100 years, mineral paints have the ability to endure. Inspired by the magnificence of limewash, yet designed for harsh weather, silicate mineral paints using potassium water glass as the sole binder became popular in Europe in the 19th and early 20th century. These paints were limited to use on siliceous substrates and required specialised application skill thereby losing popularity in modern construction practices.



Cave Paintings. Earliest known use of Minerals for Painting



Buildings painted with Silicate paints seldom require re-painting

The benefits of durability far outweighed these limitations however. Its ability to bond with the underlying substrate and its ceramic nature meant that instead of peeling away in an unsightly manner like old acrylic paint it resists weathering influences similar to stone. The usage of natural earth oxide pigments meant that the colors are highly UV resistant that will not fade. Its highly alkaline nature resists algae and fungal growth without the usage of any harmful biocides. All these properties added up to the fact that buildings did not require repainting for decades!

MODERN SILICATE PAINTS: DURABLE. BEAUTIFUL. VERSATILE.

Introducing silicate mineral paints from Zydex. Designed using only the highest performance mineral products and available in a wide range of beautiful colors, these paints are designed with all the durable benefits of silicate paints while solving all of its traditional limitations.

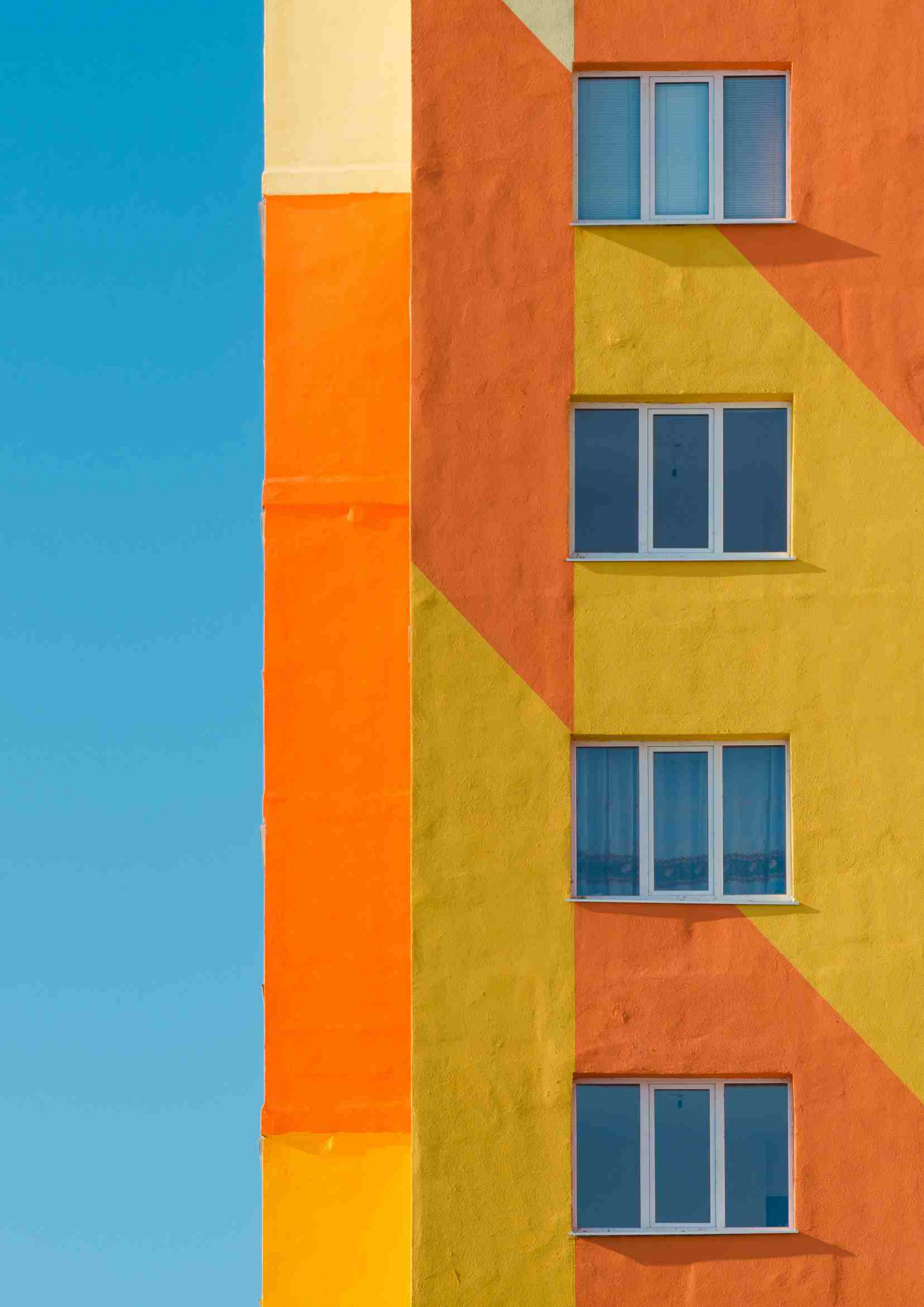


Silicate paints are available in a wide range of beautiful and bright colours.



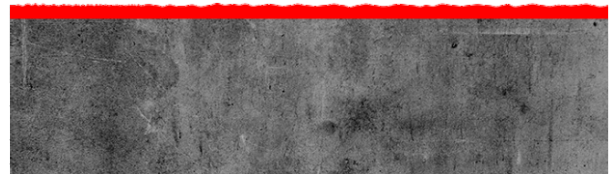
Silicate paints are suitable for interior usage and do not contain harmful biocides or solvents.

Mineral paints from Zydex are made using the finest raw materials which are naturally abundant such as sand and other earth minerals. These paints do not rely on petro-chemical based raw materials for their properties and are compliant to DIN VOB / C 18363 2.4.1 which means these paints contain < 5% organic additives. They are free of harmful biocides compared to typical modern polymer-based paints. The inorganic nature of the paint is highly resistant to flame spread in case of fire. These features make these paints particularly safe for interior usage.



ZYDEX MINERAL PAINTS: FEATURES AND BENEFITS

Mineral paints from Zydex penetrate into the substrate on which they are being applied and create an inseparable chemical bond to become an integral part of the substrate. Acrylic coatings only form surface films that are merely adherent. Thus unlike acrylic coatings that peel-off under adverse conditions due to failure of the mechanical bond, mineral paints remain interlocked and weather away gracefully over decades!



Acrylic coatings form a surface film on the surface which bonds only through mechanical adhesion



Silicate coatings penetrate into the substrate and form inseparable chemical bond



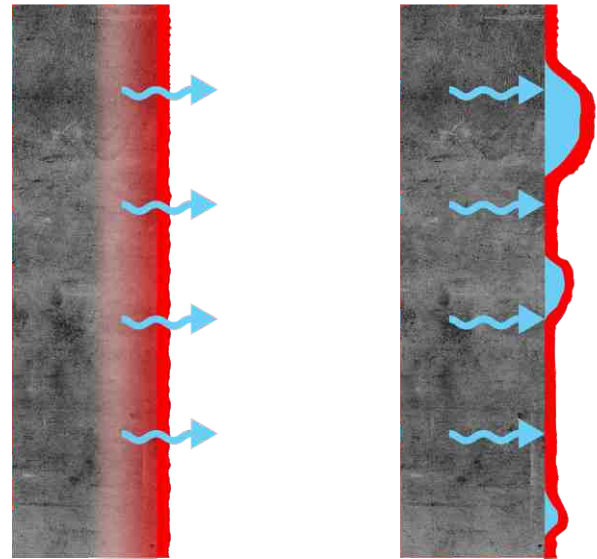
Silicate paints resist fading and weathering due to its inorganic nature which is similar to ceramics and stone.

Mineral paints from Zydex use a silicate binder that forms an insoluble silicate structure that is impervious to the effects of atmospheric UV, acids and alkalis, which imparts it extreme weather fast properties. These paints use only the highest quality light fast earth metal oxide pigments. These pigments are also completely stable against atmospheric UV, acids and alkalis ensuring that they do not show any fading over the life time of the paint. Thus, the combination of binder and pigments result in buildings that retain their vibrant look for the decades-long lifetime of the paint.

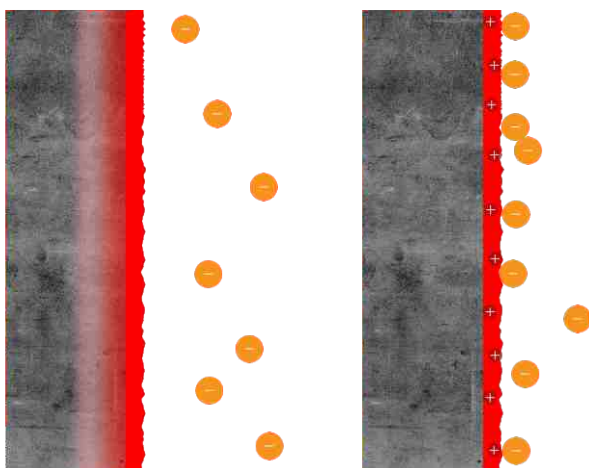
ZYDEX MINERAL PAINTS: FEATURES AND BENEFITS

Mineral paints from Zydex are resistant to water ingress while maintaining the breathability of the surface. Thus, these paints can “exhale” water vapour while not allowing liquid water into the structure. This provides an ideal moisture balance that creates a more pleasant interior climate and a robust exterior facade.

Acrylic coatings do not allow water vapour to pass and eventually can blister / bubble due to build of vapour pressure. The prolonged wetness underneath the film can cause damage to the structure.



Silicate paints allow moisture vapours to pass but prevent the ingress of liquid water, preserving and protecting the underlying structure. Acrylic coatings are not breathable and are prone to blistering from vapour buildup underneath.



Zydex mineral paints do not acquire a static charge unlike acrylic coatings and thus attract significantly less dust.

Mineral paints from Zydex have a very low organic content (<5%) and thus do not acquire a static charge due to wind friction unlike acrylic paints. Due to the lack of polymer, they are also significantly harder on hot days. The net result is that mineral paints not only attract less dirt to begin with, but are able to shed any accumulated surface dust easily with either wind or rain action. Thus, buildings painted with Zydex mineral paints look overall cleaner over a period of time compared to acrylic coatings.

ZYDEX MINERAL PAINTS: FEATURES AND BENEFITS

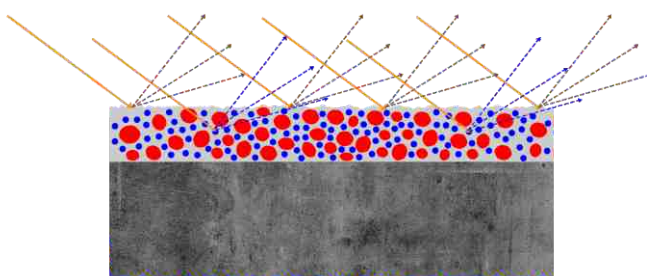
Mineral paints from Zydex are highly alkaline in nature (pH~11) due to the alkali waterglass which is the main binder. Thus they are naturally resistant to algae, fungus and mold as they are unable to thrive in high pH environments. The paints are free of harmful chemical biocides and particularly safe for interior usage.

These paints are very resistant to overnight condensation due to their breathable nature, and are extremely fast drying. Thus they do not remain wet for a sufficiently long time for bio-fouling to occur.

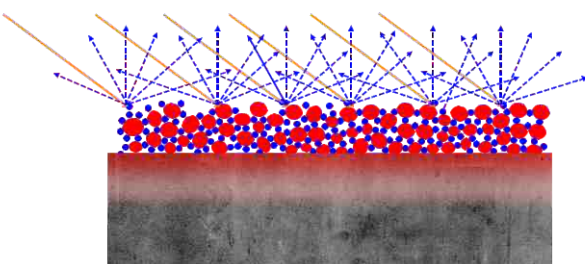
The above properties combine to keep Zydex mineral paints looking fresh for a longer duration and safer for interior usage.



Mineral paints are naturally alkaline and fast drying which make them highly resistant to algal and fungal attacks.



Light at sharper angles reflects off the polymer coating without contacting the pigment resulting in a dull look in acrylic paints



Zydex mineral paints reflect and scatter light evenly due to its transparent crystalline structure resulting in bright crisp look

Acrylic polymers tend to absorb some of the light instead of reflecting it. In case of sheen paints, the light at sharper angles is reflected back without contacting the pigment resulting in glare & poor finish. Thus acrylic coatings tend to have an overall dull look.

The silicate binder in mineral paints from Zydex forms a transparent crystalline structure that allows light to directly contact the pigments and scatter back evenly resulting in a crisp bright and monolithic look. This property makes Zydex mineral paints particularly suitable for interior environments by possibly reducing lighting requirements.

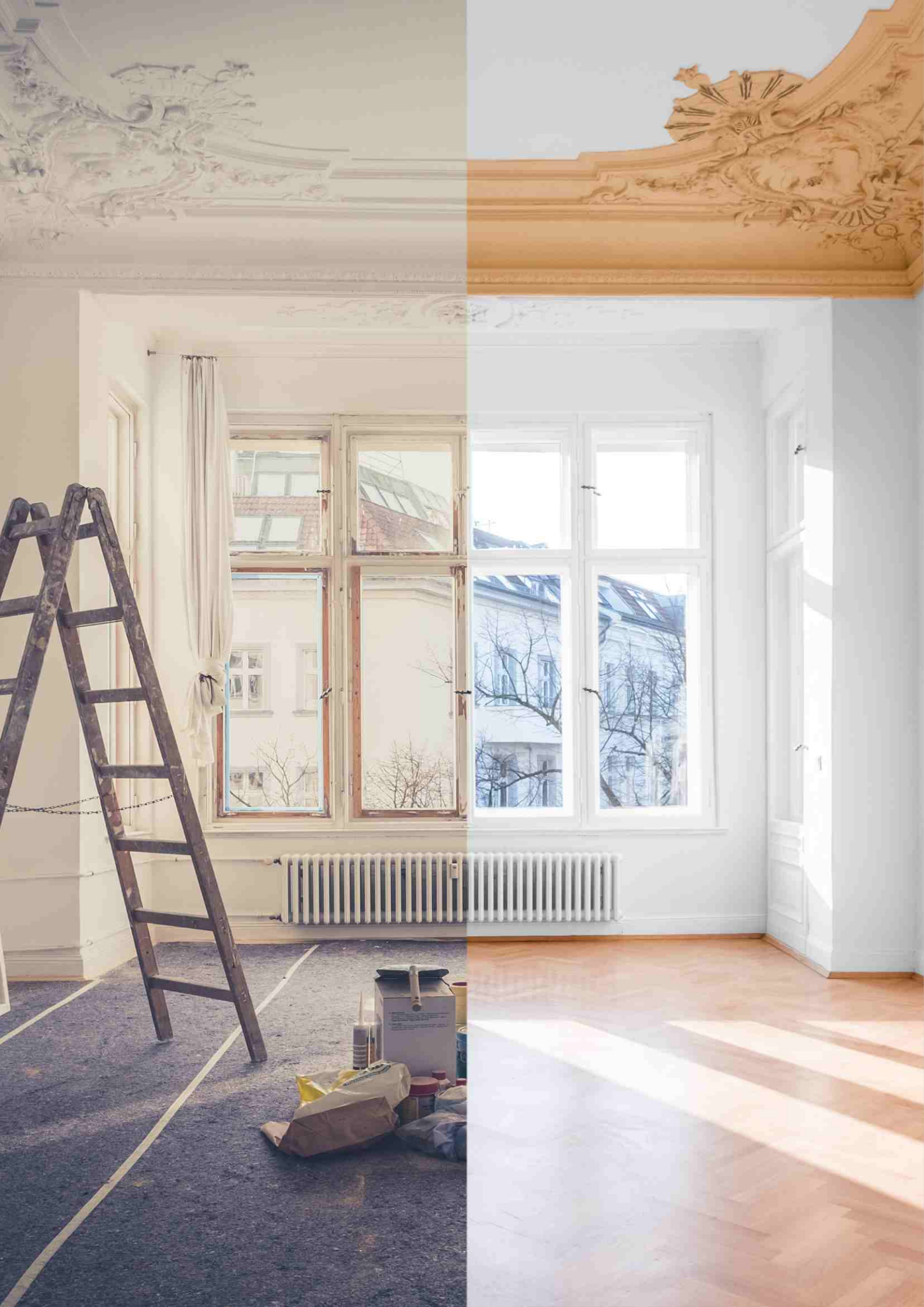


ZYDEX MINERAL PAINTS: FEATURES AND BENEFITS



Mineral paints from Zydex are universal in their adhesion and can be used to renovate buildings previously coated with acrylic paints. The usage of Zydex mineral paints will confer all of the previous benefits and protect the existing coating from further deterioration from UV and weathering. The existing breathability of the structure will also be maintained.





ABOUT ZYDEX

Established in 1997, Zydex is a specialty chemicals company with the purpose of innovating to create a sustainable world through conservation of resources.

Beyond construction products, Zydex offers a diverse set of chemical technologies for the textile, agriculture and pavement industries. We were recently recognised as one of the 25 Most Innovative Companies in India by the Confederation of Indian Industry (CII).

Sustainable Green Chemistry

Zydex is deeply committed to sustainable chemistries that will ensure a greener future for everyone. Our commitment has made us a pioneer in introducing non-polluting and non-hazardous technologies that conserve, protect and enhance the environment. Pursuing chemical innovations that would mean a greener, safer and more resource renewable world is our passion. Our technologies have been recognized for their contribution to sustainability and are globally accepted.



*25 Most Innovative
Companies of India*

GLOBAL PRESENCE

