SILACOTE ™

[Known in Europe as Hansa Silicat]

Inorganic Mineral Silicate Eco Paint

The most durable of all paint technologies for concrete and masonry substrate protection.

Environmentally Safe

Non-Combustible

Resists Toxic Mold Growth

What is Silacote?

SILACOTE is a fully tintable inorganic mineral silicate paint.

What is an inorganic mineral silicate paint?

It is a paint made from natural compounds from the earth strata, such as quartz, different minerals and inorganic mineral colorants bound together with a potassium silicate binder. Silicate paints are basically inert colored rock. Coated on an inorganic substrate it bonds chemically to form an insoluble compound of paint and substrate when used on concrete, natural stone, marble, etc.. Very long life can be expected if applied correctly to inorganic substrates as they are chemically compatible. Traditional paints, such as emulsions, acrylics, elastomerics, etc., are organic in content (typically they are made from oil) which will break down when exposed to UV and have a relatively short life. The adhesion process for traditional paints consists of a mechanical bond that fails when calcium and other salts are brought to the surface of the substrate, under the paint film, through the natural wetting drying process.

What do you mean by 'fully tintable'?

Most silicate based paint systems can only be tinted at the factory which adds additional time and expense in making sure that you have the right color for a job before you place the order.

SILACOTE uses new technology that allows the base paints to be tinted to the correct color using more traditional tinting systems such as you would find in a local hardware store. There are 252 colors available and variations of these colors add many hundreds more. Computer matching is possible but as there are only eight base mineral colorants there is a limit to providing matches in every case. Unlike traditional organic paints, that fade quickly, nullifying the color matching step, the **SILACOTE** is not subject to the damaging ultra violet rays providing the client with a selected color that will be light fast for many decades.

Where can we use Silacote?

SILACOTE is designed for use on inorganic substrates such as concrete, masonry and other cementitious substances. It can also be used on new gypsum wallboard installations providing some health and safety benefits that traditional paints cannot provide. It is equally at home in interior as well as exterior environments.

Why is Silacote better than the paint we've been using up until now?

Traditional paints create a thin film on the surface of the concrete or plaster, and their organic based colorants deteriorate when exposed to ultraviolet light or acid rain, causing the colors to fade and bleach out. The old paint film will fail in a few years, cracking and peeling off the walls. Toxic mold and mildew love to build up on it. If you want to put another coat of paint on you have to strip the old paint first, and if it should be exposed to flame it will burn, helping to spread fires as well as toxic fumes.

SILACOTE penetrates into the concrete or other inorganic substrates and petrifies, forming a micro-crystalline structure that helps to reflect heat. As it is not a thin film sitting on the surface like an organic paint, it will not crack and peel off the structure. As the colorants used in **SILACOTE** are inorganic they resist fading and bleaching out with exposure to the sun and acid rain. **SILACOTE** allows the concrete and other inorganic structure to 'breathe' naturally, allowing water vapor to permeate. **SILACOTE** is non-combustible - it will not burn and spread fires and toxic fumes. And if you decide to apply a new coat of **SILACOTE**, it is not necessary to first remove the old one.

SILACOTE™

DIRECTIONS FOR USE

Pretreatment

Remove dirt, dust and salts from unpainted surfaces. Chemical retarders containing sodium should not be used in substrates when inorganic or organic paints are to be used. Concrete surfaces to be treated should be at least 28 days old if poured in place, and 7 days old if precast. Cement plaster should be at least 21 days old before being treated. If the surface is very dense it may require sand-blasting or shot blasting to provide a surface that can be treated. Remove all previous coatings from the surface to be treated. Remove all powdery and weak concrete and plaster surfaces. Patch open cracks, holes and hollows with compatible patching material. Allow patching material to harden completely before painting. Small cracks and inequalities can be filled using a mixture of Silacote and pure quartz or natural sand.

Painting Conditions

The surface to be painted must be dry, temperature of the surface to be painted must be above +5C or 41F and relative air humidity below 80%. If possible, avoid painting under strong direct sunlight.

Protect all surfaces which are not to be treated. Be especially careful of all metal and glass surfaces - Silacote is alkaline in nature and may damage metal and glass if allowed to sit too long - rinse off with clean water. Stir thoroughly before use.

Priming and Painting

Prime Non-Absorbent surfaces with a mixture of Silacote Primer and Silacote Paint (no more than 20% primer by volume). Allow at least 12 hours of drying time, then finish with Silacote Paint at full strength.

Prime Very Absorbent surfaces with a mixture of Silactore Primer and Water (no more than 50% water by volume). Apply mixture until the surface will not absorb any more primer. Allow at least 12 hours of drying time. Apply first coat of Silacote Paint at full strength. Allow at least 12 hours of drying time. Apply finish coat of Silacote Paint also at full strength.

Cleaning of Tools

Clean tools with water.

Health and Safety Information

Please see the Material Safety Data Sheet.

Please refer to the CSI Specifications in our SILACOTE Support Data Brochure for full technical information.

Silacote Primer

Water-borne, one-component silacote primer for concrete, lime plaster, cement plaster, lime-cement plaster and sand-lime brick surfaces. Also suitable for surfaces previously treated with lime, lime-cement, cement and silicate paints.

Examples of Use
Residential, commercial, industrial, institutional, educational and military structures

Technical Data
Coverage: Approx. 200 sq. ft./gal, one coat application. Coverage will vary due to roughness and porosity of the surface, as well as painting methods and conditions.
Solids Volume: Approx 15%
Thinner: Water. No more than 50% by volume should be added.
Application: Brush, roller (both of natural materials) or spray.
Drying/Curing time: 12 hours
Storage and Transport: Protect from freezing.
Packaging: 5 litres/1.32 gal ; 10 litres/2.64 gal or 20 litres/5.28 gal

Silacote Paint

Full-matt, water-borne, one-component silicate paint for exterior and interior concrete, lime plaster, cement plaster, lime-cement plaster and sand-lime brick surfaces. Also suitable for gypsum wall board applications.

Examples of Use
Residential, commercial, industrial, institutional, educational and military structures.

Technical Data
Coverage: Approx. 180 - 200 sq.ft./gal, one coat application. Coverage will vary due to roughness and porosity of the surface, as well as painting methods and conditions.
Solids Volume: Approx 50%
Thinner: Silacote Primer.
Application: Brush, roller (both of natural materials) or spray.
Drying/Curing time: Recoatable after 12 hours.
Finish: Full Matt
Storage and Transport: Protect from freezing.
Packaging: 10 litre/2.64 gal or 20 litre/5.28gal

QUALITY ASSURANCE
Base materials manufactured in Riga, Latvia by Sia Sakret . Meets or exceeds ISO9002 and ISO 14001 standards under EC Directive 88/379/EEC.

Approved by GREENSPEC. Included in 4th Edition 2004.

Shelf Life
SILACOTE Paint may be stored for one year from date of purchase.
SILACOTE Primer may be stored for three years from date of purchase.

Product Guarantee
Provided the product is applied by an approved applicator, the SILACOTE paint and primer system is guaranteed for a period of up to 10 years for approved application use on suitable compatible substrates. Request CSI specifications for full guarantee and application data.

INDEPENDENT TEST RESULTS of SILACOTE PRIMER/PAINT SYSTEM

ASTM E1354 Ignitability and Heat/Smoke Evolution
Result: Did not ignite during required test exposure.

ASTM E84 Flame Spread and Smoke **Substrate: ¼" Cement Board**
Result: Flame Spread Index 5 Smoke Developed Index 0
Meets NFPA 101: Class A [Class 1] 25 or under flame spread rating.

ASTM E84 Flame Spread and Smoke **Substrate: Gypsum Board**
Result: Flame Spread Index 10 Smoke Developed Index 0
Meets NFPA 101: Class A [Class 1] 25 or under flame spread rating

Notes: NFPA : National Fire Protection Association Life Safety Code
Class A equates to a Class I rating in other codes such as BOCA and UBC

ASTM G53 [UVA] Light and humidity weathering
Result: Test still ongoing at time of printing

DIN 18-363 [Germany] Result: Inorganic composition not less than 95%

SILACOTE MATT FINISH
SILACOTE provides a smooth Matt Finish which allows the color to appear natural and true. This sometimes draws concern by those used to high sheen or gloss finishes of traditioanl organic paints. The SILACOTE Matt Finish brings the colors alive, enjoy the experience!

SILACOTE is also available in a textured finish with fine chalk remaining fully distributed in suspension with the paint. If additional texture is required add silica sand to your own specifications or use special textured rollers of natural materials.

SILACOTE is only sold through the authorised distributors, applicators and technical representatives in Bermuda, the Caribbean, Canada and the USA. For your nearest SILACOTE representative please contact:

SILACOTE USA LLC
111 Bank Street, #153
Grass Valley, CA 95945
Tel: (530) 268-3084
(800) 249-1881
Fax: (530-268-3142

www.silacote.com

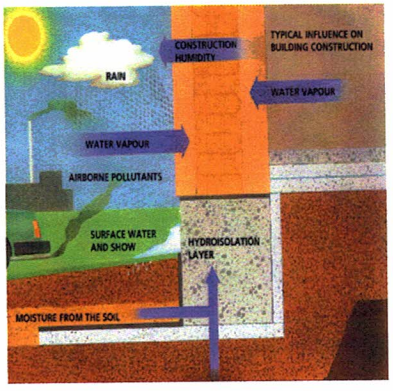
THE BASIS OF MINERAL SILICATE PAINTS

Natural ingredients are at the heart of the unique qualities of mineral silicate paints. The binder is liquid potassium silicate whose structural form and hardness is perfectly compatable with its inorganic colorants and the inorganic concrete and masonry structures it is applied to. The quality of the SILACOTE product is ensured by ISO 9002 and ISO 14001as required under the EC Directive 88/379/EEC.

PETRIFICATION PROPERTY

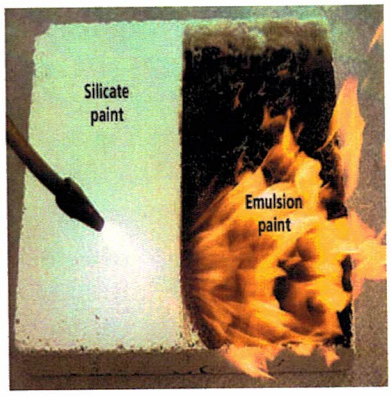
The principle strength of silicate paints is their petrification within the substrate. This results in a solid mineral and insoluable compound of paint and substrate (concrete, natural stone, marble, etc). The cross-section through the render shows this petrifaction, which is also known as silification. This chemical bond locks the Silacote into the subsurface as opposed to organic coatings that sit on the surface.

WATER VAPOUR PERMEABILITY

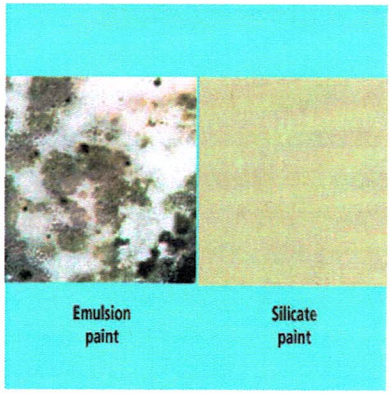


The high water vapour permeability of silicate paints is due to their crystalline nature which ensures that humidity present in the masonry can freely pass from the substrate. Thus water cannot build up between the paint and the substrate - which normally leads to paint cracking and being pushed off from the surface. Instead, the substrate remains dry and the breathability of the building is maintained.

INCOMBUSTIBILITY

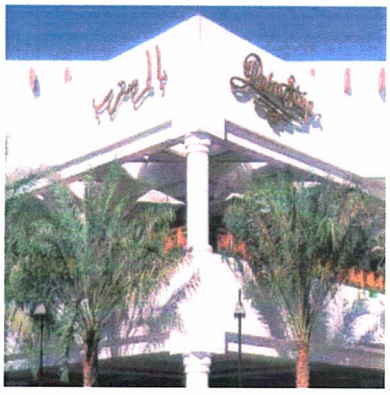


Silicate paints do not burn, unlike emulsion and other organic based paints. In the event of a fire breaking out, damage to the substrate is reduced and the paint does not give off any toxic fumes. Recent ASTM testing confirmed that the SILACOTE would not ignite under ASTM E1354 and achieved a NFPA 101 Class A rating under ASTM E84. This equates to a Class 1 rating under other codes such as BOCA and UBC etc..



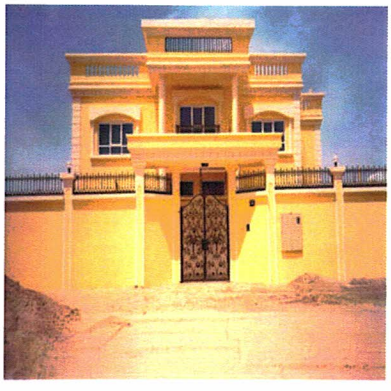
NO FUNGUS, ALGAE OR MOLD

The pure inorganic inert composition of silicate paints prevents any fungi, algae or mold growth, thus assuring a hygenic and clean paint layer. The absence of surface condensation due to the coatings high water vapor permeability, promotes a clean, healthy environment. Traditional organic paints provide a smooth film coating that does not breathe, attracting moisture, and fungi, algae and mold spores.



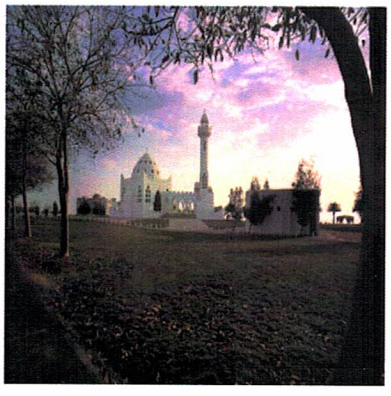
REGULATION OF TEMPERATURE

Silicate paints have a micro-crystalline structure, which reflects light and heat. In hot climates this reflective property reduces the thermal stress on the structure and reduces the amount of cracking the substrate would normally undergo. Organic paints lack a micro-crystalline structure and thus absorb more heat. This raises the substrate temperature, increasing the risk of cracking. The increased heat also draws the underlying moisture to the substrate surface, which helps to push off the organic paint.



LIGHT FASTNESS

Neither harsh climates nor high UV radiation can alter the color of a silicate paint. Redecoration in the same color shade is possible after many years. Traditional organic paint coatings are subject to UV deterioration from day one, breaking down the paint film which changes the color and causes the coating to fail. Silicate paints have an extremely long life providing important economies over the long term.



ENVIRONMENTALLY SAFE

Silicate paints are harmless to the environment, consisting of natural mineral compounds including quartz, inorganic mineral colorants and liquid potassium silicate used as a binder. Silicate paints represent a technology which has no detrimental effects on the environment in terms of manufacturing as well as in terms of application. Under fire conditions no toxic fumes evolve as the Silacote does not ignite.Organic paints are not environmentally safe from manufacture to landfill disposal.