

SOMON 藻間

珪藻岩機能性塗り壁材  
Diatomite base wall plaster



自然素材の良さを最大限に生かした  
塗り壁材です

Wall Plastering that Making use of the best of natural Materials

自然の力で with natural power  
家族の幸せを守りたい……  
子供の可能性を広げる夢の空間へ……

We want to protect the happiness of the family  
with possible dream space

藻間天下は、

目に見えない空気の質にこだわり続けてきました。  
珪藻岩の力を最大限に、最高の空間をご提供します。

We maximise the power of Diatomite and provide good  
air quality space

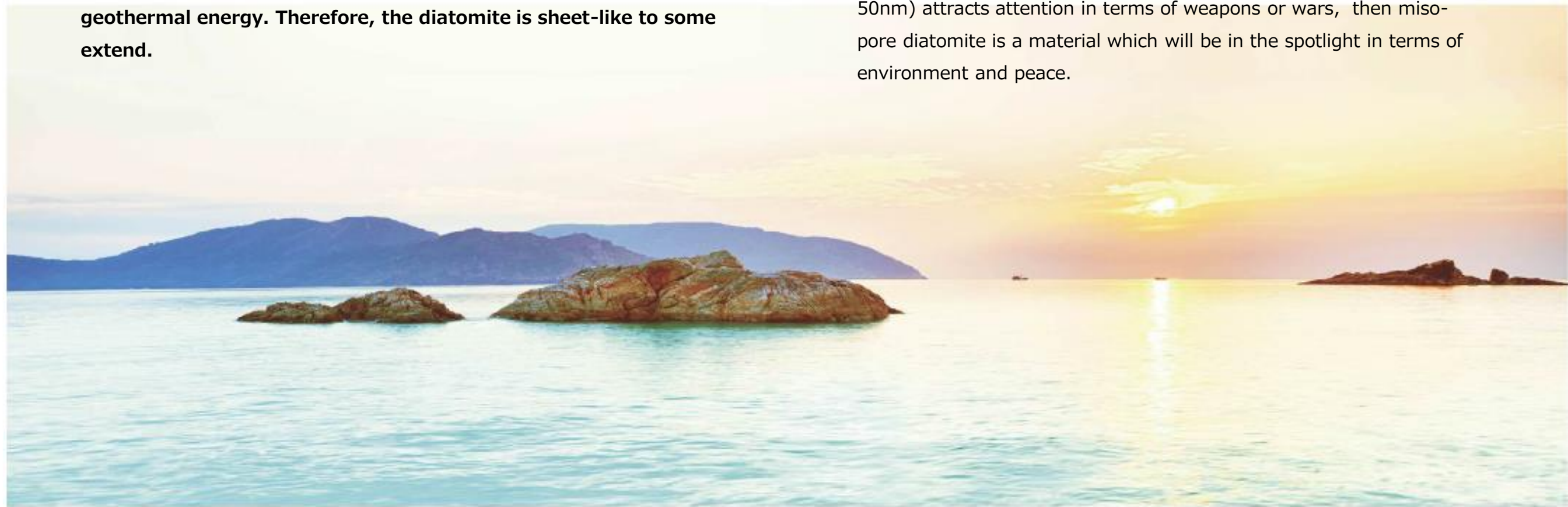


Diatomite is a fossil which is formed by a kind of diatomite shell that lived in the ancient ocean. Alga is one of the earliest protists that appeared on the earth after its birth. It is said that alga provides oxygen and makes ozone layer by photosynthesis, and promoted the birth of the animated nature including our human being. The shell of diatoms are made from Silicon dioxide (SiO<sub>2</sub>), which is also the main component of diatomite. Once diatoms boost and perish in the sea or lake marshes, the organic substances within its corpses eventually will be decomposed and become petrol, and finally the shell which is mainly made with silicon dioxide is left. The fossils made in such processes are called diatomite.

**In Soya, Tenboku district, Wakkanai, Hokkaido, diatomite is also called as diatomaceous shell. This is because when there was a undulation of diatomite of 25 million years ago, diatomite was created by the geological nature such as ground pressure and earth geothermal energy. Therefore, the diatomite is sheet-like to some extend.**

About 30 years ago, a researcher in Hokkaido Industry Laboratory found a meso-pore (the hole is 2-50nm diameter) which autonomously absorb and release moisture. Therefore the functional wall materials were invented. Since then, diatomite wall materials have drawn much attention from all over the world. Hokkaido Diatomite Association is formed with the highest-quality diatomite pit, superb researchers and those who take part in the production. Based on the long term research by the researchers, we could develop the all-time functional diatomite.

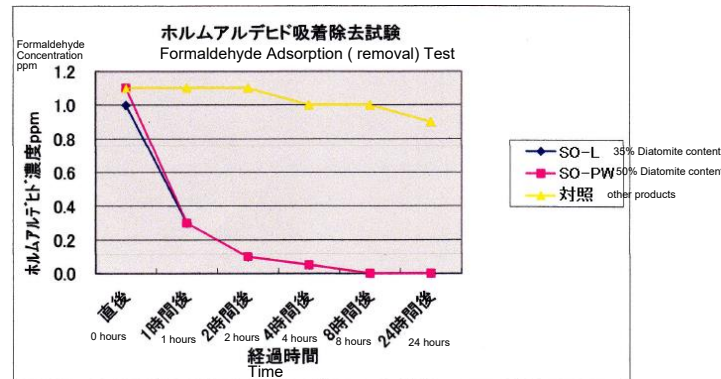
As a matter of fact, period of putting economic growth as the priority has come to an end. Environmental disruption, the negative legacy, is serious on the behalf of the economic growth. It is obvious that rebirth of polluted air, water and soil is an important common issue for all of us to solve. If micro-pore (holes diameter is over 50nm) attracts attention in terms of weapons or wars, then meso-pore diatomite is a material which will be in the spotlight in terms of environment and peace.



### Air cleaning Chemical substances cause air pollution.

Semi-permanently breathing high-concentrated formaldehyde will cause respiratory diseases, and also deteriorate the memory and intelligence of children. Toxic chemical substances are detrimental to nerves, immunity and liver systems.

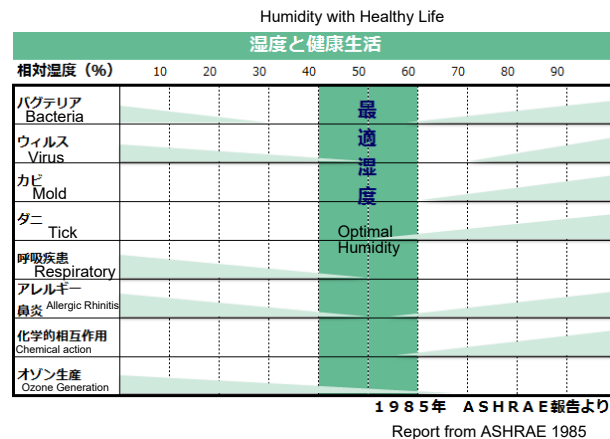
Somon Tenka wall coating materials will absorb toxic substances such as formaldehyde, meanwhile remove air pollution.



株式会社環境総合科学より測定

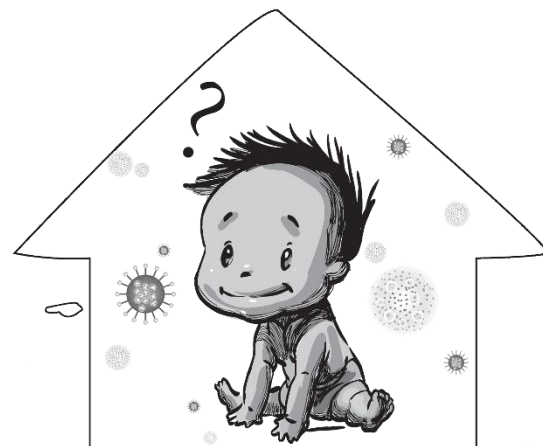
### Humidity control

Due to the high seal ability of modern houses, it is difficult to remove the humidity. Too much dryness or humidity will activate bacteria, viruses or fungi. Diatomite controls the humidity with keeping the humidity among 40 to 60%, which is the percentage that is hard for viruses to survive.



### Deodorize function

Odor is mostly caused by the adhesion of water-soluble molecules. Diatomite absorbs the humidity and odor molecules at the same time, which leads a clean and refreshing environment.



### Fireproof function

Diatomite is originally famous for its use for Japanese portable clay cooking stoves and cookers. It is resistant to fire, and will not cause toxic smoke even though scorching with gas burners, only produce a little bit burnt smell.

### Self-cleaning

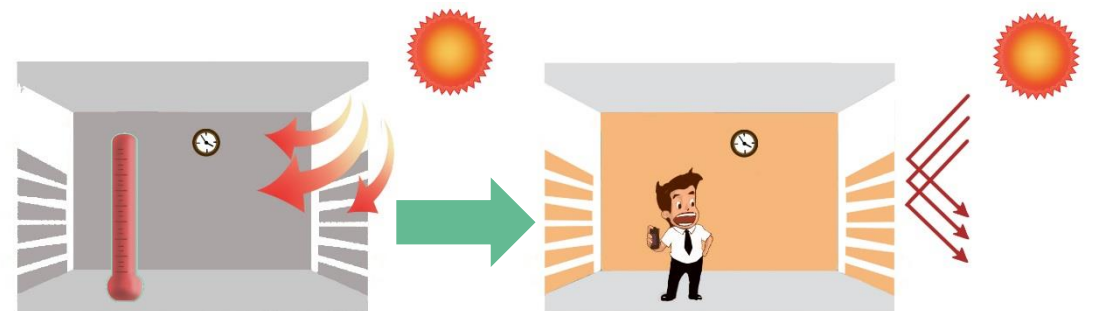
By breathing in the humid moisture and breathing it out, Somon diatomite itself will remove the dirt little by little. This is not only applied to water-soluble stuff but also oil stains. It is perfect for kitchens.

### Wallet-friendly price in a long span

The initial cost can be more expensive than other normal building materials, and it takes more time and effort to carry out the construction work. However, once it is done, it remains its brand new look for some decades. What is more, diatomite ceiling will automatically perform to absorb the humidity and adjust the temperature, and prolong the life of rooms or furniture.

### Heat insulating function

The small pores excel in heat insulating effects and will not be influenced in outer air temperature. Therefore you can enjoy the freshness throughout a year. Also, it reduces the use amount of air-conditioner because the pores helps the air cooler.



## SOMON塗り壁材 - 原料

## SOMON配合素材

Diatomite, which is from Soumiyasaki, Tenpoku area of Wakkanai district in Hokkaido, is demonstrated over its high performance in humidity control, by many research institutions all over the world.



Since diatomite is an inorganic mineral, which is fireproof, heatproof, waterproof, corrosion proof and chemical-resistance materials. Because of its porous, it has characteristics such as light weight, heat insulation, heat retention, water absorption, oil absorption and filterability. Diatomite is also a very versatile material because it can be made into ceramic by firing.

Also, the small pores can be divided into three parts by the diameter and the pore size. When the diameter is less than 2nm, it is called **micro pore**. From 2 to 50nm, it is called **meso pore**, above 50nm, it is called **macro pore**.

For instance, micro pores are famous for silica gel, a desiccant. Micro pores is known as urethane foam, which is famous for its use on commodities such as sponges or heat insulating material.



Meso pores are more functional: humidity control, air-cleaning function such cleaning volatile organic compounds; formaldehyde, and pet odors or any other unpleasant odors and oily mist in the kitchen, and absorbing viruses. Meso pores can also clean water since it absorbs the heavy metal in water.

The key point to choose the adequate wall coating materials is to find the sizes of pores, shape and its pore distribution that matches the use and aim, since the pores work differently depending on its size, shape and distribution.



Since diatomite will not be set, it is necessary to mix it with fixation auxiliary materials in order to make it into wall coating material. Cheap synthetic resin adhesives will fill up the pores of diatomite, which will not only disturb its original function to work properly but cause an environmental hormone; volatile organic compound. However, SOMON uses plant-based adhesives as the fixation auxiliary material, and makes use of its original functions.



Natural mineral pigments are used for coloring SOMON diatomite wall coating materials, in order not to take a good balance of other materials. Unlike the low-costing petrochemical organic pigments, the color will not fade out because of sunburn since natural mineral pigments are resistant to sun light and ultraviolet rays. What is more, you can use bleach spray (100 fold diluted) if stained.



Natural mineral pigments are used for coloring SOMON diatomite wall coating materials, in order not to take a good balance of other materials. Unlike the low-costing petrochemical organic pigments, the color will not fade out because of sunburn since natural mineral pigments are resistant to sun light and ultraviolet rays. What is more, you can use bleach spray (100 fold diluted) if stained.



オフィスもおしゃれに

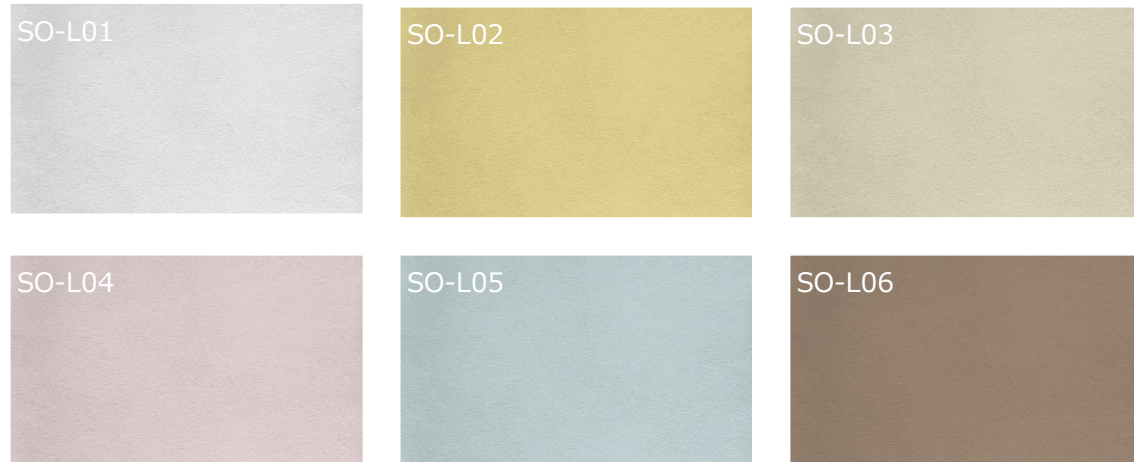
落ち着いた大人の雰囲気





## Color

### SOMON Light Series



### SOMON Power Series



Please note that the color may be slightly different from the actual product.

## Special patterns

