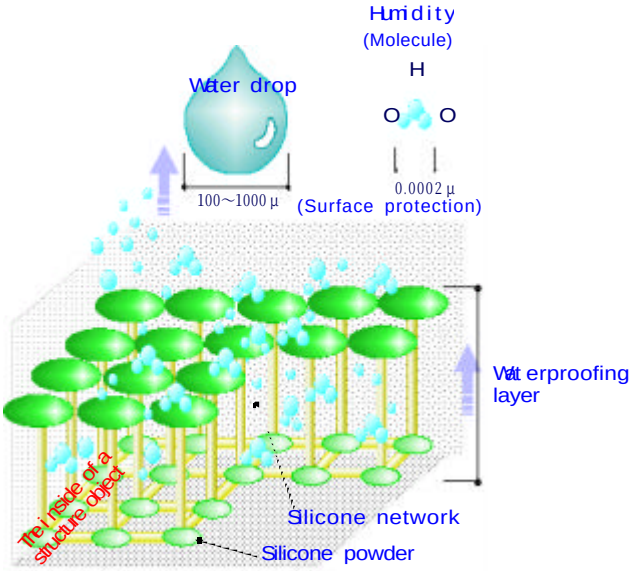
# §The feature of HYDROPROOF§

Perviousness water absorption prevention waterproofing agent

Evils such as leakage of water generated with engineering works and a building contamination,damage from salt water, acid rain damage, and Freeze damage, can be said for water or humidity to originate, so that they may be called most.
With HYDROPROOF gives water absorption tightness to the structure surface,a capillary tube is and does not bar discharge of humidity. It is distinguished from a general material which only paints the surface**.** There are 3000 or more sorts ofSilicone compounds and they are usedinallfields.




Especially characteristic water repellence originates in the molecule structure of silicone.It is said that it ranks with the inner wall of a capillary tube tidily. Since the isolation alkali of the portion which permeated changes to the substance (for example Kay acid calcium) which does not melt into water it can maintain original character.In that case an organicmachine (water repellence basis) comes to cover an inside wall, andprevents invasion of water ( water cannot pass along the so-called meshes of a net of silicone. ). Steam "humidity" can pass this through this. A water repellence phenomenon is simultaneousiy seen on the surface.After carrying out application osmosis, a silicone compound reacts inside a structure object, continues formation and water absorption tightness ability at a long period of time, and demonstrates stable silicone resin. Surface tension permeates a structure object early deeply below in the half of water at especially HYDROPROOF. This can be applied satisfactory, even if the structure contains water for a while. This is because the water and HYDROPROOF (HT=SP) wich had permeated previously interchange. When [ this ] exchanged, dirt also interchanges together and the washing effect is also a certain reason.
When, as for this, moisture interchanges, dirt also interchanges together, and the washing effect is also a certain reason. Especially the structure that has deteriorated ( neuter ) recovers alkalinity by using HYDROPROOF of high alkalinity ( PH 12-13 ). Moreover, as for HYDROPROOF ( WP series ) the silicone molecule of a permeates the inside of structure. HYDROPROOF froms the eye of a still finer silicone network. It is not made to pass except steam. Unlike the conventional paint waterproofing, this also performs protection from the surface inside. The so-called solid waterproofing was attained.

## Water osmosis water absorption prevention / waterproofing agent

| | Water osmosis water absorption prevention agent | Solvent system osmosis water absorption prevention agent |
|---|---|---|
| Strong point | 1.Nonsolvent<br>(non-dangerous object)<br>2. Low Bad Smell | 1.Construction is Easy.<br>2.Repellency and waterproof discovery are quick.<br>3.Don't Freeze. |
| Demerit | 1.Repellency and waterproof discovery are slow.<br>2.Dryness is slow.<br>3.Freeze in Cold District | 1.Those with Bad Smell<br>2.Dangerous Object<br>3.Environmental Pollution |

Restriction of time it tends to be influenced which requires time for construction of temperature that a difference is in marketability with a long care of health period or an area arises. Dryness of solvent system perviousness water absorption prevention material is also quick, without being able to respond to a broad structure and freezing, if danger is removed.

However, in order to cope with the environmental pollution problem with which regulation will be tightened up increasingly from now on, the necessity of changing to a water product came out. By using properly the product which has been improved sharply and suited the structure of construction nature recently, underground construction difficult by the solvent system and work in sealed space, such as etc. in a tunnel, are possible.

## Perviousness water absorption prevention・waterproofing agent as protection material

Protection to an outer wall, especially construction to the attachment finish side of a tile. Since there is durability of the tile itself, although it is finish suitable for securing the long term effect of a building, leading to fall of a mortar layer by secular degradation also often came out.
Temperature change is also added, it is divided and, as for osmosis of the water from a mortar portion, a float, omission and exfoliation, and degradation progress.
(A capillary tube since [ The mortar itself ] porosity water absorption)
With the conventional goods, although excelled in water absorption tightness ability, an efflorescence control performance, and construction nature, the tile surface might be discolored.
Perviousness water absorption prevention waterproofing material makes reactant HYDROPROOF HT-SP permeate first, recovers alkalinity, and strengthens a structure.
HYRDOPROOF WP-MX performs protection waterproofing after that. This is wearing the whole outer wall side in a micro network.

## The main effects of perviousness water absorption prevention・waterproofing agent

### 1. Leakage of Water Prevention

a structure expands and contracts along with many years past, and a crack cuts an engineering-works building Water permeates from the portion. Generally, it actualizes as leak in the roof. Furthermore, even the back (steel rod) is permeated, it generates, rust expands, destruction of a structure is caused, further, it accelerates and invasion of water dies very much to collapse. Perviousness water absorption prevention material prevents the flood from a hair crack by carrying out application osmosis in early stages, and becomes surface protection.

### 2. Dirt Prevention

The dust and the ground in air invade into the capillary tube of a concrete building together with water, and a building is adsorbed and adheres firmly. It is unremovable even if it washes later.Perviousness water absorption prevention material does not adsorb dirt because water does not invade.Even if it pours water on the concrete structure which carried out application osmosis, it does not become the dark wet color. A concrete structure maintains where it got dry.
Perviousness water absorption prevention material attracts attention from maintenance and scene harmony of a fine sight atthebuilding in recent years.

### 3. Prevention of Mold and Seaweed

Generating of mold and a seaweed always has a bad influence to a structure with humidity. If application osmosis of the perviousness water absorption prevention material is carried out, water is not included at the beginning of structure surface waterproofing. Therefore, since water does not exist among the air of the growth conditions of mold and a seaweed, nutrition, and water, these growth is controlled.

### 4. Efflorescence Prevention

If water invades into cement system material, the carbon dioxide, and the neutralization and salts in the back air which the water soluble alkali ingredient in cement dissolved, and came out to the structure surface will be generated, and the phenomenon which this dries and looks white is called efflorescence.Efflorescence is caused by movement of water from the inside of a structure to the structure surface. On the structure surface processed by perviousness water absorption prevention material, efflorescence can be prevented by preventing movement of water.

### 5. Damage from Salt Water Prevention

The salt which does damage to a concrete structure invades into a concrete structure by many factors, such as use of marine sand, coming flying [ of a salt particle ], and use of freeze prevention material.It is effective for there especially to be an element which starts the rust of a steel rod, salt, air, and water, and to prevent the influence of water.Perviousness water absorption prevention material has the effect which maintains the inside of a structure at a moderate dryness state, and it not only prevents invasion of water, but prevents rust since excessive moisture can be emitted as steam.

### 6. Prevention of Freezing Damage

When the water which invaded in the capillary tube of a concrete building is frozen, icy volume increases about 11%.Freeze on the concrete surface, it melts, or freeze damage occurs also by thing repetition. freeze damage can be prevented by the thing into which water is not made to invade and which is not made to adhere.

### 7. Acid Rain Damage Prevention

Environmental destruction by acid rain was regarded as questionable in earth environment, and influence has appeared.Acid rain takes on acidity, after the carbon dioxide in air, for example, the oxide of sulfur and nitrogen, has dissolved in rain. Building material will start a chemical reaction, if an alkaline thing contacts acid rain mostly, it will carry out subraw [ of salt or the water ], will weaken the intensity of a structure, and will become weak.Invasion is protected from a capillary tube for acid

rain, and perviousness water absorption prevention material can prolong the life of a structure

**8. Dew Condensation Prevention**

If water invades in the capillary tube of a building, change will be exerted on each characteristic of material.since heat conduction becomes large, the fall of heat insulation nature cuts With regards to the humidity in which the building has the fall of heat insulation nature, if heat insulation nature falls, dew condensation will take place, the inside of a capillary tube will call in humidity increasingly on ϑ and the chain target with which air pressure falls, and dew condensation will progress further.

**9. Sound Isolation Fall**

Another which water invades in the capillary tube of a building and exerts change on each characteristic of material is a soundproof fall to which propagation of sound becomes good. Since the intermediary rate of sound has underwater one quicker than the inside of air, a soundproofall takes place.

Although, as for the cause of degradation of a concrete building, "water" is mainly carrying out a certain cause or mediation, perviousness water absorption prevention material is making the effect just appear using water. HYDROPROOF does not make the outer skin which consists of minerals solution and a high reactivity catalyst, and does not discolor, but has various effects, such as degradation prevention, protection, and recovery, in HT series of a non-solvent, and WP series of a minerals quantity elastic surface protection waterproofing agent. Moreover, there is an effect as a lower coating agent of a filler.