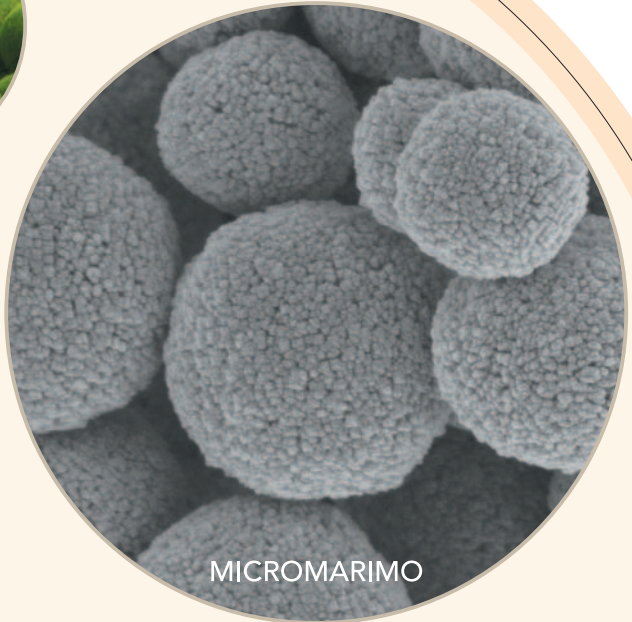




MARIMO
in Lake Akan

● A New Titanium Dioxide -MICROMARIMO

Are you aware of the unique type of particle which inhabits Lake Akan in Hokkaido, Japan? It is the MARIMO; a sphere consisting of tufts of algae filaments. In Japanese, MARI means "Ball / Sphere" and MO denotes "algae". As the name MARIMO expresses the round shaped algae tufts; our newly developed Titanium Dioxide product is MARIMO-shaped. (See photograph)
We are pleased to introduce this newly developed Titanium Dioxide ingredient. Based on its uniqueness in shape and performance we have fittingly named our ingredients MICROMARIMO.
MICROMARIMO is a spherical agglomerate, similar to that of the tufts of algae. This material is provided in a micronized size of Titanium Dioxide.
MICROMARIMO has a unique, gentle, soft feel and interesting optical qualities which are revealed by this exclusive form. Through the sense of touch and sight, it is evident that the MARIMO grade of Titanium Dioxide provides qualities never yet provided by traditional Titanium Dioxide forms.



MICROMARIMO

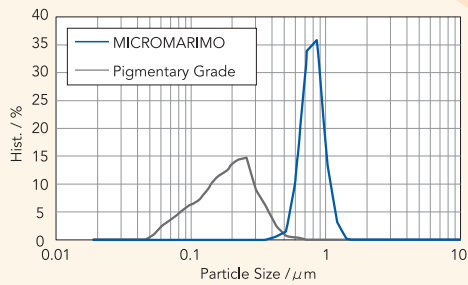
● General Characteristics

MICROMARIMO has distinct characteristics. (Shown in Table)
Micronized anatase Titanium Dioxide particles are developed into spherical agglomerations of 0.7 Micron sized particles. This agglomeration size of 0.7 microns has been optimized for foundation use to enhance the feel and the optical characteristic.
* The size of the agglomerate and well as various surface treatments can be changed based on your needs or desired end effects.

Appearance	White Powder
TiO ₂	>85%
Crystal Structure	Anatase
Particle Size (Agglomerate)	0.7 μ m
Modifiers	Stearic Acid, Aluminum Hydroxide
Loss on Drying	> 3%
Loss on Ignition	>10%
Property of Surface	Hydrophobic

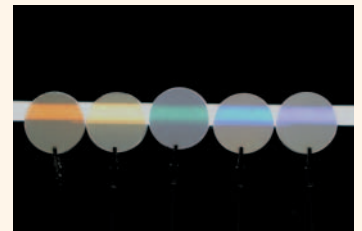
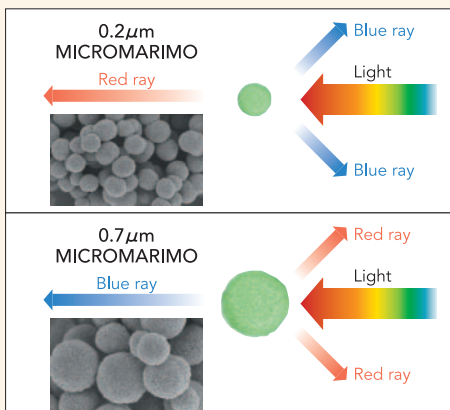
● MICROMARIMO's Particle Distribution

The particle size distribution of the MICROMARIMO is very uniform. The narrow distribution for the particle is the important factor to provide the unique characteristic feel and light scattering performance.
Measurements illustrating the MICROMARIMO particle adjusting its agglomeration size to 0.7 microns are shown in Figure.



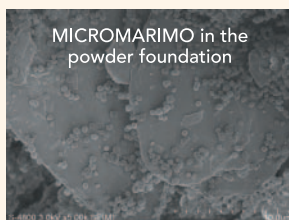
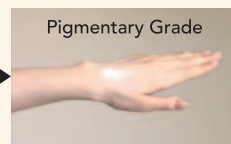
● MICROMARIMO's Light Scattering Effects

Using the MICROMARIMO particle, you can control the influence of light. MICROMARIMO can scatter and permeate the light of specific wavelengths efficiently. By changing the size of the MICROMARIMO, the wavelength of light which is scattered or permeated can be affected. (See the central Image)
The right photograph shows the various color effects which can be developed with the MICROMARIMO particle when white light is irradiated in the film. This effect is created when various sized MICROMARIMO particles are applied from the back of the film.



● MICROMARIMO's Feel Enhancements

Textural improvements can be achieved using a MICROMARIMO in foundation applications. For special effects and distinctive product claims, MICROMARIMO can provide a unique soft feel, natural coverage and specific color control.
MICROMARIMO is the technology to try when you are looking for Innovation!



MICROMARIMO in the
powder foundation