



since 2023

Kikusui Geoeath  
Geopolymer ripple coating material

## ジオアースシリーズ

**ジオアース100**

(ジオポリマーゆず肌塗材)

**ジオアース200**

(ジオポリマーさざ波塗材)

**ジオアース300**

(ジオポリマー平塗材)

## 産業副産物の有効利用

セメント・コンクリートに  
混入され再利用



Geopolymer uses industrial byproducts such as fly ash and blast furnace slag as raw materials. These products are still being reused in cement and concrete by mixing them, but geopolymer also contributes to a circular society by recycling them.

地質高分子使用工業副産品如飛灰和高爐煉渣作為原材料。這些產品現在仍然被用於混合水泥和混凝土中進行再利用，但是地質高分子也通過回收利用來貢獻於循環型社會。

## ジオポリマーの特長

### 低VOC・低臭

Due to the absence of organic solvents, volatile organic compounds (VOCs) have been reduced. Additionally, there is hardly any distinctive odor typically associated with emulsions.  
由於不使用有機溶劑，揮發性有機化合物（VOC）得到了降低。此外，幾乎沒有乳化劑特有的氣味。

### 耐酸性・白華が少ない

Compared to cement, it has a lower calcium content, making it less susceptible to corrosion in acidic environments and resulting in less efflorescence.  
相較於水泥，由於其鈣含量較低，因此不易在酸性環境下腐蝕，且白堊質生成較少。

### 抗菌性・抗ウイルス性

It exhibits antibacterial and antiviral properties due to its alkaline nature.  
由於其鹼性，具有抗菌和抗病毒的作用。

### 調湿性・消臭性・透湿性

Due to its porous coating structure, it exhibits moisture regulation properties through the absorption and release of water vapor internally, effectively adsorbing and decomposing odors. Externally, it possesses breathability, allowing moisture from the substrate to be released.  
由於其多孔質的塗膜結構，在內部具有吸放濕作用，能夠吸附和分解氣味。在外部，具有透氣性，可以將基層中的潮濕排出。

Geopolymer is a next-generation material that contributes to CO<sub>2</sub> reduction.

地質聚合物是一種對於CO<sub>2</sub>減排有貢獻的下一代新材料

# それはCO<sub>2</sub>削減に貢献する次世代の新しい素材です。

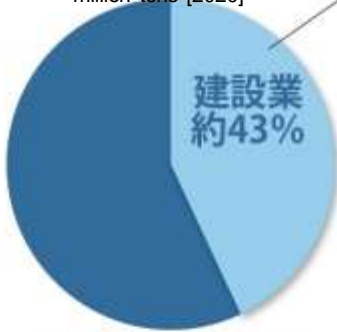
## 建設業を取り巻く環境

The environment surrounding the construction industry.  
建築行業所面臨的環境。

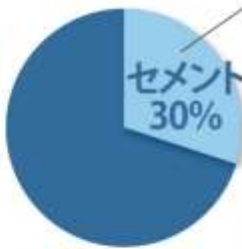
Emissions approximately 1,044 million tons [2020]

It is said that the construction industry accounts for approximately 43% of Japan's total CO<sub>2</sub> emissions.

據說建築業占日本總CO<sub>2</sub>排放量的約43%。



The percentage of CO<sub>2</sub> emissions in Japan  
日本的二氧化碳排放比例。



The percentage of CO<sub>2</sub> emissions from construction.  
建設（建築/土木）の二氧化碳排放比例。

Approximately 30% of the total CO<sub>2</sub> emissions from construction and civil engineering works are emitted during the manufacturing of cement and concrete

建設和土木工程の整體CO<sub>2</sub>排放量中，大約有30%是在水泥和混凝土的製造過程中排放的。

### セメント製造時のCO<sub>2</sub>排出は2種類



①主原料(石灰石)の熱分解時に排出  
CO<sub>2</sub>の発生割合は製造時全体の約60%



②焼成時の化石燃料消費時に排出  
CO<sub>2</sub>の発生割合は製造時全体の約40%

CO<sub>2</sub> There is a demand for alternative materials to cement (limestone), which is a major contributor to CO<sub>2</sub> emissions.  
尋找替代水泥（石灰石），這是二氧化碳大量排放的原因。

Geopolymers are expected to be a new material that can replace cement. For example, by replacing cement with geopolymers, there is a potential to reduce CO<sub>2</sub> emissions by approximately 80% compared to conventional cement products.

Geopolymers被期望作為取代水泥的新材料。例如，將水泥替換為地質聚合物可能將CO<sub>2</sub>排放量減少約80%，相較於傳統的水泥製品。

## 建設業の取り組み

In the civil engineering market, it is adopted as a secondary product for concrete.  
在土木市場上，它被用作混凝土二次產品。



まくらぎ



外構ブロック



U字溝

As part of efforts in the construction market, research is being conducted to develop next-generation materials.

作為建設市場的努力，研究正在進行中，以開發新一代的建材。

Kikusui Chemical Industries' "Geoeath Series" is an industry-first (according to our research) product as a building coating material. By using various products of the "Geoeath Series" from the base to the finish, it is possible to contribute to the reduction of greenhouse gas emissions.

菊水化學工業的「Geoeath系列」是作為建築塗料材料的行業首創產品（據我們的調查）。通過使用「Geoeath系列」的各種產品，從底層到最終塗裝，可以為減少溫室氣體排放做出貢獻。





# ジオアースシリーズ Geearth 系列 產品範圍

～GeoEarth 系列是 GeoEarth 產品系列中的第一個產品。



## ジオアース100

地质聚合物柚皮涂层材料  
(Skin)



## ジオアース200

土工聚合物波紋塗層材料  
(Ripple)



## ジオアース300

土工聚合物平面塗層材料  
(Flat)

	Geearth 100	Geearth 200	Geearth 300
CO <sub>2</sub> reduction per 1,000 m <sup>2</sup> *1*2 每 1,000 平方米二氧化碳減排量*1*2	Approx. 154 kg	Approx.83 kg	Approx. 168 kg
Amount of by-products used 副產品消耗	Approx. 40%	Approx. 23%	Approx. 18%
Reduction of fossil raw materials (resin) *1 減少化石原料 (樹脂) *1	±0	±0	100% reduction (no use) 減少 100% (不使用)
Performance	Odour-eliminating, humidity-regulating, antibacterial, antiviral, moisture-permeable, low VOC, low odour, fewer white flakes, inorganic binding material 消除異味、調節濕度、抗菌、抗病毒、透濕、低揮發性有機化合物、低異味、減少白色薄片、無機結合材料		
Features	Acid resistance	Acid resistance	---
Tone	Gray	White	White
Glossiness	Matte	Matte	Matte
Painting Method	Spray Gun	Porous roller	Wool roller, brush
Finish	Skin	Ripple	Flat
Packing	Main Agent:10kg/bag Mixing Agent: 4kg/can	Main Agent: 10kg/bag Mixing Agent: 4kg/can	Slurry: 6kg/can Mixing Agent: 10kg/can

\*1 Reduction when applied to achieve the same film thickness as the product being compared.

\*2 Compared with our existing products.



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### 注意点

施工上の注意事項及び安全衛生上の注意事項をご確認の上、施工ください。  
各製品ごとの注意事項については、ダウンロードサイトよりご確認ください。

### kikusui ダウンロードサイト

掲載製品を取り扱う際は、各製品のSDS及び標準施工仕様書をご確認ください。



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