

# PUREGROW



Inorganic Medium for Global Use  
Lightweight, Sanitary, Recyclable  
Chosen by Experts Worldwide

– Published: June 2025 –

**MMK-01**

Global Trade Medium

**BONSAI**

Bonsai Export

**HBG-01**

Hydroponic Medium

**PG-SS**

Functional Silica

## Product Introduction Catalog

June 2025



**M.C. Trading Co., Ltd.**

Copyright © 2025 M.C. TRADING CO., LTD. All rights reserved.



- P1. Cover
- P2. Table of Contents
- P3. Product Overview – What is PureGrow?
- P4. Product Introduction – “MMK-01”
- P5. Product Introduction – “BONSAI”
- P6. Product Introduction – “HBG-01”
- P7. Product Introduction – “PG-SS”
- P8. Company Profile & Development Background
- P9. Achievements, Partners & Future Vision
- P10. Material Properties & Technical Overview
- P11. Features of the Medium & Quick Handling Guide
- P12. Back Cover



# Product Overview – What is PureGrow?

PUREGROW

## Trade-Ready Inorganic Medium



PureGrow is an inorganic growing medium developed in Japan, made from recycled glass.

This product was developed as an alternative to traditional soil, addressing quarantine and environmental regulations in plant trade. It is patented in Japan (No. 7128123), with global applications in progress.

MMK-01

The core series “MMK-01” is designed specifically for import and export use. It is lightweight, clean, breathable, and water-retentive—gentle on roots. It meets both sanitary and legal requirements with exceptional ease of use. As a dual-solution medium, it is gaining global attention in green business and gift industries.

## MMK-01

Global Trade Medium

BONSAI

This model is derived from MMK-01 and tailored for bonsai display and export. Its fine grain and natural color blend seamlessly with moss and gravel. No root washing is required—plants can be shipped and displayed as is. It preserves the delicate shape and base of each bonsai with minimal handling.

## BONSAI

Bonsai Export

HBG-01

With grain sizes between 1–3mm, HBG-01 can be washed and reused repeatedly. Unlike urethane sponges or rockwool, it eliminates the hassle of single-use disposal. This leads to reduced waste and lower long-term cultivation costs. A reliable ally in hydroponics—clean, efficient, and reusable after each harvest.

## HBG-01

Hydroponic Medium

PG-SS

This silica blend uses microbes and porous silica to clean the air. Derived from PureGrow, it is optimized for microbial odor control applications. Ideal for factories, food processing, livestock, and waste treatment facilities. Includes compounds that boost microbial growth and support effective deodorization.

## PG-SS

Functional Silica

■ International Reach and Track Record  
PureGrow has already seen export success in Taiwan, used as a soil-free packing medium for succulents, flowers, and bonsai.

■ Purpose and Meaning  
PureGrow is more than a horticultural material—it's a vessel connecting people and nature. Not just for planting, but for gifting, showcasing, and protecting living beauty.



BtoC Package  
MMK-01 (0.3L)



# Product Introduction – “MMK-01”

## Global Trade Medium

Patented in Japan (No. 7653728)

**Industry First**

**Patented in Japan**

Japan Patent No. 7653728



A reliable inorganic medium supporting both plant growth and export compliance

Enables smooth international shipping with no soil removal required

Safe to use, with plant growth comparable to conventional growing media.

MMK-01 includes key nutrients and serves as a balanced growing medium. It supports healthy plant development through carefully formulated composition. Its pH-buffering ability helps maintain an optimal environment for growth.

MMK-01 is inorganic and less prone to microbial growth.

Fewer pests and diseases occur.

Plants grow cleaner and stronger.

MMK-01 is eco-friendly and minimizes environmental impact.

Unlike traditional media that are discarded after use,

it can be planted directly into soil without removal.

Reusable and sustainable, it's a responsible choice for growers.



### Import/Export and Plant Quarantine Regulations

Soil is prohibited for import in Japan and may result in fines or imprisonment.

For details, please refer to Japan's Plant Protection Station website (MAFF).

# Product Introduction – “BONSAI”

## Bonsai Export

### Bonsai Grade Derived from MMK-01

The BONSAI model is built to reflect Japanese bonsai culture and aesthetics. It requires no root washing and can be exhibited or shipped as is. Ideal for exhibitions, sales events, and international showcases. Its grain size and density are optimized to match pot and tree form. Combining beauty and practicality, it preserves the work as a complete "piece."



TRADMAN' S BONSAI, a leading brand in Japan, uses this model. It is valued for balancing transportability with exhibition appeal.

- No Root Washing – Ready for Display  
Ready for shipping or display right after repotting.
- Optimized Grain Size and Color  
Grain size balances airflow, drainage, and visual harmony. Its natural, non-white tone enhances the visual appeal in displays.
- A Quiet Presence That Enhances the Tree  
Refined texture stays subtle, letting the bonsai stand out. The subtle color change when dry also serves as a watering indicator.  
\*Also easy to use as a supplemental material for maintenance.
- Lightweight and Cushioned – Easy to handle and reduces shipping damage.

### Import/Export and Plant Quarantine Regulations

Soil is prohibited for import in Japan and may result in fines or imprisonment. For details, please refer to Japan' s Plant Protection Station website (MAFF).





# Product Introduction – “HBG-01”

## Hydroponic Medium

HBG-01 is designed for hydroponic and semi-hydroponic cultivation. Its porous structure balances water retention and airflow for ideal root conditions. Washable and reusable, it reduces waste and growing costs. With a uniform grain size of 1–3mm, it supports repeated use with minimal effort. An eco-friendly choice that supports a more sustainable future.



### Key Features:

#### ■ Balanced Water Retention and Excellent Drainage

Holds water evenly without excessive pooling—prevents root rot while keeping roots hydrated. Naturally settles at the bottom, offering stability and ideal support for plant anchoring.

#### ■ Resistant to Microbial Contamination

As an inorganic material, it contains no organics—reducing algae and mold risks. Its cleanliness makes it suitable for long-term cultivation.

#### ■ Neutral to Slightly Alkaline pH

\*Ideal for herbs, ornamental plants, and leafy greens in hydroponic systems.

#### ■ Simple and Reusable

Unlike urethane sponges or rockwool, HBG-01 can be reused after harvest with minimal effort. A strong, low-maintenance ally for hydroponic growers.



# Product Introduction – “PG-SS”

## Functional Silica

Provides a cleaner, more comfortable environment by improving air quality.  
Uses a blend of functional silica and microbes to neutralize odors.  
Derived from PureGrow and specialized for microbial deodorization.  
Ideal for factories, processing plants, livestock, and waste facilities.  
Effectively reduces and removes unpleasant odors in demanding settings.



PG-SS is a silica medium designed for microbial deodorization. It contains compounds that promote microbial growth and activity. These compounds help beneficial microbes expand their environment by generating and extending negatively charged zeta potential zones. It also contains special iron components that further activate microbes. Micropores capture odor molecules and support microbial decomposition. This contributes to air and space purification. The deodorizing silica includes various pore sizes and shapes, from 1 micron to 6 mm, allowing diverse microbes to settle and coexist.

Available in various sizes to suit different applications.



XL: 10–25 mm



L: 3–10 mm



M: 5–10 mm



S: 3–5 mm



F: 0–3 mm



# Company Profile & Development Background

## Regeneration and Creation – What Lies Beyond

Our company originally set out to promote a sustainable society through the resource recovery of recycled toner cartridges. Along the way, we found ourselves facing a single, fundamental question—

**“Are broken things simply meant to be thrown away?”**

In Japan, there is a cultural tradition called kintsugi, in which broken pottery is mended with gold to reveal new value and beauty. It reflects a philosophy that sees meaning in things that are broken. Inspired by this idea, we turned to glass—once discarded—and gave it new life. We created PureGrow using foamed recycled glass.

Lightweight, clean, and reusable, it now serves in gardening, farming, hydroponics, and decor—fields where traditional soil falls short.

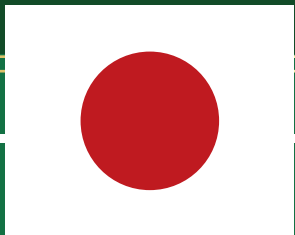
It is not just a substitute, but a material that regenerates value through circular use. The more it is used, the more it contributes to the environment and to the future. We continue to create, for tomorrow—and for the generations to come.

Beauty—  
unbroken by the break.

## About MCT (M.C. Trading Co., Ltd.)

MCT began in 1981 with information management and consumables manufacturing. In 1996, our toner cartridge recycling technology was certified by the Ministry of International Trade and Industry.

This marked our first step toward a society free from disposables. That same spirit evolved into “PureGrow,” a medium born from recycled glass. With the wisdom of recycling and the power of creativity, we now walk a new path—together.





# Achievements, Partners & Future Vision



Since its launch, PureGrow has earned trust and export achievements both in Japan and across Asia. In particular, its adoption has grown rapidly in the Taiwanese and Indian markets.

## Use Cases in Taiwan

Used by exporters and garden retailers in Taiwan.  
Enables soil-free shipping and display of plants.  
Strict quarantine rules ban soil imports.  
PureGrow avoids contamination risks.  
Chosen as a clean and safe medium.

### Features:

- No need to wash roots → minimizes plant stress
- Attractive appearance, ideal for display and gifting
- Same container used for shipping and showcasing → boosts efficiency

## Expansion in India

Entering India's décor and IT gift markets.  
Focusing on urban lifestyle demand.

In 2025, we began testing with local consultants and travel firms.  
PureGrow was introduced as a soil-free, elegant plant gift.  
Marigold trials showed strong germination and root growth.  
Local feedback praised its beauty and ease of use.  
It suits both decorative and practical needs.  
Interest is growing across urban lifestyle markets.

## Expanding Reach and Collaborations

### 【Production Partner】

**Murakami Kaimeido Co., Ltd.**

<https://www.murakami-kaimeido.co.jp/>

Murakami Kaimeido, a top-tier Japanese firm, has supported PureGrow since its early stages. They are a trusted partner, ensuring both quality and safety through close collaboration.

PureGrow expands through partnerships.  
Below are examples of companies using it.

### 【Production Partner】

**Mizusawa Chemical Industries, Ltd.**

<https://tradmans.jp/>

Supplier of inorganic materials for PureGrow, involved from the product design stage. Ensures stable and safe material supply, with ongoing support for quality assurance.

## From Display Material to Storytelling Tool

PureGrow is used in displays and gifts, serving as a material that conveys product and brand values. Beyond function, it supports various business uses with its eco-conscious and cultural appeal.

# Material Properties & Technical Overview

## Material and Structural Properties

PureGrow is a recycled, inorganic medium made from glass.

- It is lightweight and easy to handle—ideal for transport and display.
- Porous structure ensures air flow, water retention, and drainage.
- Being glass-based, it is sterile and odorless.
- Clean and durable for long-term use.

## Safety and Quality Management

No harmful substances like hexavalent chromium are used.

Only certified-safe glass is selected.

Note: All production is managed in Japan.

## Versatile Applications

PureGrow is widely appreciated in the following fields:

- Bonsai – No root washing needed; ideal for root viewing and display
- Foliage Plants – Balances airflow and aesthetics
- Hydroponics – Available in specialized HBG-01 model
- Interior & Décor – For deodorizing and green display accents



Soil-free exportable



Inorganic material—no soil restrictions.  
Easy global shipping.

Lightweight, low-cost shipping.



Lightweight porous design cuts transport cost.

Soil compatibility



Compatible with soil after transplanting, supports smooth plant establishment.

Optimized Balance of Solid, Liquid, and Air Phases



Balances water, air, and solids to support healthy plant growth.

Inorganic  
Clean & durable



Low risk of pests or pathogens.  
No odor or hygiene issues during ransport.

International  
Patent Pending



Patent pending for export use.  
Trusted for reliability.

Growth & Nutrients



Minerals boost growth from seed to harvest.

Better Water Holding



Retains moisture  
Keeps plants healthy in dry environments

pH Buffering Function



Supports ideal pH for growth.  
Helps keep plant quality stable.

Heat Resistance



Tolerates tropical transport.  
Keeps plants healthy in heat.

Eco-Friendliness



Causes no pollution when discarded  
A sustainable, eco-conscious material

Transport Stability



Stable and light,  
keeps root shape during transport.

Versatile Use



Fits flowers, greens, and fruits.  
Meets export needs.

Recyclable Material



Reusable after washing.  
Cuts cost and waste.



# Features of the Medium & Quick Handling Guide

## Comparison with Other Growing Media



Criteria	PureGrow (All product types included)	Soil	Peat Moss	Rockwool	Perlite
pH Range	Acidic–Neutral–Alkaline (Adjustable depending on product)	Varies by type	Acidic	Neutral	Neutral–Alkaline
Cleanliness	High(Sterilized by firing)	Low (contaminants)	Moderate (may rot)	High (varies)	Moderate
Pest Risk	Extremely low	High	High	Low	Moderate
Weight	Lightweight	Heavy	Light	Light	Very light
Drainage	High	Moderate	High retention	Very high	High
Water Retention	Medium to High	High	Very high	Low	Very low
Root Establishment	High	Moderate	Moderate	High	Moderate
Fertilizer Retention	Moderate to High	High	High	Low	Low
pH Adjustment Needed	No adjustment	May need	High (needs pH fix)	May need (varies)	Needs mild pH adjust
Reusability	Reusable	Hard to reuse	Hard (decomposes)	Hard (crumbly)	Partially reusable
Ease of Disposal	Easy disposal	It depends	Prone to rot	Often industrial waste	Dust caution
Visual Clarity	Visual Clarity	Low clarity	Low (brown/mold)	Moderate	Visible (dusty)
Odor	Odor-free	Has odor	Moldy/rotten odor	None	None
Growth Performance	Strong growth	Good	Somewhat slow	Fast but dries	Somewhat fast
Export/Import Suitability	Exportable	Restricted	Regulated (organic)	Some restrictions	Dust/scatter risk

## Weighted Scoring & 5-Point Rating

Criteria	PureGrow	Soil	Peat Moss	Rockwool	Perlite
Cleanliness	5	1	2	4	3
Hygiene (Pest Control)	5	1	1	4	3
Reusability	4	1	1	2	3
Export Suitability	5	1	2	3	3
Growth Performance	4	4	2	4	3
Disposability	4	2	2	2	2
Total Score (Weighted)	<b>60 Points</b>	29 Points	31 Points	49 Points	41 Points
Overall Rating (5-Star)	★★★★★	★★☆☆☆	★★★☆☆	★★★★☆	★★★★☆



To nurture a seed is to offer a quiet prayer.

From this vessel, a single life takes root—  
warming someone's heart, gently lighting the path ahead.

Thank you for taking the time to explore PureGrow.



**M.C. Trading Co., Ltd.**

Manufacturing, Development, and Sales  
2-1-17 Iwamotocho, Chiyoda-ku  
Tokyo 101-0032, JAPAN  
Tel: +81-3-3865-7888  
Email: [contact@mct-puregrow.com](mailto:contact@mct-puregrow.com)  
Site (PureGrow): <https://mct-puregrow.com>



Recycled toner, printer rentals,  
and eco-friendly office solutions.  
Feel free to contact us anytime.  
Main Site: <https://www.recycletoner.co.jp>



We look forward to the day we can take a step toward tomorrow—together.

Copyright © 2025 M.C. TRADING CO., LTD. All rights reserved.

Created and compiled by MCT Midoriplant (2025)



**Note:**

Some PureGrow models are in phased rollout.  
For large or recurring orders, please contact us first.  
Samples or small lots are often used to start.  
Production scale-up is underway.  
Lead times may vary by order.  
Flexible delivery is available.  
Thank you for your understanding.