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Walfront Monocrystalline Si Block

Walfront 99.99% High Purity Monocrystalline Silicon Metal Block

Instruction Manual

1. INTRODUCTION

This manual provides essential information regarding the Walfront 99.99% High Purity Monocrystalline Silicon Metal Block. It covers product specifications, proper handling, potential applications, and safety guidelines to ensure safe and effective use of the material.

2. PRODUCT DESCRIPTION

The Walfront Silicon Metal Block is a high-purity material, specifically 99.99% ($\geq 99.99\%$) pure monocrystalline silicon. This material is primarily used in semiconductor and solar energy industries due to its excellent electrical properties and crystalline structure. It is available in 10g and 50g weights.



Image: A large, irregularly shaped piece of shiny, metallic-grey silicon metal, with smaller fragments scattered around it, all against a white background. This illustrates the typical appearance of the Walfront 99.99% High Purity Monocrystalline Silicon Metal Block.



Image: A close-up view of a single, large piece of monocrystalline silicon metal, exhibiting a highly reflective, metallic surface with visible crystalline facets. The background is dark, highlighting the material's luster.

3. SPECIFICATIONS

Attribute	Detail
Condition	Brand New
Purity	≥99.99%
Material Type	Monocrystalline Silicon Metal
Available Weights	10g, 50g (Optional)
Product Dimensions	Approximately 1.97 x 1.97 x 1.97 inches (for a typical block)
Item Weight	0.634 ounces (for 10g option, varies by weight)

Attribute	Detail
Manufacturer	Walfront
ASIN	B07KXVJF13

4. HANDLING AND STORAGE

Proper handling and storage are crucial to maintain the purity and integrity of the silicon metal block.

- **Handling:** Handle the silicon block with clean, dry gloves to prevent contamination from skin oils or other substances. Avoid dropping or subjecting the material to impact, as silicon is brittle and can fracture.
- **Storage:** Store the silicon block in a clean, dry environment, preferably in its original packaging or a sealed container, to protect it from dust, moisture, and chemical contaminants. Keep away from strong acids or bases.
- **Temperature:** Store at room temperature. Extreme temperature fluctuations are generally not an issue for solid silicon but can affect packaging.

5. APPLICATIONS

High-purity monocrystalline silicon is a fundamental material in various advanced technological applications:

- **Semiconductor Manufacturing:** Used as a substrate for integrated circuits (ICs), transistors, diodes, and other electronic components.
- **Solar Cells:** Essential for producing high-efficiency photovoltaic cells that convert sunlight into electricity.
- **Research and Development:** Utilized in laboratories for material science studies, experimental electronics, and educational purposes.
- **Specialized Alloys:** Can be used as an additive in certain high-performance alloys where specific electrical or thermal properties are desired.

APPLICATION RANGE



Image: An illustration showing various applications of silicon metal. The image displays several pieces of silicon metal at the top, with icons below representing different uses such as converters, transistors, diodes, solar cells, solar panels, and monocrystalline wafers.

6. SAFETY INFORMATION

While silicon metal is generally considered stable and non-toxic in its solid form, basic safety precautions should always be observed when handling any raw material:

- **Personal Protective Equipment (PPE):** Wear appropriate gloves to prevent contamination and eye protection to guard against potential sharp edges or small fragments if the material breaks.
- **Ventilation:** If any processing (e.g., grinding, cutting) that could generate dust) is performed, ensure adequate ventilation or use respiratory protection to avoid inhaling silicon dust.
- **Disposal:** Dispose of any waste material according to local regulations for industrial waste.
- **Emergency Procedures:** In case of accidental ingestion or eye contact with dust, seek medical attention.

7. PACKAGE CONTENTS

Each package contains:

- 1 × Walfront 99.99% High Purity Monocrystalline Silicon Metal Block (10g or 50g, depending on selection)

8. TROUBLESHOOTING

As a raw material, the Walfront 99.99% High Purity Monocrystalline Silicon Metal Block does not typically require troubleshooting in the traditional sense. Issues would generally relate to contamination or physical damage during handling or storage. Refer to the "Handling and Storage" and "Safety Information" sections for preventative measures.

9. MANUFACTURER INFORMATION

Brand: Walfront

For further inquiries or support, please refer to the official Walfront website or contact their customer service.

10. WARRANTY AND SUPPORT

Specific warranty details for raw materials like this silicon block are typically not provided in the same manner as finished consumer products. For any concerns regarding product quality or purity upon receipt, please contact Walfront customer support directly. Keep your purchase records for reference.

