



## -Material Safety Data Sheet-

### MISO Series (MISO, MISO Plus, MISO Mini): Single Crystal Alumina AL2O3

Updated number Ver. 3  
Updated by: Tharanga

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Approved by: Jeong Goo Hwang

#### 1. Product and Company Identification

<b>Company Name:</b> HT Co., Ltd.	<b>Product Name:</b> MISO Series (MISO, MISO Mini, MISO Plus)
<b>Address:</b> (U-Tower) 1312,1313, 120, Heungdeokjungang-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Korea, 16950	<b>Product Use:</b> Orthodontic Ceramic Brackets
<b>Telephone:</b> +82-31-216-2080 <b>E-mail:</b> <a href="mailto:htdental@htdental.co">htdental@htdental.co</a>	<b>Indication of use:</b> For Professional orthodontic treatment only

#### 2. Composition/ information on ingredients

Single Crystal Alumina AL2O3 Monocrystalline Sapphire	<b>CAS No:</b> 1344-28-1
<b>Chemical Name:</b> Aluminum Oxide	<b>Content:</b> Aluminum Oxide 99.99%
<b>PRTR:</b> N/A	<b>HSBD:</b> N/A

#### 3. Hazard Identification

Made by single crystal alumina which is widely used in dental field to be proved safe enough does not contain hazardous or volatile substance. Non-Hazardous for human body and health. However, subsequent operations such as brazing, cutting, grinding, heat treating, picking or processing in any other fashion may produce potentially hazardous dust or fume which can be come in contact with eyes.  
Possible symptoms of exposure to dust, fumes or gages.  
Acute: Irritation of eyes.

Potential Environmental Effects: NA

<b>4. First Aid Measures</b>	
<b>Routes of Exposure</b>	First Aid Measures
<b>Eye Contact</b>	If eyes become irritated ,Wash eyes immediately with large amounts of water
<b>Skin Contact</b>	If skin becomes irritated, remove soiled clothing, Wash with soap or mild detergent and large amounts of water.
<b>Inhalation</b>	Remove from exposure area to fresh air immediately.
<b>Ingestion</b>	Rinse mouth with water

<b>5. Fire and Explosion Hazard data</b>	
<b>Flammable</b>	Non combustible
<b>Extinguishing Media</b>	Use extinguishing media suitable for type of surrounding fire
<b>Special Fire Fighting Procedures</b>	No special measures required
<b>Unusual Fire &amp; Explosion Hazards</b>	None

<b>6. Accidental Release Measures</b>	
<b>Containment Techniques</b>	N/A
<b>Evacuation Procedures</b>	N/A
<b>Precautions in Case of Spill</b>	N/A
<b>Special Instructions</b>	N/A

<b>7. Waste Disposal Method and storage</b>	
<b>Wasted Disposal Method:</b>	Properly dispose in accordance with federal, state and location regulation
<b>Precaution for Handling/Storage:</b>	Store in a cool and dry place. Do not place on heat or humidity.

<b>8. Special Protection Information</b>	
<b>Ventilation</b>	Not required
<b>Local Exhaust</b>	N/A
<b>Eye Protection</b>	Recommend approved safety glasses when grinding etc.
<b>Hand Protection</b>	N/A

### 9. Physical and Chemical Characteristics

<b>Appearance</b>	Clear or Transparent
<b>Melting Point</b>	2050°C
<b>Density</b>	3.99 gr/cm <sup>3</sup>
<b>Solubility in water</b>	Insoluble

### 10. Hazard Information (Stability - Reactivity)

<b>Flash</b>	N/A
<b>Flammability</b>	N/A
<b>Oxidation</b>	N/A
<b>Reactivity-Explosive</b>	N/A
<b>Stability-Reactivity</b>	Stability

### 11. Toxicological Information

Skin Erode Effect:	
Incentive (Skin, Eye)	N/A
Acute Toxicity	N/A
Sub chronic Toxicity	N/A
Chronic Toxicity	N/A
Mutagenic Effect	N/A
Reproduction Effect	N/A
Teratogenic Effect	N/A
Others	N/A

### 12. Ecological Information

<b>Biodegradability:</b> N/D
<b>Bioaccumulation:</b> N/D
<b>Follow the local regulation for non-hazardous materials.</b>

### 13. Transport Information

**Technical Shipping Name :** Not regulated

**Freight Class Bulk :** N/A

**Freight Class Package :** N/A

**Hazard Class or Division :** None-Hazardous

### 14. Regulatory Information

**TSCA (Toxic Substance Control Act):** On TSCA

**CERCLA (Comprehensive Emergency Response Compensation and Liability):** N/A

**EINECS (European Inventory of Existing Commercial Chemical Substances):**2156916

### 15. Other Information

**Attention:**

1. Disposable only.
2. For professional use only.
3. Single use to the correspondent tooth only.

**N/A**= not applicable, **NA**= not available, **N/D**= not determined

**mg/m<sup>3</sup>** = milligrams per cubic meter, **C** = ceiling, **PEL** = permissible exposure limit

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**Note:** While the information and recommendations set forth on this data sheet are believed to be accurate as received from our suppliers, HT Co., Ltd. makes no warranty with respect thereto and disclaims all liability from reliance thereon.

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