



**Hoang Long**

## **MATERIAL SAFETY DATA SHEET (MSDS)**

### **RUTILE SAND PRODUCTS**

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#### **1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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##### **Product Identification**

Product Names	HLM- Rutile Sand
Other names	Rutile Sand
Chemical Formula	TiO <sub>2</sub>

Recommended Uses	Predominantly used as a raw material for chloride titanium dioxide pigment manufacture. Also used in titanium metal production and welding rod fluxes.
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##### **Supplier Identification**

Company	Hoang Long Titanium Minerals Processing Joint Stock Company Registered Code: 3101105741
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Address	Lot 1A-3, Hon La Seaport Park, Hon La Economic Zone, Phu Trach Commune, Quang Tri Province, Vietnam
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Telephone Number	Within Vietnam: 0232389.8888; International +84.232389.8888
Fax Number	Within Vietnam: 0232374.8888; International +84.232374.8888

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#### **2. HAZARDS IDENTIFICATION**

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Risk Phrases (R-Phrases)	None
Safety Phrases (S-Phrases)	None
Dangerous	Goods
Class and Subsidiary Risk	None allocated
Hazchem Code	None allocated
Poisons Schedule	None allocated

##### **Potential Health Effects**

###### **Acute**

Swallowed	Non-toxic. There are no known hazards resulting from accidental ingestion of zircon sand as may occur during normal handling. Swallowing a large amount may result in irritation to the digestive system due to abrasiveness.
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Eye	Solid and dust can cause moderate irritation due to abrasiveness.
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Skin	Low hazard
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Inhaled	May be regarded as a general nuisance dust, but can be irritating at high concentrations. May cause symptoms such as coughing or sneezing.
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###### **Chronic**

General	In common with many minerals, rutile contains low levels of naturally occurring radioactive elements of the uranium and thorium series. The main radiological hazard from the product is internal exposure to alpha particles given off in small amounts by inhaled dust. Suitable dust control measures shall be employed to ensure occupational exposure to generated dust and alpha particles are kept as low as reasonably achievable. Low level gamma radiation from bulk or bagged stockpiles of rutile may present a lesser, external hazard.
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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Ingredient (typical)

<b>Minerals</b>	<b>CAS number</b>	<b>Percentage (%)</b>
Rutile	1317-80-2	82–97%
Leucoxene	12173-81-8	1–17%
Ilmenite	12168-52-4	<1%
Zircon	14940-68-2	0,5% approx
Kyanite	1302-76-7	0.5%
Quartz	14808-60-7	<0.1%

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### 4. FIRST AID MEASURES

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Swallowed	First aid is unlikely to be required, but if necessary wash mouth out with water ensuring the mouthwash is not swallowed. Give one or two glasses of water to drink. Seek medical attention as a precaution if a large quantity has been swallowed.
Eye	Hold eyelid open and flush with plenty of clean water. Continue for at least 15 minutes or until grit is removed. Seek medical attention if soreness or irritation persists.
Skin	First aid is unlikely to be needed. Remove contaminated clothing, avoiding generating unnecessary dust. Wash skin with soap and/or water. If irritation or soreness develops, seek medical advice. Launder clothing before re-use.
Inhaled	First aid is unlikely to be needed. If necessary, move from exposure to fresh air. Blow nose gently to remove dust particles from nasal passages. If any adverse symptoms develop, seek medical advice.
First Aid Facilities	Eye wash facilities
Advice to Physician	Treat symptomatically

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### 5. FIRE FIGHTING MEASURES

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Flashpoint	Not applicable
Flammability Limits	Not applicable
General Hazard	This product is not flammable and does not support combustion.
Extinguishing Media	Use media suitable for the material that is burning.

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### 6. ACCIDENTAL RELEASE MEASURES

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Spills and Disposal	Wear safety equipment as for normal handling. Avoid generating dust. Vacuum up if possible, otherwise sweep up and re-cycle. If the spilled product is not suitable for re-use, collect and where possible return to manufacturer for re-processing. Otherwise dispose of to an approved landfill site and cover with clean fill.
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## 7. HANDLING AND STORAGE

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Handling	Avoid breathing dust. Wash thoroughly after handling.
Storage	Storage areas should be ventilated and dust generation minimised when handling.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Exposure Standards	Dust TWA – 10mg/m <sub>3</sub> (inhalable general nuisance dust)
Radiation Exposure	Occupational exposure should be as low as reasonably achievable, (ALARA principle), but should not exceed a total of 100 milli-seiverts over five consecutive years. (ICRP).
Engineering Controls	Ventilation requirements will depend on handling methods and the amount in use, but should be sufficient to maintain dust levels below exposure limits. Indoor points of dust generation such as conveyor and hopper discharges should be equipped with an effective extraction system.
Personal Protection	Safety glasses with side shields or goggles. If risk of inhaling dust is present wear, at minimum, a P1 personal respirator (disposable or cartridge type).

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance (Form)	Dark brown to black dry free running sand. Ruby red to black under the microscope. Odourless and tasteless.
Melting Point	1825 °C
Vapour Pressure	Not volatile
Evaporation Rate	Not volatile
Specific Gravity	4.0 - 4.3
Solubility in Water	Insoluble
pH	Neutral
Bulk Density	2400 - 2700 kg/m <sub>3</sub>
Grain size	AFS No 75 – 95, average grain size of 0.1 – 0.2 mm

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## 10. STABILITY AND REACTIVITY

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Reactivity	Inert
Chemical Stability	Stable
Incompatibilities	None in normal or expected use
Decomposition	Decomposition will not occur

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## 11. TOXICOLOGICAL INFORMATION

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This product is non-toxic. Refer section 2. Hazards Identification.

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## 12. ECOLOGICAL INFORMATION

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The material is unlikely to cause any environmental damage. It is insoluble in water and is unlikely to contaminate waterways or food chains.

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## 13. DISPOSAL CONSIDERATIONS

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Disposal must be in accordance with Federal, State and Local Council regulations. If approved, may be transferred to an approved landfill site.

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**14. TRANSPORT INFORMATION**

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Transport is not regulated, however trucks transporting the dry bulk material should be covered to prevent dust creation.

May be transported normally as a non-hazardous material.

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None Allocated	None Allocated	None Allocated
14.2 Proper Shipping Name	None Allocated	None Allocated	None Allocated
14.3 Transport hazard class	None Allocated	None Allocated	None Allocated
14.4 Packing Group	None Allocated	None Allocated	None Allocated

14.5 Environmental hazards: No information provided

14.6 Special precautions for user:

Hazchem code                      None Allocated

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**15. REGULATORY INFORMATION**

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None Noted

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**16. OTHER INFORMATION**

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Information        This MSDS has been prepared by HLM Processing JSC, Safety Health and Environment Department.

Date of Issue    01<sup>st</sup> July 2025

This MSDS is valid for five (5) years from the date of issue but readers should refer to HLM Minerals's website ([www.hlm.com.vn](http://www.hlm.com.vn)) to ensure that this is the latest issue.

**Abbreviations**

mg/m<sub>3</sub>      Milligram per cubic metre  
NOHSC      National Occupational Health & Safety Commission  
TLV         Threshold Limit Value  
TWA         Time Weighted Average

**End of MSDS**