

**SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY**

**1.1 Identification of the Product**

Product name: Nickel Ore  
 Chemical formula: not applicable  
 Synonyms: Nickel laterite ore; Ferronickel ore;  
 CAS number: None

**1.2 Manufacturer's Name & Address**

Company name: GUAXILAN, S.A.  
 Address: 3 Avenida, 13-25 zona 14, Guatemala, Guatemala.  
 City / Town: Guatemala City  
 Region / County: Guatemala  
 Company Phone: + 502 2367 3381  
 E-mail: info@guaxilan.com

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Most common ingredients:

Ingredient	Content
Fe%	10 - 45%
Ni%	1.0 - 2.5%
Cr%	0.5 - 2%
CaO%	1.5 - 2%
MgO%	5 - 25%
Al <sub>2</sub> O <sub>3</sub> %	1.5 - 2.5%
SiO <sub>2</sub> %	20 - 40%
As%	< 0.05%
S%	0.03%
LOI%	12%
Moisture Content	28 - 38%

**SECTION 3: HAZARDS IDENTIFICATION**

Not applicable

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice:** If wounded, cleanse thoroughly, in order to remove any particles.

**Inhalation:** Remove to fresh air.

**Skin contact:** Wash with cool water and a pH-neutral soap.

**Eye contact:** Flush eye(s) with plenty of clean water for at least 15 minutes.

**4.2 Indication of any immediate medical attention and special treatment needed**

No special requirements.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**5.1.1 Suitable extinguishing media**

Any type to be selected according to materials burning in the immediate area.

**5.1.2 Unsuitable extinguishing media**

No special requirements.

**5.2 Special hazards arising from the substance or mixture**

None known

**Advice for firefighters**

Special protective equipment: None specific needed.

Wear protective equipment if required for other materials within the immediate vicinity.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

No known hazard. Follow good housekeeping procedures.

**SECTION 7: HANDLING AND STORAGE**

7.1 **Handling:** Use good safety and industrial hygiene practices.

7.2 **Storage:** Open air. Dry. Storage temperature: no restrictions.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

Good industrial hygiene should be followed.

Respiratory Protection: required only when excessive dust conditions are present

Eye Protection: required only when excessive dust conditions are present

Hand and Skin Protection: not required

Other protective equipment: normal working clothing

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Property	Value
Form	Solid. Row ore. Maximum size 500mm
Color	Red to brown
Odor	Odorless
Melting point	1500°C
Boiling point	NOT APPLICABLE
Bulk density	1 – 1.5 t/m <sup>3</sup>
Vapor pressure	low
Water solubility	negligible
Flash point	NOT APPLICABLE
Flammability	Non-flammable
Explosive properties	Non-explosive
Self-ignition temperature	NOT APPLICABLE

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

Stable under normal conditions.

**10.2 Chemical stability**

Chemically stable substance under normal conditions.

**10.3 Possibility of hazardous reactions**

Stable under normal conditions.

**10.4 Conditions to avoid**

None known

**10.5 Incompatible materials**

None known

**10.6 Hazardous decomposition products**

None

## SECTION 11: TOXICOLOGICAL INFORMATION

In its natural state, the Ore is made from oxide only. This oxide ( $\text{Fe}_2\text{O}_3$ ,  $\text{Fe}_3\text{O}_4$ ,  $\text{NiO}$ ,  $\text{MgO}$ ,  $\text{CaO}$ ,...) are not toxic. The potential toxicity may come from ingestion or inhalation of the Particulate Matter.

## SECTION 12: ECOLOGICAL INFORMATION

The Nickel in the Ore is essentially insoluble in water but dissolve in acids. It is ubiquitous trace metal and occurs in soil, water and air biosphere. The average content in the crust of the earth is about 80ppm, but may vary greatly depending on local geology. Cultivated soil contains 5-500ppm of nickel with a typical concentration of 50ppm.

Nickel level in natural water has been found to range from 2 to 10 $\mu\text{g/L}$  for fresh water and from 0.2 to 0.7 $\mu\text{g/L}$  in marine waters. In the latter, high levels are found in deeper waters.

Atmospheric nickel concentration in remote are ranges from 0.1 to 3 $\text{ng/m}^3$ , but can range from 5 to 35 $\text{ng/m}^3$  in rural and urban sites.

There is no data demonstrating that the Cargo is hazardous or harmful to the marine environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

No special requirements for disposing this material. This material can not be treated like waste.

No special storage and handling conditions

## SECTION 14: TRANSPORT INFORMATION

According to the IMSBC CODE (International Maritime Solid Bulk Cargoes Code) this material is classified in Group A. This material may liquefy if shipped at moisture content in excess of their transportable moisture limit (TML), is non-combustible and have low fire-risks.

Entire package (sample): not restricted to IATA (International Air Transport Association) regulation, Nickel ore is not listed in the DGL (Dangerous Good List) from the UN.

## SECTION 15: REGULATORY INFORMATION

According to the EU Regulation, this material doesn't need to be labeled.

## SECTION 16: OTHER INFORMATION

### 16.1 Indication of changes

This is the second version of the Material Safety Data Sheet for this Nickel Ore.

The first version of the Material Safety Data Sheet for this Nickel Ore is from 16.08.2012.

### 16.2 Abbreviations used:

CAS - Chemical Abstract Services- Registry Numbers

#### Disclaimer:

- This Material Safety Data Sheet (MSDS) is prepared with our best knowledge and with our best faith. It is based on information that is currently under discussion. The information in this MSDS will be updated when final decisions are reached;
- GUAXILAN, S.A. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. It does not represent a guarantee of the properties of the product.