

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND OF THE COMPANY OR ENTERPRISE

### 1.1. Product Identification:

Cast Steel Shot

### 1.2. Identification of the company or business:

**Granalladora Americana S.C.A.**

Hipólito Yrigoyen 4774 - Florida - (1602) - Buenos Aires - Argentina

Tel : 54 11 4760- 7295 - info@granalladora.com

## 2. COMPOSITION INFORMATION

2.1. Chemical composition of steel shot:

Element	Symbol	CAS No.	EINECS No.	Concentration
Iron	Fe	7439-89-6	231-096-4	> 96 %
Carbon	C	7440-44-0	231-153-3	0,80 - 1,2 %
Manganese	Mn	7439-96-5	231-105-1	0,35 - 1,20 %
Silicon	Si	7440-21-3	231-130-8	0,40 - 1,50 %

Chemical elements are found in alloyed and not free form.

## 3. HAZARD IDENTIFICATION

### 3.1. Product related hazards:

There is no known risk; iron and steel are not dangerous in themselves.

### 3.2. Hazards related to the use of the product:

#### 3.2.1. Poisoning:

Health risks are related to exposure to dust. Dust is generated by abrasive wear and by particles from the blasted part.

#### 3.2.2. Fire – Explosion:

Steel shot does not burn or explode. A slight risk of explosion may occur due to the fine dust that may be generated during use. Particles likely to cause fire include:

- Metal powder
- Plastic powder
- Dust produced by shot blasting metal parts coated with paint, rubber, grease, etc.

#### 3.2.3. Other risks:

The equipment, process conditions and products generated during shot blasting can be dangerous. Abrasive projections expose the operator to possible skin and eye injuries if personal protective equipment is not used. Risk of falling due to the presence of abrasive on the floor.

## 4. FIRST AID

### 4.1. Inhalation

Remove to fresh air, rest and stay warm. If symptoms persist, seek medical attention.

### 4.2. Eye contact

Do not rub, rinse with plenty of clean water. Seek medical help to remove particles from the eye and/or if irritation persists.

### 4.3. Skin contact

Wash thoroughly with soap and water. In case of continued skin irritation, seek medical attention.

### 4.4. Ingestion

Rinse with clean water and spit out. Do not swallow.

The user must decide what measures to take based on the type of dust generated in the shot blasting process.

## 5. FIRE FIGHTING MEASURES

### 5.1. Extinguishing media

Suitable extinguishing agents: CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

Unsuitable extinguishing agents for safety reasons: Water

### 5.2. Special measures to be taken

Non-flammable. Non-explosive. Metal fines produced during shot peening may present a minor risk of fire or explosion. This is usually due to high concentrations of dust in the extraction systems.

### 5.3. Recommendations for fire fighting personnel

Special protective equipment for fire fighting personnel. No special measures required.

## 6. MEASURES TO BE TAKEN IN CASE OF ACCIDENTAL SPILLAGE

### 6.1. Individual precautions

Shot spillage creates a slippery floor hazard. It is advised to keep floors and work areas clean at all times.

### 6.2. Environmental precautions

No special measures required.

### 6.3. Cleaning methods

It can be collected for reuse or disposed of as a non-hazardous product. Clean mechanically or with a magnetic brush to reduce the risk of falling.

### 6.4. Additional indications

Sweeping up the spill may generate dust, the use of masks is recommended during these operations.

## 7. HANDLING AND STORAGE

### 7.1. HANDLING

#### 7.1.1. General precautions

Handle the product carefully to avoid spillage. When supplied in bulk on a pallet, carefully remove the straps holding it in place, as they are under tension.

#### 7.1.2. Risk prevention for the operator

Shot blasting should be carried out in automatic booths, with the operator in the external area. Whenever technically possible, this procedure provides greater safety for the operator.

Ventilation systems must be arranged so that the surroundings of the shot blasting cabin are protected.

During compressed air shot blasting operations, the operator must wear personal protective equipment.

### 7.1.3. Fire and explosion risk prevention

Where there is a potential risk of fire or explosion, special precautions shall be taken in the design and construction of the facility.

### 7.1.4. Precautions when handling the product

There is no known risk.

### 7.1.5. Recommendations for use

Metallization and shot peening operations cannot be carried out in the same booth, as this increases the risk of fire.

The lighting in the cabins must be adequate for safety and in accordance with the tasks of inspecting the quality of shot blasting by the operator.

## 7.2. STORAGE

In a dry place.

Protect from humidity and high temperatures as it may rust.

It is recommended to keep the shot in the original packaging, which is appropriately designed for the product..

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1. Risk control

The user must be aware of the nature of the dust generated during the shot blasting operation and must take the necessary measures to protect his workers. A study must be carried out to measure elements that may be subject to exposure limits.

### 8.2. Personal protective equipment

#### 8.2.1. Respiratory protection

If ventilation is insufficient, use dust masks, face masks or hoods with corresponding air supply.

#### 8.2.2. Hand protection

Heavy duty industrial gloves

#### 8.2.3. Eye protection

Safety glasses or screen

#### 8.2.4. Other protections

Safety footwear. Overalls, sleeves and boots. Hearing protectors.

### 8.3. Exposure Controls

Límites de exposición de sustancias o agentes químicos en los puestos de trabajo.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. General information

**Physical state:** Solid. Spherical or angular particles

**Smell:** None

**Color:** Dark gray

### 9.2. Information regarding health, safety and the environment

**pH:** Not applicable

**Boiling point/range:** 2850-3250 °C

**Melting point/range:** 1300-1500 °C

**Flammability (solid, gas):** Autoignition point 930-1600 °C

**Explosion hazard:** The product is not explosive.

**Vapor pressure:** Not applicable

**Density:** > 7 gr/cm<sup>3</sup>

**Solubility in water:** Insoluble

## 10. STABILITY AND REACTIVITY

### 10.1. Stability

Stable under normal use. Prolonged exposure to high temperatures may lead to loss of hardness and/or formation of iron oxide on the surface. Oxidation and caking in the presence of moisture.

### 10.2. Reactivity

The mixture of iron powder and aluminum powder can give rise to aluminothermic reactions.

## 11. TOXICOLOGICAL INFORMATION

**Toxicidad aguda:** ninguna Acute toxicity: none

**Hazardous health effects due to inhalation:** Dust generated during use may cause irritation of the upper respiratory tract.

**Dangerous health effects due to eye contact:** Projections may be generated during use.

## 12. ECOLOGICAL INFORMATION

Tests have been carried out to determine the contamination of the atmosphere by shot. The results indicate that there are no specific toxins or contaminants.

## 13. CONSIDERATIONS REGARDING DISPOSAL

**Shot:** Can be disposed of as non-hazardous solid waste.

**Shot blasting waste:** Dust and spent shot may contain contaminants resulting from the industrial shot blasting process. Each user must study the problem of waste management through a specialized company and in accordance with current legislation.

**Packaging:** GRANALLADORA AMERICANA packaging is fully recyclable.

## 14. TRANSPORTATION INFORMATION

**Product classification for transport:** Product considered NON-DANGEROUS for transport.

**Special precautions:** This product is not considered dangerous for transportation.

**International regulations (relating to dangerous goods):** None.

**Transport outside storage areas:** Protect from moisture.

**Packaging:** Standard 1000kg pallet – 800kg drums – 1000kg Big Bags.

## 15. REGULATORY INFORMATION

Shot manufactured by GRANALLADORA AMERICANA SCA is subject to national and international legislation. Resolution 801/2015 SRT – GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICAL PRODUCTS

Law 19587 – OCCUPATIONAL SAFETY AND HYGIENE LAW AND ITS REGULATORY DECREE 351/79

Manufacturing standards:

SAE J444 – Shot Blasting Size and Cleaning Specifications

SAE J445 – Shot peening mechanical testing

SAE J827 – Cast steel shot

SAE J1993 – Cast steel grit

## 16. OTHER INFORMATION

The information contained in this document is based on the current state of our knowledge, in accordance with current legal requirements on information, packaging and labelling of hazardous chemical substances. The criteria for observing the indications contained in this safety data sheet are the responsibility of the user of the product and compliance with them does not exempt them from respecting all the legislative, regulatory and administrative texts relating to the product, safety and hygiene and the environment.