

Product: **CastBall**

FS 4300-238

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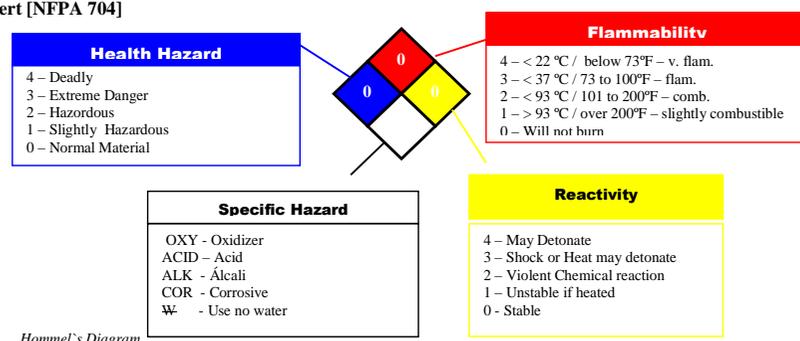
1. Products and Company Identification

Product Name	Synonym		Common Name
CastBall	Bauxite (Al ₂ O ₃ .xH ₂ O), Sintered	Bauxite (Al ₂ O ₃ .xH ₂ O), Calcined	Bauxite (Al ₂ O ₃ .xH ₂ O), Calcined

- **Company:** Mineração Curimbaba Ltda.
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2. Hazards Informations

- **Most important hazards:** This product is not harmful to health
- **Effects of Product**
 - **Adverse effects to human health**
 - **Inhalation:** May cause irritation of the respiratory tract, due to fine particles
 - **Ingestion:** No adverse effects expected by this route
 - **Skin Contact:** Prolonged contact of the skin causing friction can cause irritation
 - **Eye Contact:** May cause irritation, due to fine particles
 - **Environmental Effects:** No environmental effect was identified related to this product
 - **Physical Chemical Hazards:** Not identified physical or chemical hazard related to this product
 - **Specific Hazards:** Not identified any specific danger related to this product
 - **Main symptoms:** Cough, dyspnoea / shortness of breath, redness / erythema skin and eyes
 - **Hazard Classification of Product:** This product is not dangerous
 - **Classification system used:** Not applicable
 - **Signalizing Risk:** NFPA – USA
 - **HMS Hazard Rating for products:**
 - **Health:** 0 [minimal] - **Flammability:** 0 [minimal] - **Reactivity:** 0 [minimal]
- **Symbol of Alert [NFPA 704]**



- **General Vision of Emergency:** Product non-toxic

3. Composition / Information on Ingredients

- **Product Name:** CastBall [All Sizes]
- **Common Name:** Bauxite (Al₂O₃.xH₂O), Calcined
- **Synonym:** Bauxite (Al₂O₃.xH₂O), Sintered | Bauxite (Al₂O₃.xH₂O), Calcined

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Substance	CAS N°	EINECS N°	Concentration (%)
Bauxite (Al ₂ O ₃ .xH ₂ O),calcined	92797-42-7	296-578-9	100

4. First-Aid Measures

- **Inhalation:** If it occurs, remove to ventilated area if there are many difficulties in breathing, is needed artificial respiration, preferably mouth to mouth if breathing difficulties persist, it will need to administer oxygen, call a doctor
- **Skin Contact:** Wash with plenty of water, if irritation persists, call your doctor
- **Eye Contact:** Flush eyes with plenty of water if irritation progress, call the doctor
- **Ingestion:** If it occurs, seek medical information
- **Actions to avoid:** Not Applicable
- **Protection for the provider of aid:** If there is dust generation, use dust mask and safety glasses
- **Notes to Physician:** Product not toxic, if necessary, oxygenation

5. Fire-Fighting Measures

- **Appropriate Extinction means:** Non-flammable
- **Non Appropriate Extinction means:** Product not flammable
- **Specific Hazards related measures:** Non-flammable
- **Special Methods of Fire Fighting:** Product not flammable, Use extinguishing method suitable for surrounding fire
- **Protection of persons involved in fire fighting:** Protection in accordance with regulations of the entity involved in the fight
- **Specific Hazards of combustion product:** Non-Flammable, do not expect occur

6. Accidental Release Measures**Personal Precautions**

- **Dust Control:** Avoid generation or inhalation of dust, use ventilation when necessary to control dust
- **Prevention of inhalation and contact with the skin, mucosa and eyes:** Use personal protective equipment in accordance with section 8
- **Caution to the Environment:** The product has no toxic substances are inert in the environment
- **Emergency and Alarm Systems:** Not Applicable
- **Methods for cleaning:** If you spill, remove hand using a shovel
- **Prevention of secondary hazards:** In case of damage in the packing and/or spill, the product can leave the floor slippery
- **Differences in the action of large and small spills:** Use machines shovel loaders for the removal of material

7. Handling and Storage**Handling**

- **Technical Recommendations:** Care with straps anchor the pallets, to avoid injuries due to projections of the same
- **Prevention of Occupational Exposure:** Handle ventilated area or with a ventilation / exhaustion, avoid dust formation
- **Prevention of Fire and Explosion:** Product not flammable
- **Precautions and Guidelines for Safe Handling:** Wear respiratory protection and eye per section 8
- **Hygiene measures:** Do not eat, drink or smoke while handling product. Wash hands before eating

Storage

- **Appropriate Technical measures conditions for storage:** Keep the product stored in their original packaging with identification in a clean and dry Respect stacking up to three pallets or big bags
- **Conditions for safe storage:** Packaging damaged and wet locations
- **Packaging**

- **Recommended use:** Big Bag of polypropylene or paper bags

- Inadequate: Not Applicable**8. Exposure Control / Personal Protection**

- **Parameters Specifics Control**
- **Occupational Exposure Limits:**

Ingredients	MAK (DE) mg/m ³	Other mg/m ³
Bauxite (Al ₂ O ₃ .xH ₂ O),calcined	6	5

- **Biological Indicators:** Not Applicable

- Other Limits and Values: Not Applicable

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- **Engineering Control Measures:** Not Applicable
- **Personal Protective Equipment**
 - **Eye / Face Protection:** Safety Glasses with side shields
 - **Skin Protection and the Body:** Clothing normal working
 - **Respiratory Protection:** Mask safe against dust and spray 8822 with exhalation valve
- **Special Precautions:** Avoid wearing contact lenses when handling the product

9. Physical and Chemical Properties

- **Appearance:** Solid
- **Form:** Spherical grains
- **Color:** Black
- **Odor:** Odorless
- **PH:** Neutral
- **Melting Point:** 1868°C
- **Freezing Point:** Not Applicable
- **Boiling point range and initial boiling point:** Not Applicable
- **Flash Point:** Not Applicable
- **Evaporation Rate:** Not Applicable
- **Flammability:** Product Non-flammable
- **Lower limit / upper flammability or explosion:** Not Applicable
- **Vapor Pressure:** Not Applicable
- **Vapor density:** Not Applicable
- **Apparent Density:** 3,60 g/cm³
- **Bulk Density:** 2,08 g/cm³
- **Solubility:**
 - **Water Solubility:** Insoluble at 20°C;
 - **Sea/Water Solubility:** Insoluble at 20°C;
 - **Alkaline Solubility:** 1g of sample en 10 mL of NaOH 50% / 24 h / Temperature environment = > 0.15%;
 - **Acid Solubility:** 5g of sample in 100mL of 12HCl + 3%HF / 30minutes, Temperature 66°C [150.8°F] = > 6.50%.
- **Partition coefficient - n-octane/water:** Not Applicable
- **Temperature Self-Ignition:** Not Applicable
- **Decomposition Temperature:** Not Applicable
- **Viscosity:** Not Applicable

10. Stability and Reactivity

- **Chemical Stability:** Stable under storage and handling as described in Section 7
- **Reactivity:** not expected to occur
- **Possibility of Hazardous Reactions:** Not Applicable - Conditions to Avoid: Not Applicable
- **Incompatible materials or Substances:** Not expected to occur
- **Hazardous Decomposition Products:** Not Applicable

11. Toxicological Information

- **Information in accordance with the different routes of exposure**
- **Acute Toxicity:** Not Applicable
- **Chronic Toxicity:** Not Applicable
- **Main Symptoms:** Not Applicable
- **Specific Effects:** Not Applicable
- **Substances that can cause effects**
 - **Interaction:** Not Applicable
 - **Additives:** Not Applicable
 - **Empowerment:** Not Applicable
 - **Synergy:** Not Applicable

12. Ecological information

- **Environmental effects, behaviors, and impacts of the product**
- It isn't expected that this product causes environmental problems during handling, application and disposal
- **Ecotoxicity:** It isn't expected that this product presents a danger
- **Persistence and degradability:** Not Applicable
- **Bioaccumulative potential:** Not Applicable
- **Mobility in soil:** Not Applicable
- **Other adverse effects:** Not Applicable

13 Disposal Considerations

- **Recommended methods for treatment and disposal apply to:**
- **Product:** It can be arranged usually in big bags, paper bags and plastic, lacking these, use another container provided that support the weight
- **Remainder of products:** material is inert
- **Used packaging:** If in good condition, can be reused and / or recycled
- For disposal, it must have accordance with the laws federal, state and municipal in validity

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14. Transport Information

- **National and International regulations**
- **Land:** Product is not dangerous for transport by land, under the conditions required by law
- **Sea:** Product is not dangerous to shipping, under the conditions required by law
- **Air:** Product is not dangerous for air transport under the conditions required by law
- **U. S. Department of Transportation [DOT]:** Not Classified

15. Regulatory Information

- **Sara Hazard Category**
- **Immediate (Acute) Health Hazard:** No
- **Delayed (Chronic) Health Hazard:** No
- **Fire Hazard:** No
- **Reactivity Hazard:** No
- **Sudden Release of Pressure:** No
- **Sara Section 313 Notifications**
- This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372
- **TSCA Status:** All components of this product are listed, automatically included, or are exempt from listing on the TSCA inventory

16. Other Information

The information, which is contained in this document, is based upon available data and is believed to be correct. However, as such as it has been obtained from various sources, including the manufacturer and independent laboratories, it is given without warranty or representation that is complete, accurate and that it can be relied on. Mineração Curimbaba Ltda. has not attempted to conceal in any way the deleterious aspects of the product listed herein, but makes no warranty as to such. Further, as Mineração Curimbaba Ltda. cannot anticipate nor control the many situations in which our customer may use the listed product or this information, there is no guarantee that the health and safety precautions suggested would be proper under all conditions. It is sole responsibility of each user of the listed product to determine and comply with the requirements of all applicable laws and regulations regarding its use or disposal. This information is given solely for the purposes of health and safety to persons and property. Any other use of this information is expressly prohibited. Health, safety and environment department, Mineração Curimbaba Ltda.

- Important information but not specifically described in the previous sections:

- Requires no special procedures for sampling
- Not recommended for use in foods, pharmaceuticals and cosmetics production
- The information and recommendations found here are applied only to this product, not combined with any other material.
- Failure to release the above information Curimbaba Mining responsibility for the misuse of the product
- All figures expressed in this document are typical values and can occur variations
- The data given are based on the current state of our knowledge
- It is buyer's responsibility before using any product, verify the data on operating conditions and determine if the product is appropriate for your purposes.

- Bibliography:

- ABNT NBR 14725-4:2009
- <http://www.nfpa.org/index.asp>
- IUCLID Data Set of Bauxite (Al₂O₃.xH₂O), calcined
- ESIS Data Sheet: Result for EC#: 296-578-9

- Table of Abbreviations:

- **CAS:** Chemical Abstract Service
- **DOT:** Department of Transportation
- **EINECS:** European Inventory of Existing Commercial chemical Substances
- **cm³:** Centimeter cubic
- **g:** Gram
- **mg:** milligram
- **°C:** Centigrade
- **°F:** Fahrenheit
- **HMIS:** Hazardous Materials Identification System
- **MAK (DE):** Der MAK-Wert
- **NFPA:** National Fire Protection Association – USA
- **SDS:** Material Data Sheet
- **SARA:** Superfund Amendment and Reauthorization Act