



MATERIAL SAFETY DATA SHEET FERROCERIUM MISCHMETAL ALLOY FLINT

1. Identification of Material and the Manufacturer:

Product Name: FerroCerium Flint rod blank
 Synonyms : FerroCerium Mischmetal Alloy Flint Cylinder, Cerium Mischmetal striking flint, Cerium Misch metal sticks, Cerium mischmetal stick, essential outdoor survival gear, Ferrocium, Ferro-Cerium, Ferrocium based fire-starter, Ferrocium firestarter, Ferro mischmetal, Ferrocium rod, ferrocium rods, Ferrocium sticks, Ferro Cerium rod, ferrocium rods, ferro rod, iron rod, ferro rods, iron rods, Fire-Flint and Steel, Fire Steel, Firesteel, Fire and steel fire starter, Fire & Steel, Firesteels, Fire steels, Fire steel striker, Flint firestarter, Flint fire starter, Firestarter sticks, flint fire-starting, firestrickers, fire strikers, fire striker, fire starter rods, firesteel rod, firesteel rods, firesteel sticks, firesteel stick, Flint, lighter flint, flints, Flint rod, lighter flints, flint rods, flint sticks, flint bar, Ferrocium Flint fire starter, Ferrocium camping & emergency flint fire starters, flint firestarter, flint firestarters, firestarting sparking flint, flint device, flint devices, lighter flint misch metal (mesch metal), flint and steel bushcraft fire lighters, flint striker, Flint & steel, Flint and steel, flint n' steel, Flints & Steels, Flints and Steels, Magnesium-Ferrocium Firestarter, Magnesium Ferrocium Fire Starter, Magnesium Ferro Cerium Fire Starter, Magnesium campfire fire starter, Metal-Match, Metal-Matches, Metal match, Misch metal rods, Ultimate Survival Blast Match, Blast Match Fire Starter, Blast Match Flint Fire Starter, mischmetal rod, mischmetal rods, misch metal rod, mischmetal flints, mischmetal flint, mischmetall stick, mischmetall sticks, misch metal stick, misch metal sticks, Sparking rod, Sparking flint rods, Sparking pad, Sparking pad, Flint pad, Flint pads, Survival flints, survival fire starters, Swedish Army Firesteel Camping Camp Fire Starter, pyrophoric alloys, "ferrocium UN1323", iron cerium rod, fc rod, fc rods, high technologies survival tools, ultimate survival tool kits, ferrocium strikeforce, Sparking Flint, Sparking Flints, Cerium sparking flint, Cerium sparking flints, sparking alloy, sparking entertainment, flint slab, flint disc, Mischmetal Fire Starter rod, Mischmetal Fire Starter rods, Cerium Mischmetal Fire Starters, Mischmetal firestarter, Cerium Mischmetal firestarters, Flint and steel kits for primitive fire making, flint striker, flint strikers, handless striker, handless strikers, ferrocium blank, ferrocium blanks, ferrocium rod blank, ferrocium rod blanks, flint blank, flint blanks, flint rod blank, flint rod blanks, blank flint, blank flints, ferro rod blank, ferro rod blanks, firesteel blank, firesteel blanks, fire steel blank, fire steel blanks, flintsteel blank, flintsteel blanks, flint steel blank, flint steel blanks, Outdoor survival kits in straight rods, Survival kits in rod, pyrophorous alloy, Auer metal, spark metal, ferrocero, cerium iron rods, cerium iron rod, etc.,

Identification of the manufacturer, supplier:

Company Identification : SHANGHAI JIANGXI METALS CO., LTD.
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2. Composition and Information on Ingredients

Composition	Value	CAS #	EINECS#
Total Rare Earth Metal (TREM)	77% Approx.		
Iron (Fe)	18% - 21%	7439-89-6	2310964
Magnesium(Mg)	1.1-4.0%	7439-95-4	2311046
Total Rare Earth Metal Distribution			
Cerium/TREM	48-54%	7440-45-1	2311549
Lanthanum/TREM	43-48%	7439-91-0	2310990
Praseodymium/TREM	0-7%	7440-00-8	2311093
Neodymium/TREM	0-3%	7440-10-0	2311203

3. Hazards Identification



Risks of burning off for fine material or explosions after raising the dust or shavings.

Flash Point and Method Use None

Auto-Ignition Temperature: approx. 900 °F (abt. 482 °C)

Flammability limits in Air: N/A

Extinguisher Media:

Ferrocium flints rod or pellets do not burn

Information pertaining to particular dangers for man and environment:

Unusual Fire and Explosion Hazard: Ferrocium is flammable in powder form as are most metals, i.e. Aluminum and Magnesium. Ferrocium in rod or pellet form is not flammable and although, in fact, the auto-ignition point is specified by the manufacturer of the Ferrocium to be 900 °F (abt. 482 °C), these rods have been subjected to approx. 1700 °F (abt. 926 °C) over a prolonged period of time without flammability or deterioration.

Water reactivity of Ferrocium: Ferrocium pellets will degenerate into powder over an extended period of time, usually measured in years. The presence of moisture accelerates this deterioration. The pellets are coated with a moisture resistant lacquer to extend shelf life. It is recommended that Ferrocium pellets be disposed of if they show signs of deterioration as the resulting powder is flammable.

4. First Aid Measures

Special Instructions : Solid material has no health hazards.

Eye May cause irritation due to abrasive action of the material. Flush eyes with warm water for several minutes, occasionally lifting the upper and lower eyelids, If irritation persists, seek medical attention.



Skin May cause irritation due to abrasive action of the material. Instantly wash with water and soap and rinse thoroughly. Remove contaminated clothing and launder.

Inhalation Inhalation of powder or dust may cause irritation of respiration tract. If symptoms of pulmonary, remove involved persons from exposure area immediately to fresh air and seek medical attention.


Ingestion First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.




5. Fire Fighting Measures

Suitable extinguishing agents: Dry sand or salt (NaCl), Class D dry-powder extinguisher.  DO NOT use water.
Unsuitable extinguishing agents: Water, CO₂-extinguisher and halogenated agents.
Personal Protective Equipme Wear NIOSH/MSHA approved self-contained breathing apparatus and full protetive clothing.
Special Procedu: N/A
Attention  All exposed surfaces must be covered with sand or metal extinguisher powder !
Material should not be mixed until the material has been allowed to cool !

6. Accidental Release Measures

Person-related safety preca: Wear protective equipment. Keep unprotected persons away.
Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collec: Collect mechanically, small one pick up with shovels, filling in signed doseable containers.
Avoid any contact of material with water and acids.
Attention  Avoid development of dust and remove all sources of ignition and unburned shavings !
Rubbing product with metallic objects may cause sparking of fire !!!

7. Handling and Storage

Handling: Use appropriate coatings to protect against the oxidized parts after a certain period. Wash thoroughly after handling.
Storage: Material should be stored in a cool, clean and dry place with tightly closed containers.
Finely divided particles may be burnable or explosive.
Do not store together with acids.
Store away from oxidizing agents.
Store away from halogens.
Do not store together with alkalis (caustic solutions).
Store away from ignition sources,
Keep container tightly sealed.
 **Fine powder is highly flammable, when working with powdered material or shavings, use local explosion proof exhaust systems to keep away dust or shavings.**

8. Exposure Controls and Personal Protection

Technical measures for exposure controls : N/A
Limit Values for workplace a N/A
Personal protective equipment
Eye Protection Protective glasses recommended.
Hand Protection Protective gloves recommended, Wash thoroughly after handling.
Respiratory Prote Normally not necessary, avoid inhalation of dust.
Body protection : Protective work clothing.
General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.

9. Physical/Chemical Characteristics

Physical Form Solid cylindrical rod, round bar, cylindrical pellets
Colour Metallic dark-grey or in different colours.
Odour Odourless
PH value N/A
Relative Density 6.35 g/cm³
Information on changes in the physical state :
Melting point approx. 2000 °F (abt. 2000 °C)
Boiling point approx. 6800 °F (abt. 3760 °C)
Flash point N/A
Autoflammability

Solid bar	approx. 900 °F (abt. 482 °C)
Fine powde	approx. 392 °F (abt. 200 °C)

Explosive limits N/A
Oxidizing propret N/A
Vapour Pressure N/A
Solubility

Water solubility	insoluble
Fat solubility	insoluble

10. Stability and Reactivity

Chemical stability : Stable under normal conditions of storage and handling, but will oxidize in air.
Conditions to avc avoid all possible sources of ignition. air and moisture sensitive.
Dangerous reacti Contact with acids releases flammable gases
Hazardous decomposition pi contact with strong acids may cause evolution of hydrogen.
Incompatible materials: minimize contact with air and moisture; may pontaneously react with air. avoid contact with strong acids, water, air, and oxidizing agents.



11. Toxicological Information

Toxicological data of material in rod or pellets : N/A
Primary irritant effect on the eye and skin may be caused from ferrocium powder.
Sensitization N/A
Additional toxicological infor To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12. Ecological Information

Do not allow material to be released to the environment without proper governmental permits.
Generally not hazardous for water.

13. Disposal Considerations

Product:
Recommendation : If possible reuse the unused material, otherwise consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations.
Waste disposal n for recycling contact manufacturer or supplier.
Uncleaned packa Disposal must be made according to official regulations.

14. Transport Information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)
ADR/RID-GGVS/E Class: None
Maritime transport IMDG/GGVSea:
IMDG/GGVSea Class: None
Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: None
Transport/Additional inform: No dangerous goods !

15. Regulatory Information

Designation according to EC guidelines: Observe the normal safety regulations when handling chemicals
National regulations: Observe national regulations on other countries.
Information on the warning None
Information about limitation For use only by technically qualified individuals.
Water hazard class: Generally not hazardous for water.

16. Additional Information

The information above is believed to be accurate and represents the best information currently available to SHANGHAI JIANGXI METALS CO., LTD. However, We, SHANGHAI JIANGXI METALS CO., LTD. make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.