



## MATERIAL SAFETY DATA SHEET

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### SECTION I PRODUCT IDENTIFICATION

Product Name

AMACAST - CAST STAINLESS STEEL SHOT

Chemical Family

FERROUS

### SECTION II HAZARDOUS INGREDIENTS

Chemical Name

CAS Registry No

% Weight

ACGIH - TLV (mg/m<sup>3</sup>)

OSHA - PEL (mg/m<sup>3</sup>)

**Iron - Fe**

Oxide fume as Fe

7439-89-6

balance

5

10

**Carbon - C**

7440-44-0

<0.25

none estab.

none estab.

**Manganese - Mn**

Elemental, Inorganic Compounds as Mn  
Fume as Mn

7439-96-5

<2.0

0.2

none estab.

5 (ceiling)

5 (ceiling)

**Silicon - Si**

as total dust  
Respirable fraction

7440-21-3

<3.0

10

none estab.

15

5

**Chromium - Cr**

Elemental, Inorganic Compounds as Cr metal  
Cr II compounds - as Cr  
Cr III compounds - as Cr  
Cr IV compounds - water soluble  
Cr IV compounds - insoluble  
Chromic Acid and Chromates as CrO<sub>3</sub>

7440-47-3

<20.0

0.5

none estab.

1

0.5

0.5

0.05

0.01

none estab.

0.5

0.5

none estab.

none estab.

0.1 (ceiling)

**Nickel - Ni**

Elemental metal, insoluble as Ni  
soluble compounds as Ni

7440-02-0

<10.0

0.05

0.05

1

1

### SECTION III PHYSICAL DATA

Cast stainless steel shot is non-hazardous as received. Fine metallic dust is generated as the abrasive breaks down from impact and wear during normal use. Since the ferrous content is >72%, dust or fumes will consist mainly of iron or iron oxide. In addition, the fine stainless steel dust created can be a mild explosion hazard (see section IV).

Boiling Point - 2850-3150 Degrees C

Specific Gravity (at 60 Degrees F) >7.6

% Volatile by Volume - Not Applicable

Evaporation Rate - Not Applicable

Solubility in Water - Not Applicable

Appearance and Odor - Spherical & angular with no odor

Melting Point - 1371-1483 Degrees C

Vapor Pressure - Not Applicable

pH - Not Applicable

Vapor Density - Not Applicable

Percent Solid by Weight - 100%

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

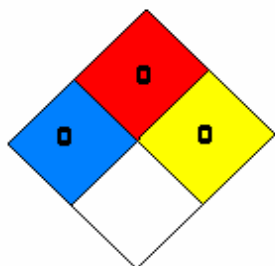
Flash Point - Not Applicable

Auto Ignition Temperature (solid iron exposed to Oxygen) -930 degree C

Flammability Limits - Not Applicable

Cast stainless steel shot will not burn or explode

A mild fire or explosion hazard situation may be created due to the **fine dust that may result from use**. Fire Extinguishing method for dust created due to use - use Class D extinguishing agents or dry sand to exclude air. Do not use water or other liquids, or foam.



NFPA Hazard Rating

4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Insignificant

Health (blue)

0

Flammability (red)

0

Reactivity (yellow)

0

Special (colorless)

## SECTION V HEALTH HAZARD DATA

Threshold Limit Values - Permissible Exposure Limits - see Section II

Carcinogenicity - OSHA, not listed. IARC, chromium [VI] - carcinogenic to humans (Group 1), metallic chromium and chromium [III] compounds - not classifiable as to their carcinogenicity to humans (Group 3); nickel compounds are carcinogenic to humans, metallic nickel is possibly carcinogenic to humans (Group 2B).

Fumes can be generated by welding or flame cutting a surface containing new or used abrasive or the dust created by use of the abrasive. Welding or flame cutting may convert a small portion of the chromium to hexavalent chromium [VI]. IARC reports that welding fumes are possibly carcinogenic to humans.

Over exposure to dust and fumes may cause mouth, eye, and nose irritation. Prolonged overexposure to manganese dust or fume affects the central nervous system. Chronic overexposure can cause manganese poisoning, and attendant apathy, loss of appetite, uncontrolled laughter, insomnia followed by sleepiness, headache, difficulty in walking, frequent falling, tremors, salivation sweating and mental detachment. Prolonged overexposure to iron oxide fume can cause siderosis, or "iron pigmentation" of the lung. It can be seen on a chest x-ray but causes little or no disability.

Target Organs - Lung for chromium and lung and nasal for Nickel.

Primary Routes of entry - inhalation of dust formed particle breakdown or dust particles in eyes.

Emergency and First Aid Procedure - If inhaled, move out of area into fresh air. Flush eyes with running water, have any remaining particles removed from eyes by qualified medical person.

Primary Routes of entry - inhalation of dust formed during use, or shot, grit or dust particles in eyes.

Emergency and First Aid Procedure - If inhaled, move out of area into fresh air. Flush eyes with running water, have any remaining particles removed from eyes by qualified medical person.

## SECTION VI REACTIVITY DATA

Stability - Stable

Hazardous decomposition products - None

Hazardous Polymerization - will not occur

Shot will break down into progressively smaller particles and dust during normal use.

## SECTION VII SPILL OR LEAK PROCEDURES

Shot spilled or leaked onto floors can create hazardous walking conditions. No special precautions need to be followed when cleaning up spills or leaks of shot or grit. When cleaning up large quantities of dust, a NIOSH approved respirator should be used. Spilled shot and grit can be reclaimed for reuse, or disposed of as a non-hazardous solid waste. Collected dust from blast cleaning or shot peening operations always contains contaminants from the surfaces of the parts being processed, and therefore the dust may be classed as a hazardous waste and, as such, must be disposed of according to appropriate local, State or Federal regulations.

## SECTION VIII SPECIAL PROTECTION INFORMATION

Ventilation - General ventilation and local exhaust should be provided to keep the dust levels below the TLV's shown in Section II.

Respiratory protection - If the dust created by use exceeds the ACGIH TLV's and OSHA PEL's indicated in Section II, a NIOSH approved respirator should be worn.

Eye protection - Approved safety glasses with eye shields should be worn.  
Other protective equipment - none required.

## SECTION IX SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing - Keep dry to reduce rusting. Observe maximum floor loading limitations.  
Other precautions - The company has no control over this product or its use after it leaves our facility. The company assumes no liability for loss or damage incurred from the proper or improper use of this product.

## SECTION X TRANSPORTATION

DOT Classification - Not a regulated material

Proper Shipping Name - N/A

DOT ID # - Not regulated

## SECTION XI REGULATORY

a) CERCLA Hazardous Substance  yes  no

Metals in solid form larger than 0.004 inches are not reportable.

b) SARA, Title III, Extremely Hazardous Substance  yes  no

c) Toxic Chemical Release Report  yes  no

Nickel & Manganese are subject to reporting under the requirements of Section 313 of the Emergency Planning and Community Right-to-know Act of 1986 and 40CFR Part 372.

The information presented here has been compiled from sources considered to be reliable and accurate to the best of our knowledge and belief, but is not guaranteed to be so.