

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/11/2010

Reviewed on 06/11/2010

1 Identification of substance

- **Product details**
- **Trade name:** Plain Iron and Steel Articles
- **Article number:** 1744-2
- **Application of the substance / the preparation**
- **Manufacturer/Supplier:**
Dayton Superior
4226 Kansas Avenue
Kansas City, KS 66106

Tel.: (866) 329-8724

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call (703) 527-3887. Collect calls are accepted.

- **Information department:** Environmental, Health, and Safety department.

2 Composition/Data on components

- **Chemical characterization:**
 - **CAS No. Description**
7439-89-6 iron
 - **Identification number(s)** Not applicable
 - **EINECS Number:** 231-096-4
 - **Additional information:**
Percentages are representative of product and may vary depending on batch composition. Due to the variance in batch composition, trace quantities of antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and thallium may be present in amounts <1%.
- * A thin coating of oil, lime (<0.5% of total weight of product), or zinc (<2.4% total weight of product) may be added to the surface as a corrosion inhibitor or preservative.

3 Hazards identification

- **Hazard description:** Not applicable.
- **Information pertaining to particular dangers for man and environment:** Not applicable.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
PHYSICAL HAZARD	0	Reactivity = 0

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4 First aid measures

- **General information:**

No special measures required.

No toxic effects are expected from its inert form. Prolonged, repeated exposure to fumes or dusts generated during heating, cutting, welding, or brazing may cause the following health effects:

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

If skin irritation continues, consult a doctor.

Soluble oil may cause dermatitis.

- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** May cause irritation to mouth and throat if ingested.

- **Information for doctor:**

- **Danger**

Iron (FE): Siderosis, no fibrosis

Manganese (Mn): Pneumonitis. CNS involvement, including irritability, difficulty in walking, speech disorders, compulsive behavior, masklike face, and Parkinson like syndrome.

Zinc (Zn): Zinc oxide fumes can cause metal fume fever with symptoms similar to flu: chills, fever, headache, cough, nausea, diarrhea, vomiting, ect.

Lime (CaO): May cause irritation.

5 Fire fighting measures

- **Suitable extinguishing agents:** Dry Compound or Dry Powder

- **Protective equipment:** NIOSH approved positive pressure, self contained breathing apparatus.

- **Additional information** Spraying water on molten metal may cause an explosion. Use a dry type extinguisher.

6 Accidental release measures

- **Person-related safety precautions:** Not required.

- **Measures for environmental protection:**

No special measures required.

Do not allow to enter sewers/ surface or ground water.

- **Measures for cleaning/collecting:** Ensure adequate ventilation.

- **Additional information:**

No dangerous substances are released.

Avoid breathing fumes when welding, cutting, or brazing.

7 Handling and storage

- **Handling:**

- **Information for safe handling:**

Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.

- **Information about protection against explosions and fires:** No special measures required.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Information about storage in one common storage facility:** Not required.

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· Further information about storage conditions: None.

8 Exposure controls and personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

· Personal protective equipment:

· General protective and hygienic measures: Do not inhale dust / smoke / mist.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

NIOSH approved dust and fume cartridge respirator or supplied air is airborne dust or fume levels are or may be above the PEL.

Consult respirator manufacturer for assistance in choosing appropriate respirator. If respirators are used, employees must have a respirator program which complies with OSHA 1910.134.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Eye protection: Wear appropriate eye protection to prevent eye contact.

9 Physical and chemical properties

· General Information

Form:	Solid
Color:	Metallic lustre
Odor:	Odorless solid

· Change in condition

Melting point/Melting range: 1535°C (2795°F)

Boiling point/Boiling range: > 999°C (> 1830°F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

· Danger of explosion: Product does not present an explosion hazard.

· Density at 20°C (68°F): 7.86 g/cm³

· Bulk density at 20°C (68°F): 2900 kg/m³

· Solubility in / Miscibility with

Water: Negligible

Organic solvents: 0.0 %

· Solids content: 100.0 %

· Volatile Organic Compounds: Not determined

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10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** Strong acids or bases.
- **Dangerous products of decomposition:**
Metal fumes and certain noxious gases such as CO may be produced during welding or burning operations.

11 Toxicological information

- **Acute toxicity:**
 - **LD/LC50 values that are relevant for classification:**
- | | | |
|----------------|------|----------------|
| 7439-89-6 iron | | |
| Oral | LD50 | 30 mg/kg (rat) |
- **Primary irritant effect:**
 - **on the skin:** May cause irritation. Soluble oil may cause dermatitis.
 - **on the eye:** May cause irritation.
 - **Sensitization:** Soluble oil may cause dermatitis.
 - **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification.

12 Ecological information

- **General notes:**
Generally not hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Danger to drinking water if even extremely small quantities leak into the ground.
Will rust over long period of time in water.

13 Disposal considerations

- **Product:**
- **Recommendation:**
Smaller quantities can be disposed of with household waste.
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Limited Quantity Exemption:** No Limited Quantity exemption applies for this shipping class.
- **U.S. Domestic Ground Shipments:** Same as listed for Standard Shipments above.
- **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:** Same as listed for Standard Shipments above.

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· **Emergency Response Guide (ERG) Number:** Not determine

· **Land transport ADR/RID (cross-border):**

· **ADR/RID class:** -

· **Maritime transport IMDG:**

· **IMDG Class:** -

· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** -

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

7439-96-5	manganese	≤1%
7440-66-6	zinc powder -zinc dust (pyrophoric)	≤0.01%

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

7439-96-5	manganese	D
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· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **MAK (German Maximum Workplace Concentration)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

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· OSHA-Ca (Occupational Safety & Health Administration)*Substance is not listed.***· Product related hazard informations:***Observe the general safety regulations when handling chemicals.**The substance is not subject to classification according to the sources of literature known to us.***· Safety phrases:** 23 Do not breathe smoke.**· National regulations:****· Water hazard class:** Generally not hazardous for water.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing MSDS: Environmental, Health & Safety Department**· Contact:** Environmental, Health & Safety Manager

USA