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**** MATERIAL SAFETY DATA SHEET ****

Iron
11490

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Iron
Catalog Number: 1053-1, S719531, S719532, I60 3, I60 500, I60-3, I60-500, I603,
I60500, I62 500, I62-500, I62500, S71953-2
Synonyms:
Iron Dust; Iron Metal; Iron Powder;
Company Identification: Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
7439-89-6	IRON	>97	231-096-4
Hazard Symbols: None Listed.			
Risk Phrases: None Listed.			

**** SECTION 3 - HAZARDS IDENTIFICATION ****

Appearance: black to gray solid. EMERGENCY OVERVIEW

Warning! Flammable solid. May cause liver damage. May cause cardiac
disturbances. May cause lung damage. May cause mechanical eye and
skin irritation. Inhalation of fumes may cause metal-fume fever. May
cause blood abnormalities.
Target Organs: Liver, respiratory system, cardiovascular system,
pancreas.

Potential Health Effects

Eye: Exposure to particulates or solution may cause conjunctivitis,
ulceration, and corneal abnormalities.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and
diarrhea.
Acute toxicity may include weakness, shock, cyanosis and acidosis.
Delayed symptoms may include liver

Inhalation: Inhalation of fumes may cause metal fume fever, which is
characterized by flu-like symptoms with metallic taste, fever,
chills, cough, weakness, chest pain, muscle pain and increased white
blood cell count. May cause lung damage.

Chronic: Chronic exposure may lead to liver and lung damage. Repeated
exposure may cause pancreatic damage, diabetes, and cardiac
abnormalities.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes,
occasionally lifting the upper and lower eyelids. Get medical aid
immediately.

Skin: Immediately flush skin with plenty of water for at least 15 minutes
while removing contaminated clothing and shoes. Get medical aid if
irritation develops or persists.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water.
Get medical aid immediately.

Inhalation: Remove victim from exposure and move to fresh air immediately. If not
breathing, give artificial respiration. If breathing is difficult,
give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and

Antidote: The use of Deferoxamine as a chelating agent should be determined
only by qualified medical personnel.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

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As in any fire, wear a self-contained breathing apparatus in
pressure-demand, MSHA/NIOSH (approved or equivalent), and full
protective gear. Dusts at sufficient concentrations can form
explosive mixtures with air. Combustion generates toxic fumes.
Extinguish with dry chemical powder, soda ash, powdered sodium chloride, or an
use only graphite powder-extinguishing dry powder.
Appropriate metal fire-extinguishing dry powder.
Autoignition Temperature: Not applicable.
Flash Point: Not applicable.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
NFPA Rating:

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated
in Section 8.

Spills/Leaks:

Sweep up or absorb material, then place into a suitable clean, dry,
closed container for disposal. Avoid generating dusty conditions.
Remove all sources of ignition.

**** SECTION 7 - HANDLING AND STORAGE ****

Handling: Thoroughly after handling. Remove contaminated clothing and
wash before reuse. Use with adequate ventilation. Minimize dust
generation and accumulation. Avoid contact with eyes, skin, and
clothing. Keep container tightly closed. Avoid ingestion and
inhalation.

Storage: Keep from contact with oxidizing materials. Store in a cool, dry,
well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
Use process enclosure, local exhaust ventilation, or other
engineering controls to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
IRON	none listed	none listed	none listed

OSHA Vacated PELs:

IRON: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical
safety goggles as described by OSHA's eye and face
protection regulations in 29 CFR 1910.133 or European
Standard EN166.

Skin:

Wear impervious gloves.

Clothing: Wear appropriate protective clothing to prevent skin
exposure.

Respirators:

Follow the OSHA respirator regulations found in 29
CFR 1910.134 or European Standard EN 149. Always use
a NIOSH or European Standard EN 149 approved
respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Solid

Color: black to gray

Odor: none reported

pH: Not available.

Vapor Pressure: 1 mm Hg @ 1787C

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not available.

Not available.

Boiling Point: 2582 deg F

Freezing Point: 2582 deg F

Decomposition Temperature: Not available.

Stability in water: Insoluble in water.

Specific Gravity/Density: 7.86 @ 20C

Molecular Formula: Fe

Molecular Weight: 55.847

**** SECTION 10 - STABILITY AND REACTIVITY ****

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Chemical Stability:
Decomposes when heated. Oxidizes when exposed to air.
Conditions to Avoid:
Incompatible materials, moisture, exposure to air, excess heat.
Incompatibilities with Other Materials:
Acetaldehyde, ammonium peroxodisulfate, chloroformanidinium, chloric acid, ammonium nitrate, halogens, dinitrogen tetroxide, nitryl fluoride, polystyrene, sodium acetylaldehyde, potassium dichromate, hydrogen peroxide, nitryl fluoride, sulfuric acid, sodium carbide.
Hazardous Decomposition Products:
Oxides of iron.
Hazardous Polymerization: Has not been reported.

*** SECTION 11 - TOXICOLOGICAL INFORMATION ***

RTECS#: CAS# 7439-89-6; N04565500 N08225000
LD50: CAS# 7439-89-6; Oral, rat: LD50 = 30 gm/kg.
Carcinogenicity:
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No information available.
Teratogenicity:
No information available.
Reproductive Effects:
No information available.
Neurotoxicity:
No information available.
Mutagenicity:
No information available.
Other Studies:
None.

*** SECTION 12 - ECOLOGICAL INFORMATION ***

Other:
No information available.

*** SECTION 13 - DISPOSAL CONSIDERATIONS ***

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.
US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
None listed.
RCRA U-Series: None listed.

*** SECTION 14 - TRANSPORT INFORMATION ***

US DOT
Shipping Name: METAL POWDERS, FLAMMABLE, N.O.S.
Hazard Class: 4.1
UN Number: UN3089
Packing Group: II
Canading:
Shipping Name: METAL POWDER FLAMMABLE NOS (IRON)
Hazard Class: 4.1
UN Number: UN3089

*** SECTION 15 - REGULATORY INFORMATION ***

US FEDERAL
TSCA
CAS# 7439-89-6 is listed on the TSCA inventory.
Health & Safety Reporting List
Chemicals on the Health & Safety Reporting List.
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 7439-89-6: acute, flammable.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

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Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
IRON can be found on the following state right to know lists:

California.
None of the chemicals in this product are listed.
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available.

Risk Phrases:
Safety Phrases: section)

WGK (Wa) CAS# 7439-89-6: 0

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 7439-89-6 is listed on Canada's DSL List.
This product has a WHMIS classification of B4, D2B.
CAS# 7439-89-6 is not listed on Canada's Ingredient Disclosure List.
Exposure Limits

*** SECTION 16 - ADDITIONAL INFORMATION ***

MSDS Creation Date: 12/12/1997 Revision #2 Date: 3/18/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we 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 product for their intended use. We shall not be liable for any claims, losses or damages of any kind that may result from the use of this product, including but not limited to, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.