

# Safety Data Sheet



## 1: Identification

### 1.1: Product Identifier

Product Name: FeI2

Product Number(s): 1FEI2-0004F

CAS Number: 7783-86-0

SDS Document Number: 000136

### 1.2: Recommended Uses and Restrictions

Recommended Uses

Manufacture of substances

Restrictions

Not for food or drug use.

### 1.3: Supplier Contact Information

APL Engineered Materials, Inc.

2401 N. Willow Rd.

Urbana, IL 61802

Phone: 217-367-1340

Fax: 217-367-9084

### 1.4: Emergency Phone Number

United States: 800-255-3924

International: +01-813-248-0585

## 2: Hazards Identification

### 2.1: Classifications

Acute Toxicity, Dermal - Category 4

Acute Toxicity, Inhalation - Category 4

Acute Toxicity, Oral - Category 4

Eye Damage/Irritation - Category 2A

Skin Corrosion/Irritation - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

Toxic to Reproduction - Category 1B

### 2.2: GHS Label Elements

Pictograms



Signal Word: Danger

#### Hazard Statements

- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled.
- H335: May cause respiratory irritation.
- H360: May damage fertility or the unborn child.

#### Precautionary Statements

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P261: Avoid breathing dust.
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P281: Use personal protective equipment as required.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313: IF EXPOSED or concerned: Get medical advice/attention.
- P321: Specific treatment. Call a physician or poison control center.
- P330: Rinse mouth.
- P332 + P313: If skin irritation occurs: Get medical advice/attention.
- P337 + P313: If eye irritation persists: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.
- P501: Dispose of contents/container to licensed disposal facility.

#### 2.3: Hazards Not Otherwise Classified or Not Covered by GHS

None.

#### 2.4: Amount(s) of substances with unknown toxicity

None

### 3: Composition/Information on Ingredients

3.1: .Ingredient	.Weight%	.Formula	.CAS Number	.Mol Wt	.EC Number
FeI2	100	FeI2	7783-86-0	309.65	232-031-2

#### 3.2: Other Hazardous components

none

#### 3.3: Trade Secret Disclaimer

none

#### 3.4: Synonyms

Iron (II) Iodide  
Ferrous iodide  
iron diiodide

## 4: First Aid Measures

### 4.1: First Aid

#### General

Consult with physician and provide this Safety Data Sheet

Remove person from area of exposure and remove any contaminated clothing

#### In contact with eyes

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Seek medical attention if irritation develops or persists

#### In contact with skin

Wash thoroughly with soap and plenty of water. Remove all contaminated clothing for proper laundering. Seek medical attention if irritation develops or persists.

#### If swallowed

If conscious and alert, rinse mouth and drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical aid.

#### If inhaled

Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.

If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

### 4.2: Most important symptoms and effects; acute and delayed

Harmful if inhaled

Causes skin irritation

Harmful if in contact with skin

May damage the unborn child.

May damage fertility.

Causes serious eye irritation.

May cause respiratory irritation.

Harmful if swallowed.

### 4.3: Indication of any immediate medical attention and special treatment needed

If swallowed: Immediately call a POISON CENTER or doctor/ physician.

If inhaled : Immediately call a POISON CENTER or doctor/ physician.

## 5: Fire Fighting Measures

### 5.1: Fire extinguishing media

water or alcohol-resistant foam

dry chemical

carbon dioxide

### 5.2: Specific hazards arising from the substance or mixture

iron oxides

hydroiodic acid and hydroiodic acid fumes

### 5.3: Special protective equipment and precautions for firefighters.

Wear self contained breathing apparatus for fire fighting if necessary

## 6: Accidental Release Measures

### 6.1: Personal precautions, protective equipment, and emergency procedures.

- Avoid breathing dust.
- Avoid dust formation.
- For personal protection see section 8.
- Ensure adequate ventilation.
- Use personal protective equipment.
- Evacuate personnel to safe areas.

### 6.2: Methods and materials for containment and cleaning up.

- Sweep up and shovel.
- Keep in suitable, closed containers for disposal.

### 6.3: Environmental precautions

- Do not let product enter drains.

### 6.4: Disposal

- Dispose of in accordance with local regulations.
- See section 13.

## 7: Handling and Storage

### 7.1: Precautions for safe handling

- Provide appropriate exhaust ventilation at places where dust is formed.
- See precautionary statements in section 2.2.
- Avoid formation of dust and aerosols.
- Avoid contact with skin and eyes.

### 7.2: Conditions for safe storage

- Store in a dry and well-ventilated place.
- Store under inert gas.
- Store in the dark to preserve product quality.
- Store away from moisture.
- Keep container tightly closed.

### 7.3: Incompatibilities

- moisture sensitive
- alkali metals
- strong bases
- strong acids

## 8: Exposure Controls/Personal Protection

### 8.1: Control parameters

- OSHA permissible exposure limit (PEL)
- not listed

ACGIH threshold limit value (TLV)

1 mg/m<sup>3</sup> (as Fe)

NIOSH recommended exposure limit (REL)

1 mg/m<sup>3</sup> (as Fe)

### 8.2: Engineering controls

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower

Use adequate ventilation to keep airborne concentrations low

### 8.3: 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 appropriate, chemical-resistant protective gloves to prevent skin exposure.

Clothing

Wear appropriate protective clothing to prevent skin exposure

Respirator

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

## 9: Physical and Chemical Properties

### 9.a: Appearance

State: Solid

Form: powder or spheres

Color: red to violet

9.b: Odor: no data available

9.c: Odor threshold: no data available

9.d: pH: no data available

9.e: Melting point / freezing point: 587 °C (1,089 °F)

9.f: Initial boiling point and range: no data available

9.g: Flashpoint: no data available

9.h: Evaporation rate: no data available

9.i: Flammability (solid, gas): no data available

9.j: Upper/lower flammability or explosive limits: no data available

9.k: Vapor pressure: no data available

9.l: Vapor density: no data available

9.m: Relative density: 5.32 g/mL at 25 °C (77 °F)

9.n: Water Solubility: 1090 g/l water

9.o: Partition coefficient: n-octanol/water: no data available

9.p: Auto-ignition temperature: no data available

9.q: Decomposition temperature: no data available

9.r: Viscosity: no data available

## 10: Stability and Reactivity

### 10.1: Reactivity

no data available

### 10.2: Chemical stability

Stable under recommended storage conditions.

### 10.3: Possibility of hazardous reactions

no data available

### 10.4: Conditions to avoid

exposure to water

heat

In the event of fire: see section 5

### 10.5: Incompatible materials

See section 7.3.

### 10.6: Hazardous decomposition products

In the event of fire: see section 5.2

Other decomposition products - no data available

## 11: Toxicological Information

### 11.1: Toxicity data

Acute toxicity - Oral

no data available

Acute toxicity - Dermal

no data available

Acute toxicity - Inhalation

No data available.

Skin corrosion/irritation

Causes skin irritation.

Eye damage/irritation

Causes severe eye irritation.

Respiratory irritation

May cause respiratory irritation.

Germ cell mutagenicity

no data available

Reproductive toxicity

Suspected reproductive toxicant.

Specific organ toxicity - single exposure

May cause respiratory irritation.

Specific organ toxicity - repeated exposure

No data available.

#### Aspiration hazard

No data available.

#### Additional information

No data available.

#### ACGIH carcinogenicity

The ACGIH has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

#### IARC carcinogenicity

The IARC has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

#### NTP carcinogenicity

The NTP has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

#### OSHA carcinogenicity

OSHA has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

### 11.2: Routes of exposure

skin

oral

See section 2.2

eyes

### 11.3: Symptoms of exposure

See section 4.2

### 11.4: Delayed and immediate effects of exposure

Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include skin rash, running nose, headache and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters and black and blue spots. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration.

Prolonged or repeated exposure may cause allergic skin and /or respiratory reactions in certain sensitive individuals.

Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma. To the best of our knowledge the toxicological properties have not been thoroughly investigated.

## 12: Ecological Information

### 12.1: Ecotoxicity

#### Toxicity to fish

No data available

#### Toxicity to daphnia and other aquatic invertebrates

No data available

Toxicity to algae/bacteria

No data available

12.2: Persistence and degradability

no data available

12.3: Bioaccumulative potential

no data available

12.4: Mobility in soil

no data available

12.5: Other effects

no data available

## 13: Disposal Considerations

13.1: Waste treatment methods

No data available

13.2: Safe handling

See section 7.1 .

13.3: Product disposal

Contact a licensed professional waste disposal service to dispose of this material.

13.4: Packaging disposal

Dispose of as unused product.

## 14: Transport Information

14.1: DOT(US)

UN Number: 3260

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (Iron iodide)

Packing Group: II

Shipping Class(es): 8

Marine Pollutant: No

14.2: IMDG

UN Number: 3260

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (Iron iodide)

Packing Group: II

Shipping Class(es): 8

Marine Pollutant: No

14.3: IATA

UN Number: 3260

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (Iron iodide)

Packing Group: II

Shipping Class(es): 8

14.4: Special Shipping Precautions



None

## 15: Regulatory Information

### 15.1: TSCA inventory

This material is listed on the TOSCA inventory.

### 15.2: SARA 302 components

This material is not subject to the reporting requirements of SARA Title III, Section 302.

### 15.3: SARA 313 components

This material is not subject to the reporting requirements of SARA Title III, Section 313.

### 15.4: SARA 313/312 hazards

Acute health hazard.

Chronic health hazard.

### 15.5: Other information

California Prop. 65 Components - This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts Right To Know Components - This product does not contain materials listed on the Massachusetts Right to Know list

New Jersey Right To Know Components -This product does not contain materials listed on the New Jersey Right to Know list

Pennsylvania Right To Know Components -This product does not contain materials listed on the Pennsylvania Right to Know list

## 16: Additional Information

### 16.1: NFPA

Health: 2

Fire: 0

Reactivity: 0

Special:

### 16.2: HMIS

Health: 2

Chronic: \*

Flammability: 0

Physical Hazard: 0

### 16.3: Disclaimers

For industrial use only. Not for drug, household or other uses

The information herein is believed to be accurate and reliable as of the date compiled. However, APL Engineered Materials, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.

### 16.4: References

Information contained on this SDS sheet was obtained from some or all of the following sources: American Conference of Governmental Industrial Hygienists (ACGIH), TLVs and BEIs; National Institute for Occupational Safety and Health (NIOSH), Pocket Guide to Chemical Hazards; European Chemicals Agency, <http://echa.europa.eu/>; The National Institute of Health, U.S National Library of

Medicine, TOXNET, Toxicology Data Network; and the Registry of Toxic Effects of Chemical Substances (RTECS) database.

#### 16.5: Version

Preparation Date: 5/22/2015

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