



## MATERIAL SAFETY DATA SHEET

### 1. Product Identification

**Product Name:** Ferrous Fumarate

**Synonyms:** 2-Butanedioic acid (E)-, iron (+2) salt (1:1), Ferrous fumarate; Fumaric acid, iron (+2) salt; Cpiron; Iron fumarate

**CAS No.:** 141-01-5

**Molecular Weight:** 169.91

**Chemical Formula:** C<sub>4</sub>H<sub>2</sub>O<sub>4</sub>Fe

**Contact Information:**

Company: Aurora Industry Co.,Ltd.

Address: Room 7033, No.9-1, Haifu Road, Dalian Free Trade Zone, China

Tel: 0411-82288674

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Ferrous fumarate	141-01-5	93%	--

### 3. Hazards Identification

**Emergency Overview**

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

**Potential Health Effects**

**Inhalation:**

Excessive inhalation of dust may be irritating to the respiratory tract.

**Ingestion:**

Low toxicity in small quantities but larger dosages may cause nausea, vomiting, diarrhea, and black stool. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death from iron poisoning has been recorded.

**Skin Contact:**

No adverse effects expected.



**Eye Contact:**

No adverse effects expected but dust may cause mechanical irritation.

**Chronic Exposure:**

No adverse effects expected.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

**4. First Aid Measures**

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

If large amounts were swallowed, give water to drink and get medical advice.

**Skin Contact:**

Wash exposed area with soap and water. Get medical advice if irritation develops.

**Eye Contact:**

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

**5. Fire Fighting Measures**

**Fire:**

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

**Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Fire Extinguishing Media:**

Dry chemical, foam or carbon dioxide.

**Special Information:**

Wear full protective clothing and breathing equipment for high-intensity fire or potential explosion conditions. Use of limited water spray on a smoldering fire can release explosive hydrogen.

**6. Accidental Release Measures**

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.



## **7. Handling and Storage**

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Separate from acids and oxidizing materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## **8. Exposure Controls/Personal Protection**

### **Airborne Exposure Limits:**

-ACGIH Threshold Limit Value (TLV):

1 mg/m<sup>3</sup> (TWA) soluble iron salt as Fe

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Gloves and lab coat, apron or coveralls.

### **Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## **9. Physical and Chemical Properties**

### **Appearance:**

Reddish to reddish-orange powder.

### **Odor:**

Odorless.

### **Solubility:**

Slightly soluble in water.



**Specific Gravity:**

2.44

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

No information found.

**Boiling Point:**

Decomposes.

**Melting Point:**

280C (536F)

**Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

**10. Stability and Reactivity**

**Stability:**

Stable under ordinary conditions of use and storage. Heat will contribute to instability.

**Hazardous Decomposition Products:**

Can form pyrophoric iron when burned in insufficient air.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizers.

**Conditions to Avoid:**

No information found.

**11. Toxicological Information**

Oral rat LD50: 3850 mg/kg

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Ferrous fumerate (141-01-5)	No	No	None



**12. Ecological Information**

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

**13. Disposal Considerations**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**14. Transport Information**

Not regulated.

**15. Regulatory Information**

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Ferrous fumerate (141-01-5)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

--Canada--

Ingredient	Korea	DSL	NDSL	Phil.
Ferrous fumerate (141-01-5)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302-      -----SARA 313-----

Ingredient	RQ	TPQ	List	Chemical Catg.
Ferrous fumerate (141-01-5)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA-      -TSCA-

Ingredient	CERCLA	261.33	8(d)
Ferrous fumerate (141-01-5)	No	No	No

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No

SARA 311/312: Acute: No      Chronic: No      Fire: No      Pressure: No



Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**16. Other Information**

**Created Date:** 07/09/2020 09:27 PM

**NFPA Ratings:** Health: **0** Flammability: **1** Reactivity: **0**

**Label Hazard Warning:**

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

**Label Precautions:**

None.

**Label First Aid:**

Not applicable.

**Product Use:**

Bulk pharmaceutical chemical. Food additive.

**Revision Information:** N/A