

SAFETY DATA SHEET

according to the Hazardous Products Regulations



FERASI

Version	Revision Date:	SDS Number:	Date of last issue: -
1.2	04/02/2024	50001183	Date of first issue: 03/02/2020

SECTION 1. IDENTIFICATION

Product identifier

Product name FERASI

Other means of identification

Product code 50001183

Recommended use of the chemical and restrictions on use

Recommended use A liquid formulation of iron EDDHA

Restrictions on use Use as recommended by the label.

Details of the supplier of the safety data sheet

Manufacturer

FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
Phone (AgHotline): 1-833-FMC-PPAC (1-833-362-7722),
Web: <https://ag.fmc.com/ca/en>
SDS-Info@fmc.com

Supplier Address

FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
Canada

Emergency telephone

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Specific target organ toxicity : Category 2 (Kidney)
- repeated exposure (Oral)

GHS label elements

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Hazard pictograms

:



Signal Word

:

Warning

Hazard Statements

:

H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary Statements

:

Prevention:

P260 Do not breathe mist or vapors.

Response:

P314 Get medical advice/ attention if you feel unwell.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

:

Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
ethanediol	ethanediol	107-21-1	$\geq 10 - < 30$ *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice

:

Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled

:

Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact

:

Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.
Wash off immediately with plenty of water for at least 15 minutes.
Get medical attention if irritation develops and persists.

In case of eye contact

:

Flush eyes with water as a precaution.

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- Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Do not induce vomiting without medical advice.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : May cause damage to organs through prolonged or repeated exposure if swallowed.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
Avoid inhalation, ingestion and contact with skin and eyes.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : Carbon oxides
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Keep people away from and upwind of spill/leak.
Avoid formation of aerosol.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.
For disposal considerations see section 13.

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- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors/dust.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.
- Recommended storage temperature : > 5 °C
- Further information on storage stability : No decomposition if stored and applied as directed.
Do not freeze.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanediol	107-21-1	(c)	100 mg/m3	CA AB OEL
		C (Vapor)	50 ppm	CA BC OEL
		C (Vapour and mist)	50 ppm 127 mg/m3	CA QC OEL
		TWA (Total, aerosol only)	10 mg/m3	CA BC OEL
		STEL (Total, aerosol only)	20 mg/m3	CA BC OEL
		C (Total, aerosol only)	100 mg/m3	CA BC OEL
		TWA (Vapor) STEL (Vapor)	25 ppm 50 ppm	ACGIH ACGIH

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		STEL (Inhalable fraction, Aerosol only)	10 mg/m3	ACGIH
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Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Ensure that eye flushing systems and safety showers are located close to the working place.
Wear suitable protective equipment.
- Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Color : red brown
- Odor : Barely perceptible
- Odor Threshold : No data available
- pH : 7.00 - 9.00
Concentration: 100 %
- Melting point/freezing point : No data available
- Initial boiling point and boiling range : No data available

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Flash point	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1.37 - 1.43
Density	:	No data available
Bulk density	:	No data available
Solubility(ies)	:	
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	
Viscosity, dynamic	:	500 - 6,000 mPa.s
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	Non-oxidizing
Particle size	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid extreme temperatures.

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Protect from frost, heat and sunlight.

Incompatible materials : Strong oxidizing agents
Avoid strong acids, bases, and oxidizers.

Hazardous decomposition products : toxic fumes

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Based on available data, the classification criteria are not met.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

ethanediol:

Acute inhalation toxicity : LC0 (Rat, male and female): > 2.5 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist
Remarks: no mortality

Acute dermal toxicity : LD50 (Mouse, male and female): > 3,500 mg/kg

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Remarks : No data is available on the product itself.

Components:

ethanediol:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

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Product:

Remarks : No data is available on the product itself.

Components:

ethanediol:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

Based on available data, the classification criteria are not met.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Product:

Remarks : No data is available on the product itself.

Components:

ethanediol:

Test Type : Maximization Test
Species : Guinea pig
Result : Does not cause skin sensitization.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

ethanediol:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OPPTS 870.5100
Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Rat
Application Route: Oral
Result: negative

Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

ethanediol:

Species : Mouse
Application Route : Oral
Exposure time : 24 month(s)
Result : negative

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Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

ethanediol:

Routes of exposure	:	Oral
Target Organs	:	Kidney
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

ethanediol:

Species	:	Rat
NOAEL	:	150 mg/kg
Application Route	:	Oral
Exposure time	:	12 Months

Species	:	Dog
NOAEL	:	> 2,200 - < 4,400 mg/kg
Application Route	:	Dermal
Exposure time	:	4 Weeks
Method	:	OECD Test Guideline 410

Aspiration toxicity

Based on available data, the classification criteria are not met.

Further information

Product:

Remarks	:	No data available
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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

ethanediol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 72,860 mg/l
Exposure time:		96 h

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Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	IC50 (Pseudokirchneriella subcapitata (green algae)): 10,940 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	:	(Menidia peninsulae (tidewater silverside)): 1,500 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	(Daphnia magna (Water flea)): 33,911 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	(activated sludge): > 1,995 mg/l Exposure time: 30 min Method: ISO 8192

Persistence and degradability

Components:

ethanediol:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 90 - 100 % Exposure time: 10 d Method: OECD Test Guideline 301A
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Bioaccumulative potential

Components:

ethanediol:

Partition coefficient: n-octanol/water	:	log Pow: -1.36
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Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	No data available
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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemi-
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cal or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

TDG

Not regulated as a dangerous good

TDG

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

NPRI Components : ethanediol

The ingredients of this product are reported in the following inventories:

TCSI : Not in compliance with the inventory

TSCA : Product contains substance(s) not listed on TSCA inventory.

AIIC : Not in compliance with the inventory

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

1258274-08-6

ENCS : Not in compliance with the inventory

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ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	: Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	: Canada. British Columbia OEL
CA QC OEL	: Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for air-borne contaminants
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
CA AB OEL / (c)	: ceiling occupational exposure limit
CA BC OEL / TWA	: 8-hour time weighted average
CA BC OEL / STEL	: short-term exposure limit
CA BC OEL / C	: ceiling limit
CA QC OEL / C	: Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships;

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n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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End of Material Safety Data Sheet