

Iron FS Ferene Reagent R1

Material number 1 1911 R1

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1. Product and company identification

Product identifier

Trade name: Iron FS Ferene Reagent R1
as part of the kits: 1 1911 XX XX XXX
(The positions X code different packages.)

Relevant identified uses of the substance or mixture and uses advised against

General use: Reagent for in-vitro diagnostic use.
For professional use only

Details of the supplier of the safety data sheet

Company name: DiaSys Diagnostic Systems GmbH
Street/POB-No.: Alte Strasse 9
Postal Code, city: 65558 Holzheim
WWW: <http://www.diasys.de>
E-mail: mail@diasys.de
Telephone: +49 (0) 6432-9146-0
Telefax: +49 (0) 6432-9146-32
Dept. responsible for information:
Corporate headquarters, Telephone: +49 (0) 6432-9146-0, Email: mail@diasys.de

Emergency phone number

Infraserv, Telephone: +49 (0) 69-305-6418

2. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: liquid
Color: colorless up to weak yellowish
Odor: weak like acetic acid
Classification: Skin Irritation - Category 2; Eye Damage - Category 1; Carcinogenicity - Category 2;
Reproductive toxicant - Category 2;

Hazard symbols:



Signal word:

Danger

Hazard statements:

Causes skin irritation.
Causes serious eye damage.
Suspected of causing cancer.
Suspected of damaging the unborn child.

Precautionary statements:

Obtain special instructions before use.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water/soap.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

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Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Aqueous solution of anorganic salts and organic compounds.

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 60-32-2	Aminocaproic acid	< 10 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 64-19-7	Acetic acid	1 - 5 %	Flammable Liquid - Category 3. Skin Corrosion - Category 1A.
CAS 9002-92-0	Dodecan-1-ol, ethoxylated	1 - 5 %	Acute Toxicity - oral - Category 4. Eye Damage - Category 1.
CAS 78330-20-8	Alcohols, C9-11-iso-, C10-rich, ethoxylated	1 - 5 %	Eye Damage - Category 1.
CAS 62-56-6	Thiourea	< 1 %	Acute Toxicity - oral - Category 4. Carcinogenicity - Category 2. Reproductive toxicant - Category 2. Aquatic toxicity - chronic - Category 2.

4. First aid measures

General information:	First aider: Pay attention to self-protection! If medical advice is needed, have product container or label at hand. Take off contaminated clothing and wash it before reuse.
In case of inhalation:	Move victim to fresh air. Seek medical treatment in case of troubles.
Following skin contact:	Remove residues with water. In case of skin irritation, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently seek the immediate attention of an ophthalmologist.
After swallowing:	Rinse mouth immediately and drink plenty of water. Immediately get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Causes serious eye damage.
Causes skin irritation.

Information to physician

Treat symptomatically.



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5. Fire fighting measures

Flash point/flash point range:

not combustible

Auto-ignition temperature: No data available

Suitable extinguishing media:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

Specific hazards arising from the chemical

Fires in the immediate vicinity may cause the development of dangerous vapors. In case of fire may be liberated: Nitrogen oxides (NO_x), sulphur oxides, carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Do not allow fire water to penetrate into surface or ground water.

6. Accidental release measures

Personal precautions:

Avoid exposure. Avoid contact with skin, eyes, and clothing. Work place should be equipped with a shower and an eye rinsing apparatus. Wear appropriate protective equipment.

In enclosed areas: Provide fresh air. Do not breathe vapors. Take off contaminated clothing and wash it before reuse.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.

Methods for clean-up:

Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Wash spill area with plenty of water. Final cleaning.

7. Handling and storage

Handling

Advices on safe handling: Obtain special instructions before use. Provide adequate ventilation, and local exhaust as needed. Do not breathe vapors. Avoid contact with skin, eyes, and clothing.

Keep all containers, equipment and working place clean. Take off contaminated clothing and wash it before reuse.

Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Work place should be equipped with a shower and an eye rinsing apparatus.

Storage

Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 35.6 °F and 46.4 °F. Protect against heat /sun rays. Do not freeze. Keep sterile.

Hints on joint storage:

Do not store together with: strong oxidizing agents, alkalis
Keep away from food, drink and animal feedingstuffs.



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8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
64-19-7	Acetic acid	USA: ACGIH: STEL	37 mg/m ³ ; 15 ppm
		USA: ACGIH: TWA	25 mg/m ³ ; 10 ppm
		USA: NIOSH: STEL	37 mg/m ³ ; 15 ppm
		USA: NIOSH: TWA	25 mg/m ³ ; 10 ppm
		USA: OSHA: TWA	25 mg/m ³ ; 10 ppm

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing.
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Nitrile rubber
Breakthrough time: > 480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Provide adequate ventilation. Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.

General hygiene considerations:

Obtain special instructions before use. Do not breathe vapors. Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Work place should be equipped with a shower and an eye rinsing apparatus.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Physical state at 68 °F and 101.3 kPa: liquid
Color: colorless up to weak yellowish

Odor: weak like acetic acid

Odor threshold: No data available

pH value: at 77 °F: 4.5

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point/flash point range: not combustible

Evaporation rate: No data available

Flammability: No data available

Explosion limits: No data available

Vapor pressure: No data available

Vapor density: No data available

Density: at 68 °F: 1.049 g/mL



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Water solubility: completely miscible
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Thermal decomposition: No data available
Additional information: No data available

10. Stability and reactivity

Reactivity: No data available
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: No hazardous reaction when handled and stored according to provisions.
Conditions to avoid: Protect from frost, heat and sunlight.
Incompatible materials: Strong oxidizing agents, alkalis
Hazardous decomposition products: No hazardous decomposition products when regulations for storage and handling are observed.
Thermal decomposition: No data available

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.
Acute toxicity (oral): Based on available data, the classification criteria are not met.
Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Lack of data.
Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.
Serious eye damage/irritation: Eye Damage - Category 1 = Causes serious eye damage.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data.
Germ cell mutagenicity/Genotoxicity: Lack of data.
Carcinogenicity: Carcinogenicity - Category 2 = Suspected of causing cancer.
Reproductive toxicity: Reproductive toxicant - Category 2 = Suspected of damaging the unborn child.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure): Lack of data.
Aspiration hazard: Lack of data.



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Other information: Chronic toxicity carcinogenic effect:
Information about Thiourea:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: listed

Symptoms

In case of ingestion: May cause irritations.
The following symptoms may occur: Nausea, vomiting, diarrhea, gastrointestinal complaints.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Information about Thiourea:
Toxic to aquatic life with long lasting effects.

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains.

13. Disposal considerations

Product

Recommendation: Special waste. Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: no

Air transport (IATA)

Proper shipping name: Not restricted



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Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - U.S. Federal Regulations

Aminocaproic acid:	TSCA Inventory: listed TSCA HPVC: not listed
Acetic acid:	TSCA Inventory: listed TSCA HPVC: not listed Clean Air Act: SOCMI Chemical: yes Clean Water Act: Hazardous Substances: RQ 5000 lbs. Other Environmental Laws: CERCLA: RQ 5000 lbs. NIOSH Recommendations: Occupational Health Guideline: 0002*
Dodecan-1-ol, ethoxylated:	TSCA Inventory: listed; EPA flags XU TSCA HPVC: not listed
Alcohols, C9-11-iso-, C10-rich, ethoxylated:	TSCA Inventory: listed; UVCB; EPA flags XU TSCA HPVC: not listed
Thiourea:	TSCA Inventory: listed TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 3 OSHA Carcinogen: not listed NTP Rating: listed Other Environmental Laws: CERCLA: RQ 10 lbs. RCRA Hazardous Wastes: Code U219 SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard

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National regulations - U.S. State Regulations

Acetic acid: California Proposition 65 code: -
Delaware Air Quality Management List:
DRQ: 5000 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List:
Title 585: AAC: 1.25 - EL: 1.67 - OEL: 25 - Title 586: -
Massachusetts Haz. Substance codes: 2,4,5,6 F8
Minnesota Haz. Substance:
Codes: AO - Ratings: -- - Status: Title III.
New York List of Hazardous Substances:
RQ-Air: 5000 - RQ-Land: 100 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: E
Washington Air Contaminant:
TWA: 10 ppm - 25 mg

Thiourea: California Proposition 65 code: C
Delaware Air Quality Management List:
DRQ: 10 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List:
Title 585: - Title 586: AAAC: 1.8E-03 - EL: 1.2E-05 - OEF: 5.5E-04
Massachusetts Haz. Substance codes: 1,3,7 *E*C* F8 F9
Minnesota Haz. Substance:
Codes: RT - Ratings: - Status: Carcinogen. Title III. TRI.
New Jersey RTK Hazardous Substance:
DOT: 2877 - Sub No.: 1853 - TPQ: -
New York List of Hazardous Substances:
RQ-Air: 10 - RQ-Land: 10 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: ES
California Proposition 65: cancer

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Text for labeling: Contains < 10 % Aminocaproic acid, 1 - 5 % Acetic acid, 1 - 5 % Dodecan-1-ol, ethoxylated, 1 - 5 % Alcohols, C9-11-iso-, C10-rich, ethoxylated, < 1 % Thiourea. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:
Health: 2 (Moderate)
Fire: 0 (Minimal)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 2 (Moderate) - Chronic effects
Flammability: 0 (Minimal)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

HEALTH	*	2
FLAMMABILITY		0
PHYSICAL HAZARD		0
		X

Reason of change: Changes in section 2: Labeling

Date of first version: 8/7/2007

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information



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The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.