## SECTION 1. IDENTIFICATION

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>IRON STAINING KIT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mat.-No./ Genisys-No.</strong></td>
<td>05279259001</td>
</tr>
</tbody>
</table>

**Manufacturer or supplier’s details**

<table>
<thead>
<tr>
<th><strong>Company name of supplier</strong></th>
<th>Roche Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>9115 Hague Road 46250 Indianapolis IN</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>1-800-428-5074</td>
</tr>
<tr>
<td><strong>Emergency telephone:</strong></td>
<td>CHEMTREC 1-800-424-9300 (U.S. or Canada) 1-703-527-3887 (International)</td>
</tr>
</tbody>
</table>

**Recommended use of the chemical and restrictions on use**

| **Restrictions on use** | For professional users only. |

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit

**GHS Label element**

<table>
<thead>
<tr>
<th><strong>Hazard pictograms</strong></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Signal Word</strong></th>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazard Statements</strong></td>
<td>H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td><strong>Precautionary Statements</strong></td>
<td><strong>Prevention:</strong> P234 Keep only in original container. P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. <strong>Response:</strong> P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

IRON STAINING KIT

Version 1.2 Revision Date: 12-16-2015 Date of last issue: 12-14-2015
Date of first issue: 11-23-2015

P305 + P351 + P338 + P310 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 or doctor/physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage:
P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Iron Reagent A

GHS Classification
Not a hazardous substance or mixture.

Hazardous ingredients
No hazardous ingredients

Iron Reagent B

GHS Classification
Corrosive to Metals H290: May be corrosive to metals.
Category 1
Skin corrosion H314: Causes severe skin burns and eye damage.
Category 1
Serious eye damage H318: Causes serious eye damage.
Category 1

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (theor. 100%)</td>
<td>7647-01-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

Nuclear Fast Red / Red Counterstain II

GHS Classification
Serious eye damage H318: Causes serious eye damage.
Category 1

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium sulfate-hexadecahydrate</td>
<td>16828-11-8</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice: Move out of dangerous area. Consult a physician. Show this material 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: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed: No information available.

Notes to physician: The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: High volume water jet

Specific hazards during fire fighting: Do not allow run-off from fire fighting to enter drains or water courses.
Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

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. Avoid contact with skin and eyes. 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. To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Technical measures/Precautions: See label, package insert or internal guidelines.

SECTION 8. EXPOSURE CONTROLS/PERSOAL PROTECTION

Iron Reagent A

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

**Iron Reagent B**

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (theor. 100%)</td>
<td>7647-01-0</td>
<td>C</td>
<td>2 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>5 ppm 7 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>5 ppm 7 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>5 ppm 7 mg/m³</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

**Nuclear Fast Red / Red Counterstain II**

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium sulfate-hexadecahydrate</td>
<td>16828-11-8</td>
<td>TWA</td>
<td>2 mg/m³ (Aluminum)</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2 mg/m³ (Aluminum)</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

**Engineering measures** : No data available

**Personal protective equipment**

**Hand protection**

<table>
<thead>
<tr>
<th>Material</th>
<th>Protective gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks</td>
<td>Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.</td>
</tr>
<tr>
<td>Hygiene measures</td>
<td>When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.</td>
</tr>
</tbody>
</table>

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Iron Reagent A**

**Appearance** : liquid
Iron Staining Kit

Color: yellow

Odor: No data available

Odor Threshold: No data available

pH: 8.7

Melting point/range: No data available

Boiling point/boiling range: No data available

Flash point: does not flash

Evaporation rate: No data available

Flammability (solid, gas): The product is not flammable.

Upper explosion limit: No data available

Lower explosion limit: No data available

Vapor pressure: No data available

Relative vapor density: No data available

Relative density: No data available

Solubility(ies)

Water solubility: completely miscible

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: No data available

Viscosity, kinematic: No data available

Oxidizing properties: The substance or mixture is not classified as oxidizing.

Iron Reagent B

Appearance: liquid

Color: colorless

Odor: No data available

Odor Threshold: No data available
### SAFETY DATA SHEET

#### IRON STAINING KIT

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
<td>1.0</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>does not flash</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>The product is not flammable.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**Nuclear Fast Red / Red Counterstain II**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>red</td>
</tr>
<tr>
<td>Odor</td>
<td>none</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>acidic</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### Flash point
- does not flash

### Evaporation rate
- No data available

### Flammability (solid, gas)
- The product is not flammable.

### Upper explosion limit
- No data available

### Lower explosion limit
- No data available

### Vapor pressure
- No data available

### Relative vapor density
- No data available

### Relative density
- No data available

### Solubility(ies)
- Water solubility: completely miscible

### Partition coefficient: n-octanol/water
- No data available

### Autoignition temperature
- No data available

### Decomposition temperature
- Hazardous decomposition products formed under fire conditions.

### Viscosity
- Viscosity, dynamic: No data available
- Viscosity, kinematic: No data available

### Oxidizing properties
- The substance or mixture is not classified as oxidizing.

### SECTION 10. STABILITY AND REACTIVITY

#### Reactivity
- No dangerous reaction known under conditions of normal use.

#### Chemical stability
- Stable under normal conditions.

#### Possibility of hazardous reactions
- No decomposition if stored and applied as directed.

#### Conditions to avoid
- No data available

#### Incompatible materials
- No data available

#### Hazardous decomposition products
- Carbon oxides
- Nitrogen oxides (NOx)
- Hydrogen cyanide (hydrocyanic acid)
- Hydrogen chloride gas
SECTION 11. TOXICOLOGICAL INFORMATION

Iron Reagent A

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Iron Reagent B

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Causes severe burns.

Ingredients:
Hydrochloric acid (theor. 100%):
### Serious eye damage/eye irritation
Causes serious eye damage.

**Ingredients:**
- **Hydrochloric acid (theor. 100%):** Result: Risk of serious damage to eyes.

### Respiratory or skin sensitization
Skin sensitization: Not classified based on available information. Respiratory sensitization: Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

### Carcinogenicity
Not classified based on available information.

**IARC**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity
Not classified based on available information.

**STOT-single exposure**
Not classified based on available information.

**Ingredients:**
- **Hydrochloric acid (theor. 100%):** Assessment: May cause respiratory irritation.

### Aspiration toxicity
Not classified based on available information.

### Nuclear Fast Red / Red Counterstain II

**Acute toxicity**
Not classified based on available information.

**Ingredients:**
- **Aluminium sulfate-hexadecahydrate:**
  - Acute oral toxicity: LD50 Oral (Rat): > 5,000 mg/kg
Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Causes serious eye damage.

Ingredients:
Aluminium sulfate-hexadecahydrate:
Result: Risk of serious damage to eyes.
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.
IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

Ingredients:
Aluminium sulfate-hexadecahydrate:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure
Not classified based on available information.

Ingredients:
Aluminium sulfate-hexadecahydrate:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity
Not classified based on available information.
SECTION 12. ECOLOGICAL INFORMATION

Iron Reagent A

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects

Iron Reagent B

Ecotoxicity

Ingredients:
Hydrochloric acid (theor. 100%):
Ecotoxicology Assessment
Acute aquatic toxicity : This product has no known ecotoxicological effects.
Chronic aquatic toxicity : This product has no known ecotoxicological effects.
Toxicity Data on Soil : Not expected to adsorb on soil.
Other organisms relevant to the environment : No data available

Persistence and degradability
No data available

Bioaccumulative potential

Ingredients:
Hydrochloric acid (theor. 100%):
Partition coefficient: n-octanol/water : Remarks: No data available

Mobility in soil
No data available

Other adverse effects

Nuclear Fast Red / Red Counterstain II

Ecotoxicity

Ingredients:
Aluminium sulfate-hexadecahydrate:
Toxicity to fish:
LC50 (Gambusia affinis (Mosquito fish)): 37 mg/l
Exposure time: 4 d

Toxicity to daphnia and other aquatic invertebrates:
LC50 (Daphnia magna (Water flea)): ca. 136 mg/l
Exposure time: 1 h

Ecotoxicology Assessment:
Acute aquatic toxicity:
This product has no known ecotoxicological effects.

Chronic aquatic toxicity:
This product has no known ecotoxicological effects.

Toxicity Data on Soil:
Not expected to adsorb on soil.

Other organisms relevant to the environment:
No data available

Persistence and degradability:
No data available

Bioaccumulative potential:

Ingredients:
Aluminium sulfate-hexadecahydrate:
Partition coefficient: n-octanol/water:
Remarks: No data available

Mobility in soil:
No data available

Other adverse effects

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods:
Waste from residues:
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging:
Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation:
UNRTDG:
UN number: UN 3316
Class: 9
Packing group: II
SAFETY DATA SHEET

IRON STAINING KIT

Labels : 9

IATA-DGR
UN/ID No. : UN 3316
Proper shipping name : Chemical kits
Class : 9
Packing group : II
Labels :
Packing instruction (cargo aircraft) : 960
Packing instruction (passenger aircraft) : 960

IMDG-Code
UN number : UN 3316
Proper shipping name :
Class : 9
Packing group : II
Labels : 9
EmS Code : F-A, S-P
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

Domestic regulation

49 CFR
UN/ID/NA number : UN 3316
Proper shipping name : CHEMICAL KITS

Class : 9
Packing group : II
Labels : Class 9 - Miscellaneous Dangerous Goods
ERG Code : 171
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

Iron Reagent A

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SAFETY DATA SHEET

IRON STAINING KIT

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Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-23-2015

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 11 SOCMCI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

US State Regulations

Massachusetts Right To Know
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know
Water 7732-18-5 90 - 100 %
Potassium hexacyanidoferrate(II) trihydrate 14459-95-1 10 - 20 %

New Jersey Right To Know
Water 7732-18-5 90 - 100 %
Potassium hexacyanidoferrate(II) trihydrate 14459-95-1 10 - 20 %

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

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

CH INV: On the inventory, or in compliance with the inventory
TSCA: On TSCA Inventory
DSL: All components of this product are on the Canadian DSL
AICS: On the inventory, or in compliance with the inventory
NZIoC: On the inventory, or in compliance with the inventory
ENCS: Not in compliance with the inventory
ISHL: Water
KECI: On the inventory, or in compliance with the inventory

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Version 1.2
Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-23-2015

PICCS: On the inventory, or in compliance with the inventory
IECSC: On the inventory, or in compliance with the inventory

TSCA list
No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

Iron Reagent B

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid (theor. 100%)</td>
<td>7647-01-0</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Acute Health Hazard
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

Hydrochloric acid (theor. 100%) 7647-01-0 1.9999%

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Hydrochloric acid (theor. 100%) 7647-01-0 1.9999%

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Hydrochloric acid (theor. 100%) 7647-01-0 1.9999%

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Hydrochloric acid (theor. 100%) 7647-01-0 1.9999%
The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

- Hydrochloric acid (theor. 100%) 7647-01-0 1.9999 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

US State Regulations

Massachusetts Right To Know

- Hydrochloric acid (theor. 100%) 7647-01-0 1 - 5 %

Pennsylvania Right To Know

- Water 7732-18-5 90 - 100 %
- Hydrochloric acid (theor. 100%) 7647-01-0 1 - 5 %

New Jersey Right To Know

- Water 7732-18-5 90 - 100 %
- Hydrochloric acid (theor. 100%) 7647-01-0 1 - 5 %

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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

- **CH INV**: On the inventory, or in compliance with the inventory
- **TSCA**: On TSCA Inventory
- **DSL**: All components of this product are on the Canadian DSL
- **AICS**: On the inventory, or in compliance with the inventory
- **NZIoC**: On the inventory, or in compliance with the inventory
- **ENCS**: Not in compliance with the inventory
  - Water
- **ISHL**: On the inventory, or in compliance with the inventory
- **KECI**: On the inventory, or in compliance with the inventory
- **PICCS**: On the inventory, or in compliance with the inventory
- **IECSC**: On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Nuclear Fast Red / Red Counterstain II**

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
SAFETY DATA SHEET

IRON STAINING KIT

Version 1.2
Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-23-2015

Ingredients

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumium sulfate-hexadecahydrate</td>
<td>16828-11-8</td>
<td>5000</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>1000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards: Acute Health Hazard

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 116.4A:
Alumium sulfate-hexadecahydrate | 16828-11-8 | 5.3 %

The following Hazardous Chemicals are listed under the U.S. Clean Water Act, Section 311, Table 117.3:
Alumium sulfate-hexadecahydrate | 16828-11-8 | 5.3 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

US State Regulations

Massachusetts Right To Know

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumium sulfate-hexadecahydrate</td>
<td>16828-11-8</td>
<td>5 - 10 %</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>0 - 0.1 %</td>
</tr>
</tbody>
</table>

Pennsylvania Right To Know

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>90 - 100 %</td>
</tr>
<tr>
<td>Alumium sulfate-hexadecahydrate</td>
<td>16828-11-8</td>
<td>5 - 10 %</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>0 - 0.1 %</td>
</tr>
</tbody>
</table>

18 / 23
New Jersey Right To Know
Water 7732-18-5 90 - 100 %
Aluminium sulfate-hexadecahydrate 16828-11-8 5 - 10 %

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

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

CH INV : On the inventory, or in compliance with the inventory
TSCA : Not on TSCA Inventory
        Nuclear Fast Red
DSL : All components of this product are on the Canadian DSL
AICS : Not in compliance with the inventory
        Nuclear Fast Red
NZIoC : On the inventory, or in compliance with the inventory
ENCS : Not in compliance with the inventory
        Water
        Nuclear Fast Red
ISHL : Not in compliance with the inventory
        Nuclear Fast Red
KECI : Not in compliance with the inventory
        Nuclear Fast Red
PICCS : Not in compliance with the inventory
        Nuclear Fast Red
IECSC : On the inventory, or in compliance with the inventory

TSCA list
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Iron Reagent A
GHS Label element
Not a hazardous substance or mixture.

Iron Reagent B
GHS Label element
Hazard pictograms :
Signal Word: Danger

Hazard Statements:
- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.

Precautionary Statements:

Prevention:
- P234 Keep only in original container.
- P264 Wash skin thoroughly after handling.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338 + P310 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 or doctor/ physician.
- P363 Wash contaminated clothing before reuse.
- P390 Absorb spillage to prevent material damage.

Storage:
- P405 Store locked up.
- P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

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

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Nuclear Fast Red / Red Counterstain II

GHS Label element
Hazard pictograms:

Signal Word: Danger

Hazard Statements: H318 Causes serious eye damage.

Precautionary Statements:

Prevention:
- P280 Wear eye protection/ face protection.

Response:
- P305 + P351 + P338 + P310 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 or doctor/ physician.
SECTION 16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; 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; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

Further information

Iron Reagent A
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only
to the specific material designated and may not be valid for such material used in combination
with any other materials or in any process, unless specified in the text.

US / Z8