<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSKTIRO</td>
<td>Iron Stain Kit</td>
</tr>
</tbody>
</table>

Components:

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAHP04</td>
<td>3% Potassium Ferrocyanide</td>
</tr>
<tr>
<td>SSAHH02</td>
<td>3% Hydrochloric Acid</td>
</tr>
<tr>
<td>SSSTNFR</td>
<td>Nuclear Fast Red Stain</td>
</tr>
</tbody>
</table>
1 Identification of the Substance/Mixture and Company

Product Name: 3% Potassium Ferrocyanide
SDS Code: SSAHP04
Product Description: Laboratory Reagent

Manufacturer/Supplier:
American MasterTech
1330 Thurman Street
Lodi, CA 95240
USA
(800) 860-4073

European Authorized Representative:
Emergo Europe
Prinsessegracht 20
2514 AP The Hague,
The Netherlands

Emergency Telephone Number: Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

2 Hazards Identification

Classification of the substance or mixture
The product is not classified according to the Globally Harmonized System (GHS).

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Classification system:
NFPA ratings (scale 0 - 4)
Health = 1
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 1
Fire = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition

Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.
SAFETY DATA SHEET
In Accordance with ISO/DIS 11014

Review Date 03/16/2017 Revision Date 03/14/2017

Product Name: 3% Potassium Ferrocyanide

4 First Aid Measures

Description of first aid measures
General information: No special measures required.
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If symptoms persist consult doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed: No further relevant information available.
Indication of any immediate medical attention and special treatment needed:
No further relevant information available.

5 Firefighting Measures

Extinguishing media
Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Special hazards arising from the substance or mixture: No further relevant information available.
Advice for firefighters
Protective equipment: No special measures required.

6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Not required.
Environmental precautions:
Dilate with plenty of water.
Do not allow to enter sewers/surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th>14459-95-1 Potassium Ferrocyanide</th>
<th>16 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-2:</td>
<td>14459-95-1 Potassium Ferrocyanide</td>
<td>23 mg/m³</td>
</tr>
<tr>
<td>PAC-3:</td>
<td>14459-95-1 Potassium Ferrocyanide</td>
<td>140 mg/m³</td>
</tr>
</tbody>
</table>
7 Handling and Storage

Handling:
Precautions for safe handling: No special measures required.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls:
Personal protective equipment:
General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.

Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic physical and chemical properties
General Information
Appearance
Form: Liquid
Color: Yellow
Odor: Odorless
Odor threshold: Not determined.
Product Name: 3% Potassium Ferrocyanide

### pH-value:
Not determined.

### Change in condition

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/Melting range:</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>100 °C (212 °F)</td>
</tr>
</tbody>
</table>

### Flash point:
Not applicable.

### Flammability (solid, gaseous):
Not applicable.

### Ignition temperature:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto igniting:</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion:</td>
<td>Product does not present an explosion hazard.</td>
</tr>
</tbody>
</table>

### Explosion limits:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper:</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

### Vapor pressure at 20 °C (68 °F):
23 hPa (17 mm Hg)

### Density at 20 °C (68 °F):
0 g/cm³ (0 lbs/gal)

### Relative density:
Not determined.

### Vapour density:
Not determined.

### Evaporation rate:
Not determined.

### Solubility in / Miscibility with Water:
Fully miscible.

### Partition coefficient (n-octanol/water):
Not determined.

### Dynamic at 20 °C (68 °F):
0 mPas

### Kinematic:
Not determined.

### Other information:
No further relevant information available.

## 10 Stability and Reactivity

**Reactivity:** No further relevant information available.

**Chemical stability:**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions:** No dangerous reactions known.

**Conditions to avoid:** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicology Information

**Information on toxicological effects**

**Acute toxicity:**

**Primary irritant effect:**

- **On the skin:** No irritant effect.
- **On the eye:** No irritating effect.

**Sensitization:** No sensitizing effects known.
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th>None of the ingredients are listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>None of the ingredients are listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

12 Ecological Information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

13 Disposal Considerations

Waste treatment methods:
Recommendation:
Smaller quantities can be disposed of with household waste.
Disposal must be according to official regulations.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport Information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA
Class
Not applicable

Packing group
DOT, ADR, IMDG, IATA
Not applicable

Environmental hazards
Marine pollutant:
No

Special precautions for user:
Not applicable.

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

UN "Model Regulation":
Not applicable

15 Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA
Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.

TSCA (Toxic Substances Control Act):
7732-18-5 water, distilled, conductivity or of similar purity

Proposition 65
Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

Carcinogenic categories
EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)
None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Product Name: 3% Potassium Ferrocyanide

**Hazard statements** Not applicable
**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other Information
This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

**Department issuing SDS:** Regulatory Department

**Contact:** Phone (800) 860-4073

**Date of preparation / last revision** 03/16/2017 / -

**Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

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1 Identification of the Substance/Mixture and Company

Product Name: 3% Hydrochloric Acid
SDS Code: SSAHH02
Product Description: Laboratory Reagent
Manufacturer/Supplier: American MasterTech
1330 Thurman Street
Lodi, CA 95240
USA
(800) 860-4073

European Authorized Representative:
Emergo Europe
Prinsessegracht 20
2514 AP The Hague,
The Netherlands

Emergency Telephone Number: Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

2 Hazards Identification

Classification of the substance or mixture
The product is not classified according to the Globally Harmonized System (GHS).

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Classification system:
NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition

Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.
Product Name: 3% Hydrochloric Acid

### 4 First Aid Measures

**Description of first aid measures**

**General information:** No special measures required.
**After inhalation:** Supply fresh air; consult doctor in case of complaints.
**After skin contact:** Generally the product does not irritate the skin.
**After eye contact:** Rinse opened eye for several minutes under running water.
**After swallowing:** If symptoms persist consult doctor.

**Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Firefighting Measures

**Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:** No further relevant information available.

**Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Not required.

**Environmental precautions:**
- Dilute with plenty of water.
- Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:**
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**
- No dangerous substances are released.
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

**Protective Action Criteria for Chemicals**

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th>7647-01-0 hydrogen chloride</th>
<th>1.8 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-2:</td>
<td>7647-01-0 hydrogen chloride</td>
<td>22 ppm</td>
</tr>
<tr>
<td>PAC-3:</td>
<td>7647-01-0 hydrogen chloride</td>
<td>100 ppm</td>
</tr>
</tbody>
</table>
7 Handling and Storage

Handling:
Precautions for safe handling: No special measures required.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL Ceiling limit value</th>
<th>REL Ceiling limit value</th>
<th>TLV Ceiling limit value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7647-01-0 hydrogen chloride</td>
<td>7 mg/m³, 5 ppm</td>
<td>7 mg/m³, 5 ppm</td>
<td>2.98 mg/m³, 2 ppm</td>
</tr>
</tbody>
</table>

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls:
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic physical and chemical properties
General Information
Appearance
Form: Liquid
Color: Colorless
SAFETY DATA SHEET
In Accordance with ISO/DIS 11014

Product Name: 3% Hydrochloric Acid

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Nearly odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH-value</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>100 °C (212 °F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto igniting</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Vapor pressure at 20 °C (68 °F)</td>
<td>23 hPa (17 mm Hg)</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F):</td>
<td>1.0045 g/cm³ (8.383 lbs/gal)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water</td>
<td>Fully miscible</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Dynamic at 20 °C (68 °F):</td>
<td>0 mPas</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

10 Stability and Reactivity

Reactivity: No further relevant information available.
Chemical stability:
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
On the skin: No irritant effect.
Product Name: 3% Hydrochloric Acid

On the eye: No irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th>hydrogen chloride</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
</tbody>
</table>

12 Ecological Information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

13 Disposal Considerations

Waste treatment methods:
Recommendation:
Smaller quantities can be disposed of with household waste.
Disposal must be according to official regulations.

Uncleaned packagings:
Recommendation: Disposable must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport Information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
**SAFETY DATA SHEET**

In Accordance with ISO/DIS 11014

Review Date 03/16/2017  Revision Date 03/14/2017

**Product Name:** 3% Hydrochloric Acid

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user:</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>Stowage Category</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

**15 Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

**SARA**

**Section 355 (extremely hazardous substances):**
7647-01-0 hydrogen chloride

**Section 313 (Specific toxic chemical listings):**
7647-01-0 hydrogen chloride

**TSCA (Toxic Substances Control Act):**
All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**
None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**
None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**
7647-01-0 hydrogen chloride

**NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients are listed.
SAFETY DATA SHEET
In Accordance with ISO/DIS 11014

Product Name: 3% Hydrochloric Acid

GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

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Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073
Date of preparation / last revision 03/16/2017 / -

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

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1 Identification of the Substance/Mixture and Company

Product Name: Nuclear Fast Red Stain
SDS Code: SSSTNFR
Product Description: Histology Stain
Manufacturer/Supplier:
American MasterTech
1330 Thurman Street
Lodi, CA 95240
USA
(800) 860-4073

European Authorized Representative:
Emergo Europe
Prinsessegracht 20
2514 AP The Hague
The Netherlands

Emergency Telephone Number: Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

2 Hazards Identification

Classification of the substance or mixture

GHS08 Health hazard
Carc. 1A H350 May cause cancer.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS08

Signal word Danger

Hazard-determining components of labeling:
etanol
Hazard statements
May cause cancer.
Precautionary statements
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Product Name: Nuclear Fast Red Stain

Classification system:
NFPA ratings (scale 0 - 4)
Health = 1
Fire = 1
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 1
Fire = 1
Reactivity = 0

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition

Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>&lt;20%</td>
</tr>
</tbody>
</table>

4 First Aid Measures

Description of first aid measures
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If symptoms persist consult doctor.

Information for doctor:
Most important symptoms and effects, both acute and delayed: No further relevant information available.
Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Firefighting Measures

Extinguishing media
Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Special hazards arising from the substance or mixture: No further relevant information available.
Advice for firefighters
Protective equipment: No special measures required.

6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Not required.
Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>1,800 ppm</td>
</tr>
<tr>
<td>89-83-8 thymol</td>
<td>2.9 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>3300* ppm</td>
</tr>
<tr>
<td>89-83-8 thymol</td>
<td>32 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>15000* ppm</td>
</tr>
<tr>
<td>89-83-8 thymol</td>
<td>190 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and Storage

Handling:
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.
Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>Long-term value: 1900 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td></td>
<td>REL Long-term value: 1900 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td></td>
<td>TLV Short-term value: 1880 mg/m³, 1000 ppm</td>
</tr>
</tbody>
</table>

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Product Name: Nuclear Fast Red Stain

Wash hands before breaks and at the end of work.
Store protective clothing separately.

**Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:**
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material:**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles

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### 9 Physical and Chemical Properties

| Information on basic physical and chemical properties |
|---------------------------------------------|---|
| General Information:                        |   |
| **Appearance**                              |   |
| Form:                                       | Liquid |
| Color:                                      | Red |
| Odor:                                       | Thymol-like |
| Odor threshold:                             | Not determined. |
| pH-value:                                   | Not determined. |
| **Change in condition**                    |   |
| Melting point/Melting range:                | Undetermined. |
| Boiling point/Boiling range:                | 100 °C (212 °F) |
| Flash point:                                | Not applicable. |
| Flammability (solid, gaseous):              | Not applicable. |
| **Ignition temperature:**                  |   |
| Decomposition temperature:                 | Not determined. |
| Auto igniting:                              | Product is not selfigniting. |
| Danger of explosion:                        | Product does not present an explosion hazard. |
| **Explosion limits:**                       |   |
| Lower:                                      | Not determined. |
| Upper:                                      | Not determined. |
| **Vapor pressure at 20 °C (68 °F):**        | 23 hPa (17 mm Hg) |
| **Density at 20 °C (68 °F):**               | 0 g/cm³ (0 lbs/gal) |
| Relative density:                           | Not determined. |
| Vapour density:                             | Not determined. |
Evaporation rate: Not determined.
Solubility in / Miscibility with Water: Fully miscible.
Partition coefficient (n-octanol/water): Not determined.
Dynamic at 20 °C (68 °F): 0 mPas
Kinematic: Not determined.
Other information: No further relevant information available.

10 Stability and Reactivity

Reactivity: No further relevant information available.
Chemical stability:
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
On the skin: No irritant effect.
On the eye: No irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:

Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
</tr>
</tbody>
</table>

12 Ecological Information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Product Name: Nuclear Fast Red Stain

Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport Information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td>Special precautions for user:</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

15 Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 313 (Specific toxic chemical listings):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TSCA (Toxic Substances Control Act):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
</tbody>
</table>
Product Name: Nuclear Fast Red Stain

7732-18-5 | water, distilled, conductivity or of similar purity

**Proposition 65**

**Chemicals known to cause cancer:**
None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**
64-17-5 | ethanol

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**
None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**
64-17-5 | ethanol | A3

**NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients are listed.

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**

![GHS08]

**Signal word** Danger

**Hazard-determining components of labeling:**
ethanol

**Hazard statements**
May cause cancer.

**Precautionary statements**
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:**
**Additional classification according to Decree on Hazardous Materials:**
Carcinogenic hazardous material group III (dangerous).

**Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
16 Other Information

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NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Carc. 1A: Carcinogenicity – Category 1A

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