


Nuclear Fast Red Solution



1. Identification

1.1 Product Identifier	Product Name: Nuclear Fast Red Solution (Enhanced Stability) Product Number: SSC1099	
1.2 Intended use	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
1.3 Details of the supplier of the safety data sheet	Manufacturer	Cancer Diagnostics, Inc.
	Address	116 Page Point Circle Durham, NC 27703
	Phone Number	1-877-846-5393
	Fax Number	1-877-817-1716
	e-mail	compliance@cancerdiagnostics.com
	Website	www.cancerdiagnostics.com

2. Hazards Identification

2.1 GHS Classification	Skin irritation (Category 2) – H315 Serious eye damage (Category 1) – H318 Chronic aquatic toxicity (Category 3) – H412	
Classification: Directive 1999/45/EC		Xi, R36, S26 EN: Irritant DA: Lokalirriterende DE: Reizend EL: Ερεθιστικό ES: Irritante FR: Irritant IT: Irritante NL: Irriterend PT: Irritante SV: Irriterande
For full text of R- & S- phrases: see Section 15.		

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2.2 Label Elements	Pictogram(s):  Signal word: Danger Hazard statement(s): H303 – May be harmful if swallowed. H318 – Causes serious eye damage H412 – Harmful to aquatic life with long-lasting effects Precautionary statement(s): P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P305 + P351 + P315 - IF IN EYES: Rinse cautiously with water for several minutes. Get immediate medical advice/attention. P273 – Avoid release to the environment.			
NFPA Scale: 0-4				
HMIS (U.S.A.) Scale: 0-4	HEALTH	2		
	FLAMMABILITY	0		
	PHYSICAL HAZARD	0		
	PERSONAL PROTECTION	B		
2.3 Other Hazards	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.			

3. Composition and Information on Ingredients




3.2 Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%/w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Water	7732-18-5	231-791-2	n/a	80-100
Aluminum Sulfate Hydrate	7784-31-8	233-135-0	 Warning. 2 H315 Causes skin irritation. 3 H335 May cause respiratory irritation.  Danger. 2 H318 Causes serious eye damage.  Warning. 2 H411 Toxic to aquatic life with long lasting effects.	≤ 5

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Nuclear Fast Red	6409-77-4	229-088-0	 Warning. 2 H315 Causes skin irritation. 2 H319 Causes serious eye irritation. 3 H335 May cause respiratory irritation.	≤ 0.2
Sodium Azide	26628-22-8	247-852-1	 Danger 1, 2 H300 Fatal if swallowed., H310 Fatal in contact with skin.  Warning. 1. H410 Very toxic to aquatic life with long lasting effects.	≤ 0.1

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Fire Fighting Measures

5.1 Extinguishing Media	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
5.2 Special hazards arising from the substance or mixture	Sulphur oxides, Aluminum oxide
5.3 Advice for firefighters	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.

6.2 Environmental precautions

Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.

6.3 Methods and materials for containment and cleaning up

Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

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7. Handling and Storage

7.1 Precautions for safe handling.

Avoid contact with skin and eyes.
 Wash thoroughly after handling.
 Avoid breathing vapor.

7.2 Conditions for safe storage, including any incompatibilities.

Store in well ventilated area.
 Keep container tightly closed.
 Store at 15-30°C.

7.3 Specific end use(s).

See section 1.2

8. Exposure Controls / Personal Protection

8.1 Control parameters	Exposure Limits: Sodium Azide: ACGIH TLV: 0.29/mg/m ³ ceiling NIOSH REL-C: 0.3mg/m ³ skin
8.2 Exposure controls	Personal Protective Equipment (PPE): Eye/Face protection. Safety glasses or goggles are required. Skin protection. Protective clothing is required. Hand protection. Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove. Respiratory protection. Avoid breathing vapor. Environmental exposure controls. Avoid releasing large quantities into the environment. No additional information.
Engineering Controls	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Red
Odor	Odorless
Odor Threshold	Unknown
pH	3.2 ± 0.4
Melting Point/ Freezing Point	Unknown
Initial Boiling Point	Unknown
Flash Point	Unknown
Evaporation Rate	Unknown
Flammability (solid, gas)	Unknown
Upper/Lower Flammability Limits	Unknown
Vapor Pressure	Unknown

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Vapor Density	Unknown
Relative Density	Unknown
Solubility(ies)	Water
Partition Coefficient: n-octanol/water	Unknown
Auto-Ignition Temperature	Unknown
Decomposition Temperature	Unknown
Viscosity	Unknown
Explosive Properties	Not explosive.
Oxidizing Properties	Unknown

10. Stability and Reactivity

10.1 Reactivity	No relevant data available.
10.2 Chemical Stability	Stable under normal temperatures and pressures.
10.3 Possibility of Hazardous Reactions	No hazardous reactions known.
10.4 Conditions to Avoid	Fire, static electricity, direct sunlight.
10.5 Incompatible Materials	Strong oxidizing agents, metals.
10.6 Hazardous Decomposition Materials	Sulphur oxides, Aluminum oxide.

11. Toxicological Information

11.1 Information on Toxicological Effects.	<p>Acute Toxicity. No relevant data available</p> <p>Skin Corrosion/Irritation. Irritating to skin and mucous membranes.</p> <p>Serious Eye Damage/Irritation. Causes serious damage to eye.</p> <p>Respiratory or skin sensitization. No relevant data available.</p> <p>Germ Cell Mutagenicity. No relevant data available.</p>
Carcinogenicity.	<p>International Agency for Research on Cancer (IARC). None of the components are listed.</p> <p>National Toxicology Program (NTP). None of the components are listed.</p>

12. Ecological Information

12.1 Toxicity	<p>Fish: No relevant studies identified. Crustacea: No relevant studies identified. Algae/Aquatic Plants: No relevant studies identified. Other Organisms: No relevant studies identified.</p> <p>Other: Known to be harmful to aquatic life with long-lasting effects.</p>
12.2 Persistence and Degradability.	No relevant studies identified.
12.3 Bioaccumulative Potential.	No relevant studies identified.

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12.4 Mobility in Soil.	Miscible in water. May spread in water systems. This component is non-volatile.
Additional Remarks	None.
12.5 Results of PBT and vPvB Assessment.	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.

13. Disposal Considerations

13.1 Waste Disposal Methods.	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
Product/Packaging Disposal.	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
Other Disposal Recommendations.	No relevant data available.

14. Transport Information

14.1 UN Number DOT, IATA,IMDG, ADR	DOT: Not dangerous goods. ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.
14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR	ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods. DOT: Not dangerous goods.
14.3 Transport Hazard Class(es)	DOT: Not dangerous goods. IATA: Not dangerous goods. IMDG: Not dangerous goods. ADR/RID: Not dangerous goods.
14.4 Packing Group DOT, IATA,IMDG, ADR	ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods. DOT: Not dangerous goods.
14.5 Environmental Hazards	Marine Pollutant: No
14.6 Special Precautions for User	Not applicable.
14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code.	This product is not intended to be transported in bulk as defined in Annex II of MARPOL73/78 and the IBC Code.

15. Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.	
Extremely Hazardous Substances; Section 355	None of the components in this mixture are listed.
Toxic Substances Control Act; TSCA	All of the components in this mixture are listed.
California Proposition 65	This mixture does not contain a chemical known to the state of California to cause cancer.
Right To Know Components	None of the components in this mixture are listed.

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15.2 Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
R phrases	<p>R38 EN: Irritating to skin. DA: Irriterer huden. DE: Reizt die Haut. EL: Ερεθίζει το δέρμα. ES: Irrita la piel. FR: Irritant pour la peau. IT: Irritante per la pelle. NL: Irriterend voor de huid. PT: Irriterend voor de huid. SV: Irriterar huden.</p> <p>R41 EN: Risk of serious damage to eyes. DA: Risiko for alvorlig øjenskade. DE: Gefahr ernster Augenschäden. EL: Κίνδυνος σοβαρών οφθαλμικών βλαβών. ES: Riesgo de lesiones oculares graves. FR: Risque de lésions oculaires graves. IT: Rischio di gravi lesioni oculari. NL: Gevaar voor ernstig oogletsel. PT: Risco de lesões oculares graves. SV: Risk för allvarliga ögonskador.</p> <p>R52 EN: Harmful to aquatic organisms. DA: Skadelig for organismer, der lever i vand. DE: Schädlich für Wasserorganismen. EL: Επιβλαβές για τους υδρόβιους οργανισμούς. ES: Nocivo para los organismos acuáticos. FR: Nocif pour les organismes aquatiques. IT: Nocivo per gli organismi acquatici. NL: Schadelijk voor in het water levende organismen. PT: Nocivo para os organismos aquáticos. SV: Skadligt för vattenlevande organismer.</p>
S phrases	<p>S36/37/39 EN: Wear suitable protective clothing, gloves and eye/face protection. DA: Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller/ansigtsskærm. DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen. EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara. FR: Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage. IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia. NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht. PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados. SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.</p> <p>S26 EN: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. DA: Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes. DE: Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren. EL: Σε περίπτωση επαφής με τα μάτια πλύνετε τα αμέσως με άφρονο νερό και ζητήστε ιατρική συμβουλή. ES: En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico.</p>

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	<p>FR: En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste.</p> <p>IT: In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico.</p> <p>NL: Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen.</p> <p>PT: Em caso de contacto com os olhos, lavar imediata e abundantemente com água e consultar um especialista.</p> <p>SV: id kontakt med ögonen, spola genast med mycket vatten och kontakta läkare.</p>
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16. Other Information

Revision Date: 01/11/2019

Notice to Reader:


To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Potassium Ferrocyanide Solution 5%

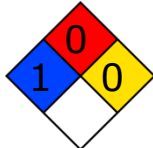
Section 1. Identification

1.1 Product Identifier	Product Name: Potassium Ferrocyanide Solution (5%) Product Number: SSC1143	
1.2 Intended use	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
1.3 Details of the supplier of the safety data sheet	Manufacturer	Cancer Diagnostics, Inc.
	Address	116 Page Point Circle Durham, NC 27703
	Phone Number	1-877-846-5393
	Fax Number	1-877-817-1716
	e-mail	compliance@cancerdiagnostics.com
	Website	www.cancerdiagnostics.com

Section 2. Hazards Identification

2.1 GHS Classification	Acute aquatic toxicity (Category 3) – H402 Chronic aquatic toxicity (Category 3) – H412
Classification: Directive 1999/45/EC	 <p>N: R31; S36/37/39 EN: Dangerous for the environment DA: Miljøfarlig DE: Umweltgefährlich EL: Επικίνδυνο για το περιβάλλον ES: Peligroso para el medio ambiente FR: Dangereux pour l'environnement IT: Pericoloso per l'ambiente NL: Milieugevaarlijk PT: Perigoso para o ambiente SV: Miljöfarlig'</p> <p>For full text of R- & S- phrases: see Section 15.</p>

Potassium Ferrocyanide Solution 5%


2.2 Label Elements	Pictogram: No Pictogram Signal word: No Signal word Hazard Statement(s): H412 – Harmful to aquatic life with long lasting effects Precautionary Statements(s): P273 – Avoid release to the environment P501 – Dispose of contents/ container to an approved waste disposal plant		
NFPA Scale: 0-4			
HMIS (U.S.A.) Scale: 0-4	HEALTH	1	
	FLAMMABILITY	0	
	PHYSICAL HAZARD	0	
	PERSONAL PROTECTION	B	
2.3 Other Hazards	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.		

Section 3. Composition and Information on Ingredients

3.2 Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Potassium Ferrocyanide, trihydrate	14459-95-1	237-722-2	 Warning, 3 H412 harmful to aquatic life with long lasting effects.	≤ 5

Section 4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Potassium Ferrocyanide Solution 5%

Section 5. Fire Fighting Measures

5.1 Extinguishing Media	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
5.2 Special hazards arising from the substance or mixture	No unusual fire or explosion hazards expected.
5.3 Advice for firefighters	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

Section 6. Accidental Release Measures

<p>6.1 Personal precautions, protective equipment and emergency procedures Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.</p> <p>6.2 Environmental precautions Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.</p> <p>6.3 Methods and materials for containment and cleaning up Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.</p>

Section 7. Handling and Storage

<p>7.1 Precautions for safe handling. Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing vapor.</p> <p>7.2 Conditions for safe storage, including any incompatibilities. Store in well ventilated area. Keep container tightly closed. Store at 15-30°C.</p> <p>7.3 Specific end use(s). See section 1.2</p>

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters	<p>Exposure Limits: N/A</p>
8.2 Exposure controls	<p>Personal Protective Equipment (PPE):</p> <p>Eye/Face protection. Safety glasses or goggles are required.</p> <p>Skin protection. Protective clothing is required.</p> <p>Hand protection. Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</p> <p>Respiratory protection. Avoid breathing vapor.</p> <p>Environmental exposure controls. Avoid releasing large quantities into the environment. No additional information.</p>

Potassium Ferrocyanide Solution 5%

Engineering Controls	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.
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Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Yellow.
Odor	Odorless
Odor Threshold	Unknown
pH	Basic.
Melting Point/ Freezing Point	Unknown
Initial Boiling Point	Unknown
Flash Point	Unknown
Evaporation Rate	Unknown
Flammability (solid, gas)	Unknown
Upper/Lower Flammability Limits	Unknown
Vapor Pressure	Unknown
Vapor Density	Unknown
Relative Density	Unknown
Solubility(ies)	Water
Partition Coefficient: n-octanol/water	Unknown
Auto-Ignition Temperature	Unknown
Decomposition Temperature	Unknown
Viscosity	Unknown
Explosive Properties	Not explosive.
Oxidizing Properties	Unknown

Section 10. Stability and Reactivity

10.1 Reactivity	No relevant data available.
10.2 Chemical Stability	Stable under normal temperatures and pressures.
10.3 Possibility of Hazardous Reactions	Contact with acid liberates very toxic gas.
10.4 Conditions to Avoid	Fire, static electricity, direct sunlight.
10.5 Incompatible Materials	Strong acids, acid fumes and oxidizers.
10.6 Hazardous Decomposition Materials	Nitrogen oxides, carbon monoxide, carbon dioxide and hydrogen cyanide.

Potassium Ferrocyanide Solution 5%

Section 11. Toxicological Information

11.1 Information on Toxicological Effects.	Acute Toxicity. No relevant data available Skin Corrosion/Irritation. May be irritating to skin and mucous membranes. Serious Eye Damage/Irritation. May be irritating to the eyes. Respiratory or skin sensitization. No relevant data available. Germ Cell Mutagenicity. No relevant data available.
Carcinogenicity.	International Agency for Research on Cancer (IARC). None of the components are listed. National Toxicology Program (NTP). None of the components are listed.

Section 12. Ecological Information

12.1 Toxicity	Fish: No relevant studies identified. Crustacea: No relevant studies identified. Algae/Aquatic Plants: No relevant studies identified. Other Organisms: No relevant studies identified.
12.2 Persistence and Degradability.	No relevant studies identified.
12.3 Bioaccumulative Potential.	No relevant studies identified.
12.4 Mobility in Soil.	Miscible in water. May spread in water systems. This component is non-volatile.
Additional Remarks	None.
12.5 Results of PBT and vPvB Assessment.	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.

Section 13. Disposal Considerations

13.1 Waste Disposal Methods.	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
Product/Packaging Disposal.	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
Other Disposal Recommendations.	No relevant data available.

Section 14. Transport Information

14.1 UN Number DOT, IATA, IMDG, ADR	DOT: Not dangerous goods. ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.
14.2 UN Proper Shipping	ADR/RID: Not dangerous goods.

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Name DOT, IATA,IMDG, ADR	IMDG: Not dangerous goods. IATA: Not dangerous goods. DOT: Not dangerous goods.
14.3 Transport Hazard Class(es)	DOT: Not dangerous goods. IATA: Not dangerous goods. IMDG: Not dangerous goods. ADR/RID: Not dangerous goods.
14.4 Packing Group DOT, IATA,IMDG, ADR	ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods. DOT: Not dangerous goods.
14.5 Environmental Hazards	Marine Pollutant: No
14.6 Special Precautions for User	Not applicable.

Section 15. Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.	
Extremely Hazardous Substances; Section 355	None of the components in this mixture are listed.
Toxic Substances Control Act; TSCA	All of the components in this mixture are listed.
California Proposition 65	None of the components in this mixture are listed.
Right To Know Components	None of the components in this mixture are listed.
15.2 Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
R phrases	R31 EN: Contact with acids liberates toxic gas. DA: Udvikler giftig gas ved kontakt med syre. DE: Entwickelt bei Berührung mit Säure giftige Gase. EL: Σε επαφή με οξέα ελευθερώνονται τοξικά αέρια. ES: Σε επαφή με οξέα ελευθερώνονται τοξικά αέρια. FR: Au contact d'un acide, dégage un gaz toxique. IT: A contatto con acidi libera gas tossico. NL: Vormt vergiftige gassen in contact met zuren. PT: Em contacto com ácidos liberta gases tóxicos. SV: Utvecklar giftig gas vid kontakt med syra.
S phrases	S36/37/39 EN: Wear suitable protective clothing, gloves and eye/face protection. DA: Brug særligt arbejdstøj, egnede beskyttelseshandsker og -briller/ansigtsskærm. DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen. EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara. FR: Porter un vêtement de protection appropriée, des gants et un appareil de protection des yeux/du visage. IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia. NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht. PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados. SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.

Potassium Ferrocyanide Solution 5%

Section 16. Other Information

Revision Date: 01/11/2019

Notice to Reader:


To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Hydrochloric acid solution 2%



Section 1. Identification

1.1 Product Identifier	Product Name: Hydrochloric acid solution (2%) Product Number: SSC1084	
1.2 Intended use	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.	
1.3 Details of the supplier of the safety data sheet	Manufacturer	Cancer Diagnostics, Inc.
	Address	116 Page Point Circle Durham, NC 27703
	Phone Number	1-877-846-5393
	Fax Number	1-877-817-1716
	e-mail	compliance@cancerdiagnostics.com
	Website	www.cancerdiagnostics.com

Section 2. Hazards Identification

2.1 GHS Classification	Corrosive to metals (Category 1) – H290 Skin irritation (Category 2) – H315 Serious eye damage (Category 1) – H318	
Classification: Directive 1999/45/EC		C, R38, R41; S26, S36/37/39 EN: Corrosive DA: Ætsende DE: Ätzend EL: Διαβρωτικό ES: Corrosivo FR: Corrosif IT: Corrosivo NL: Bijtend PT: Corrosivo SV: Frätande For full text of R- & S- phrases: see Section 15.

Hydrochloric acid solution 2%



2.2 Label Elements	Pictogram(s):  Signal word: Danger Hazard statement(s): H290 – May be corrosive to metals H315 – Causes skin irritation H320 – Causes serious eye damage Precautionary statement(s): P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P305 + P351 + P310- IF IN EYES: Rinse cautiously with water for several minutes. Immediately call a POISON CENTER/ doctor.										
NFPA Scale: 0-4											
HMIS (U.S.A.) Scale: 0-4	<table border="1"> <tr> <td>HEALTH</td> <td>2</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td>C</td> </tr> </table>	HEALTH	2	FLAMMABILITY	0	PHYSICAL HAZARD	0	PERSONAL PROTECTION	C		
HEALTH	2										
FLAMMABILITY	0										
PHYSICAL HAZARD	0										
PERSONAL PROTECTION	C										
2.3 Other Hazards	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.										

Section 3. Composition and Information on Ingredients

3.2 Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%/w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Hydrochloric Acid (~37%)	7647-01-0	231-595-7	 Warning. 3. H335 May cause respiratory irritation.  Danger. 1B. H314 Causes severe skin burns and eye damage.	≤ 5

Section 4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious

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person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. Fire Fighting Measures

5.1 Extinguishing Media	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
5.2 Special hazards arising from the substance or mixture	Hydrogen chloride gas. Emits acrid vapors under fire conditions.
5.3 Advice for firefighters	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.

6.2 Environmental precautions

Keep material away from heat, flame, ignition sources, and reactive materials. Don't allow product to enter drain.

6.3 Methods and materials for containment and cleaning up

Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

Section 7. Handling and Storage

7.1 Precautions for safe handling.

Avoid contact with skin and eyes.

Wash thoroughly after handling.

Avoid breathing vapor.

7.2 Conditions for safe storage, including any incompatibilities.

Store in well ventilated area.

Keep container tightly closed.

Store at 15-30°C.

7.3 Specific end use(s).

See section 1.2

Section 8. Exposure Controls / Personal Protection

8.1 Control parameters	Exposure Limits: Hydrochloric Acid (37%) NIOSH REL : C 5 ppm (7 mg/m ³) OSHA PEL : C 5 ppm (7 mg/m ³)
8.2 Exposure controls	Personal Protective Equipment (PPE): Eye/Face protection. Safety glasses or goggles are required. Skin protection. Protective clothing is required. Hand protection. Chemical resistant gloves are required.

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	Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove. Respiratory protection. Avoid breathing vapor. Environmental exposure controls. Avoid releasing large quantities into the environment. No additional information.
Engineering Controls	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Odor	Odorless
Odor Threshold	Unknown
pH	Unknown
Melting Point/ Freezing Point	Unknown
Initial Boiling Point	Unknown
Flash Point	Unknown
Evaporation Rate	Unknown
Flammability (solid, gas)	Unknown
Upper/Lower Flammability Limits	Unknown
Vapor Pressure	Unknown
Vapor Density	Unknown
Relative Density	Unknown
Solubility(ies)	Water
Partition Coefficient: n-octanol/water	Unknown
Auto-Ignition Temperature	Unknown
Decomposition Temperature	Unknown
Viscosity	Unknown
Explosive Properties	Not explosive.
Oxidizing Properties	Unknown

Section 10. Stability and Reactivity

10.1 Reactivity	No relevant data available.
10.2 Chemical Stability	Stable under normal temperatures and pressures.
10.3 Possibility of Hazardous Reactions	No hazardous reactions known.
10.4 Conditions to Avoid	Fire, static electricity, direct sunlight.
10.5 Incompatible Materials	Metals, strong oxidizers, strong bases, metal oxides.
10.6 Hazardous Decomposition Materials	Hydrogen Chloride, Hydrogen Gas.

Section 11. Toxicological Information

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11.1 Information on Toxicological Effects.	Acute Toxicity. No relevant data available Skin Corrosion/Irritation. Irritating to skin and mucous membranes. Serious Eye Damage/Irritation. Corrosive to eye. Respiratory or skin sensitization. No relevant data available. Germ Cell Mutagenicity. No relevant data available.
Carcinogenicity.	International Agency for Research on Cancer (IARC). Hydrochloric Acid is listed as Group 3 – Not classifiable as to carcinogenicity in humans National Toxicology Program (NTP). None of the components are listed.

Section 12. Ecological Information

12.1 Toxicity	Fish: No relevant studies identified. Crustacea: No relevant studies identified. Algae/Aquatic Plants: No relevant studies identified. Other Organisms: No relevant studies identified.
12.2 Persistence and Degradability.	No relevant studies identified.
12.3 Bioaccumulative Potential.	No relevant studies identified.
12.4 Mobility in Soil.	Miscible in water. May spread in water systems. This component is non-volatile.
Additional Remarks	None.
12.5 Results of PBT and vPvB Assessment.	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.


Section 13. Disposal Considerations

13.1 Waste Disposal Methods.	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.
Product/Packaging Disposal.	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
Other Disposal Recommendations.	No relevant data available.

Section 14. Transport Information

14.1 UN Number DOT, IATA, IMDG, ADR	DOT: 1789 ADR/RID: 1789 IMDG: 1789 IATA: 1789
14.2 UN Proper Shipping Name DOT, IATA, IMDG, ADR	ADR/RID: HYDROCHLORIC ACID IMDG: HYDROCHLORIC ACID IATA: Hydrochloric acid

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	DOT: Hydrochloric acid
14.3 Transport Hazard Class(es)	DOT: 8 IATA: 8 IMDG: 8 ADR/RID: 8 
14.4 Packing Group DOT, IATA, IMDG, ADR	ADR/RID: III IMDG: III IATA: III DOT: III
14.5 Environmental Hazards	Marine Pollutant: No
14.6 Special Precautions for User	Not applicable.

Section 15. Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.	
Extremely Hazardous Substances; Section 355	None of the components in this mixture are listed.
Toxic Substances Control Act; TSCA	All of the components in this mixture are listed.
California Proposition 65	None of the components in this mixture are listed.
Right To Know Components	Hydrochloric Acid: California Massachusetts Minnesota New Jersey Pennsylvania
15.2 Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by Cancer Diagnostics, Inc.
R phrases	R38 EN: Irritating to skin. DA: Irriterer huden. DE: Reizt die Haut. EL: Ερεθίζει το δέρμα. ES: Irrita la piel. FR: Irritant pour la peau. IT: Irritante per la pelle. NL: Irriterend voor de huid. PT: Irriterend voor de huid. SV: Irriterar huden. R41 EN: Risk of serious damage to eyes. DA: Risiko for alvorlig øjenskade. DE: Gefahr ernster Augenschäden. EL: Κίνδυνος σοβαρών οφθαλμικών βλαβών. ES: Riesgo de lesiones oculares graves. FR: Risque de lésions oculaires graves. IT: Rischio di gravi lesioni oculari. NL: Gevaar voor ernstig oogletsel.

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	PT: Risco de lesões oculares graves. SV: Risk för allvarliga ögonskador.
S phrases	<p>S26 EN: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. DA: Kommer stoffet i øjnene, skylles straks grundigt med vand og læge kontaktes. DE: Bei Berührung mit den Augen sofort gründlich mit Wasser abspülen und Arzt konsultieren. EL: Σε περίπτωση επαφής με τα μάτια πλύνετε τα αμέσως με άφθονο νερό και ζητήστε ιατρική συμβουλή. ES: En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico. FR: En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste. IT: In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico. NL: Bij aanraking met de ogen onmiddellijk met overvloedig water afspoelen en deskundig medisch advies inwinnen. PT: Em caso de contacto com os olhos, lavar imediata e abundantemente com água e consultar um especialista. SV: id kontakt med ögonen, spola genast med mycket vatten och kontakta läkare.</p> <p>S36/37/39 EN: Wear suitable protective clothing, gloves and eye/face protection. DA: Brug særligt arbejdstøj, egnede beskytteshandsker og -briller/ansigtsskærm. DE: Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen. EL: Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου ES: Úsense indumentaria y guantes adecuados y protección para los ojos/la cara. FR: Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage. IT: Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia. NL: Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/het gezicht. PT: Usar vestuário de protecção, luvas e equipamento protector para os olhos /face adequados. SV: Använd lämpliga skyddskläder, skyddshandskar samt skyddsglasögon eller ansiktsskydd.</p>

Section 16. Other Information

Revision Date: 01/11/2019

Notice to Reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.