



Date Issued: 05/04/2010
Supersedes Date:

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-PBI-A
Part Name: 4% POTASSIUM FERROCYANIDE IN DIS TILLED WATER
Supplier: Triangle Biomedical Sciences, Inc. (TBS)
3014 Croasdaile Drive
Durham, NC 27705
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

Section 2: Composition/ Information on Ingredients

Table with 4 columns: Item #, Name, CAS#, % in product. Row 1: 1, Ferrate(4-), hexakis(cyano-C)-, tetrapotassium, trihydrate, 014459951, 1.74. Row 2: 2, Water, 007732185, 98.

OSHA (ACGIH) Exposure Limits

Table with 8 columns: CAS#, IDLH, OSHA, ACGIH, TWA (ppm, mg/), ppm, mg/m3, ppm, mg/m3. Rows for CAS# 007732185 and 014459951.

Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Table with 3 columns: Health, Flammability, Reactivity. Values: 0, 0, 0.

Section 4: First Aid Measures

Contact medical personnel.
Flush eyes with flowing water for at least 15 minutes.
Separate eyelids with finger tips.
Wash skin with deluge of water for at least 15 minutes.

NA = not applicable NL = not listed NE = not established NNR = not normally required

Section 5: Fire Fighting MeasuresFlash point, deg F: ≥ 200

UEL: no data LEL: no data

Flammability Classification: no data

Hazardous Combustion Products: no data

Method:

Auto ignition temperature, deg. F.: no data

Flame Propagation Rate: no data

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

No special measures are indicated.

Section 7: Handling and Storage

Store at room temp

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

No special protection is indicated.

Section 9: Physical and Chemical PropertiesFormula: $K_4Fe(CN)_6$

Formula Weight: no data

boiling point: 212

melting point: 32

solubility: no data

vapor pressure: no data

vapor density: no data

Specific gravity: 1.04

ph: no data

appearance: clear yellow liquid

Section 10: Stability and Reactivity

Chemical Stability: stable

Conditions to Avoid: none

Incompatibility with other materials: none

Hazardous Decomposition Products: n

Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data

Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
007732185	not listed	not listed
014459951	not listed	not listed

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
007732185	no	no
014459951	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	
007732185	not listed
014459951	not listed

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)
This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
007732185	not listed	not listed	not listed
014459951	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs
This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
007732185	not listed	not listed	not listed
014459951	not listed	not listed	not listed

CERCLA
The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
007732185	Not listed	Not listed
014459951	Not listed	Not listed

Section 16: Other Information

TRIANGLE BIOMEDICAL SCIENCES (TBS) provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. TBS makes no representation or warranties, either expressed or implied of merchantability, fitness for particular purposes with respect to the information set forth herein or to which the information refers. Accordingly, TBS will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

NA = not applicable NL = not listed NE = not established NNR = not normally required

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required



Date Issued: 05/04/2010
Supersedes Date: _____

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-PBI-B
Part Name: 4% HYDROCHLORIC ACID IN DISTILLED WATER
Supplier: Triangle Biomedical Sciences, Inc. (TBS)
3014 Croasdaile Drive
Durham, NC 27705
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	% in product
1	Hydrogen chloride	007647010	1
2	Water	007732185	99

OSHA (ACGIH) Exposure Limits

CAS#	IDLH	TWA					
		ppm	mg/	ppm	mg/m3	ppm	mg/m3
007647010	50	Not classifi	--	--	--	5	7
OSHA							
ACGIH		--	--	--	--	5	7.5
007732185	NE	NE	NE	NE	NE	NE	NE
OSHA		NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Causes eye irritation.

Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
1	0	0

Section 4: First Aid Measures

Contact medical personnel if discomfort persists.

Flush eyes with flowing water for at least 15 minutes.

Separate eyelids with finger tips.

Wash skin with deluge of water for at least 15 minutes.

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Section 5: Fire Fighting Measures

Flash point, deg F: ≥ 200	Method:
UEL: no data LEL: no data	Auto ignition temperature, deg. F.: no data
Flammability Classification: no data	Flame Propagation Rate: no data
Hazardous Combustion Products: hydrogen chloride	

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.
 No special measures are indicated.

Section 7: Handling and Storage

Store at room temp

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

No special protection is indicated.

Section 9: Physical and Chemical Properties

Formula:	HCl	vapor pressure:	no data
Formula Weight:	no data	vapor density:	no data
boiling point:	212	Specific gravity:	1.048
melting point:	32	ph:	1
solubility:	miscible	appearance:	clear colorless liquid

Section 10: Stability and Reactivity

Chemical Stability	stable
Conditions to Avoid:	one
Incompatibility with other materials:	none
Hazardous Decomposition Products:	hydrogen chloride
Hazardous Polymerization:	will not occur

Section 11: Toxicological Information

Acute Data:	no data
Subchronic data:	no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
007647010	not listed	not listed
007732185	not listed	not listed

NA = not applicable NL = not listed NE = not established NNR = not normally required

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
007647010	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#

007647010	FL	MA	MN	NJ	PA	WA
007732185	not listed					

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
007647010	Hydrochloric acid (acid aerosols including mists, vapors, gas	1.0	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
007647010	Hydrogen chloride (gas only)	500	5,000
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
007647010	Not listed	Not listed
007732185	Not listed	Not listed

Section 16: Other Information

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END OF MSDS

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required



Date Issued: 05/04/2010
Supersedes Date: _____

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-PBI-C
Part Name: Nuclear Fast Red 1%
Supplier: Triangle Biomedical Sciences, Inc. (TBS)
3014 Croasdaile Drive
Durham, NC 27705
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	% in product
1	2-Anthracenesulfonic acid, 9-amino-9,10-dihydro-1,3-dihydroxy-9,10-dioxo-monoso	006409774	1
2	Water	007732185	99

OSHA (ACGIH) Exposure Limits

CAS#	IDLH	TWA					
		ppm	mg/	ppm	mg/m3	ppm	mg/m3
006409774	NE	NE	NE	NE	NE	NE	NE
007732185	NE	NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
0	0	0

Section 4: First Aid Measures

Contact medical personnel.
Flush eyes with flowing water for at least 15 minutes.
If swallowed, wash out mouth with water if person is conscious.
Separate eyelids with finger tips.
Wash skin with deluge of water for at least 15 minutes.

NA = not applicable NL = not listed NE = not established NNR = not normally required

Section 5: Fire Fighting Measures

Flash point, deg F.: ≥ 200 Method:
 UEL: no data LEL: no data Auto ignition temperature, deg. F.: no data
 Flammability Classification: no data Flame Propagation Rate: no data
 Hazardous Combustion Products: sulfur compounds; nitrogen compounds

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.
 No special measures are indicated.

Section 7: Handling and Storage

Store at room temp

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.
 No special protection is indicated.

Section 9: Physical and Chemical Properties

Formula:	no data	vapor pressure:	no data
Formula Weight:	no data	vapor density:	no data
boiling point:	212	Specific gravity:	1.01
melting point:	32	ph:	no data
solubility:	miscible	appearance:	opaque dark red liquid

Section 10: Stability and Reactivity

Chemical Stability stable
 Conditions to Avoid: none
 Incompatibility with other materials: none
 Hazardous Decomposition Products: no data
 Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
 Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
006409774	not listed	not listed
007732185	not listed	not listed

NA = not applicable NL = not listed NE = not established NNR = not normally required

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

Section 15: Regulatory Information

This product contains a component which does not appear on the TSCA public inventory. It is manufactured or imported only in small quantities and solely for research and development. All usage of this product must comply with 40 CFR 720.36.

This chemical substance must be used by, or directly under the supervision of, a technically qualified individual.

You must notify all persons who are engaged in experimentation, research, or analysis on the chemical substance, including the manufacture, possessing, use, transport, storage, and disposal of the substance of any known risk to health.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
006409774	no	no
007732185	no	no

State Regulatory Information: If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	
006409774	not listed
007732185	not listed

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
006409774	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
006409774	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
006409774	Not listed	Not listed
007732185	Not listed	Not listed

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Section 16: Other Information

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END OF MSDS

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