



Date Issued: February 16, 2011
 Supersedes Date: 1/20/11

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-CI(A)
 Part Name: 29% MUELLER STOCK SOLUTION
 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#	CAS#	% in product
1 Iron chloride (FeCl3)	007705080	10
2 Water	007732185	90

OSHA (ACGIH) Exposure Limits

	TWA	ppm		mg/		STEL		CEILING	
		ppm	mg/	ppm	mg/m3	ppm	mg/m3		
CAS#: 007705080	IDLH: NE								
OSHA		NE	NE	NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE	NE	NE
CAS#: 007732185	IDLH: NE								
OSHA		NE	NE	NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Causes skin and eye burns.

Causes skin, eye and respiratory tract 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
3	0	0

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Section 4: First Aid Measures

Brush off the skin.

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.

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method: no data

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: 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.

Protect personnel from exposure.

Sweep up solids.

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.

Use chemical splash goggles and face shield.

Use latex or equivalent gloves.

Use process enclosures, local exhaust ventilation, or other engineering controls.

Section 9: Physical and Chemical Properties

Formula:	FeCl ₃	vapor pressure:	<1 mm Hg
Formula Weight:	no data	vapor density:	5.61
boiling point:	no data	Specific gravity:	1
melting point:	>500 dec.	ph:	no data
solubility:	soluble	appearance:	yellow liquid

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Section 10: Stability and Reactivity

Chemical Stability stable

Conditions to Avoid: none

Incompatibility with other materials: forms explosive mixtures with sodium and potassium

Hazardous Decomposition Products: no data

Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: LD50 oral rat 450mg/Kg

Subchronic data: fertility effects

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
007705080	not listed	not listed
007732185	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.
UN Number: 1773

Section 15: Regulatory Information

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
007705080	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#	MA	PA
007705080	MA	PA
007732185	not listed	

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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.
007705080	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)
007705080	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)
007705080	Not listed	Not listed
007732185	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



Date Issued: 1/20/11
Supersedes Date: _____

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-CI(E)
Part Name: 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#	Name	IDLH	TWA		STEL		CEILING	
			ppm	mg/	ppm	mg/m3	ppm	mg/m3
007647010	Hydrogen chloride	50	Not classifi	--	--	--	5	7
	OSHA							
	ACGIH		--	--	--	--	5	7.5
007732185	Water	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

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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.

Section 5: Fire Fighting Measures

Flash point, deg F.: >200 Method:
UEL: no data LEL: no data Autoignition 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

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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

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

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#	FL	MA	MN	NJ	PA	WA
007647010						
007732185	not listed					

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

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: 1/20/11
Supersedes Date: _____

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-CI(D)
Part Name: 4% POTASSIUM FERROCYANIDE 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#	CAS#	% in product
1 Ferrate(4-), hexakis(cyano-C)-, tetrapotassium, trihydrate	014459951	1.74
2 Water	007732185	98

OSHA (ACGIH) Exposure Limits TWA

	IDLH: NE	ppm		mg/		STEL		mg/m3		CEILING	
		ppm	mg/	ppm	mg/m3	ppm	mg/m3				
CAS#: 007732185	IDLH: NE										
OSHA		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
CAS#: 014459951	IDLH: NE										
OSHA		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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.

Separate eyelids with finger tips.

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

Section 5: Fire Fighting Measures

Flash point, deg F.: >200

Method:

UEL: no data

LEL: no data

Autoignition temperature, deg. F.: no data

Flammability Classification: no data

Flame Propagation Rate: no data

Hazardous Combustion Products: 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 Properties

Formula:	K ₄ Fe(CN) ₆	vapor pressure:	no data
Formula Weight:	no data	vapor density:	no data
boiling point:	212	Specific gravity:	1.04
melting point:	32	ph:	no data
solubility:	no data	appearance:	clear yellow liquid

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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.

Section 15: Regulatory Information

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

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

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-
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



Date Issued: February 16, 2011
 Supersedes Date: 1/20/2011

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-CI(C)
 Part Name: 29% FERRIC CHLORIDE
 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#	CAS#	% in product
1 Iron chloride (FeCl3)	007705080	10
2 Water	007732185	90

OSHA (ACGIH) Exposure Limits

	TWA	STEL		CEILING	
		ppm	mg/	ppm	mg/m3
CAS#: 007705080	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE
CAS#: 007732185	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE

Section 3: Hazards Identification

Causes skin and eye burns.

Causes skin, eye and respiratory tract 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
3	0	0

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

Section 4: First Aid Measures

Brush off the skin.

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.

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method: no data

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: 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.

Protect personnel from exposure.

Sweep up solids.

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.

Use chemical splash goggles and face shield.

Use latex or equivalent gloves.

Use process enclosures, local exhaust ventilation, or other engineering controls.

Section 9: Physical and Chemical Properties

Formula:	FeCl ₃	vapor pressure:	<1 mm Hg
Formula Weight:	no data	vapor density:	5.61
boiling point:	no data	Specific gravity:	1
melting point:	>500 dec.	ph:	no data
solubility:	soluble	appearance:	yellow liquid

Section 10: Stability and Reactivity

Chemical Stability stable

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Conditions to Avoid: none

Incompatibility with other materials: forms explosive mixtures with sodium and potassium

Hazardous Decomposition Products: no data

Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: LD50 oral rat 450mg/Kg

Subchronic data: fertility effects

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
007705080	not listed	not listed
007732185	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. **UN Number:** 1773

Section 15: Regulatory Information

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
007705080	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#	MA	PA
007705080		
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.
007705080	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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)
007705080	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)
007705080	Not listed	Not listed
007732185	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



Date Issued: February 16, 2011
Supersedes Date: 1/20/2011

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-CI(B)
Part Name: 12% ACETIC ACID
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#	CAS#	% in product
1 Acetic acid	000064197	12
2 Water	007732185	88

OSHA (ACGIH) Exposure Limits

CAS#	IDLH	TWA		STEL		CEILING	
		ppm	mg/	ppm	mg/m3	ppm	mg/m3
000064197	50						
OSHA		Not classifi	25	--	--	--	--
ACGIH		10	25	15	15	--	--
007732185	NE						
OSHA		NE	NE	NE	NE	NE	NE
ACGIH		NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Causes eye burns.

Causes respiratory tract irritation.

Causes skin 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
2	1	0

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Section 4: First Aid Measures

Flush eyes with flowing water for at least 15 minutes.

If breathing is difficult, contact emergency personnel.

If swallowed, do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.

If swallowed, wash out mouth with water if person is conscious.

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

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method: no data

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: oxides of carbon

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.

Absorb liquids on absorbent material.

Contain spilled liquids.

Protect personnel from exposure.

Use appropriate personal protective equipment.

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.

Use chemical splash goggles and face shield.

Use latex or equivalent gloves.

Use process enclosures, local exhaust ventilation, or other engineering controls.

Section 9: Physical and Chemical Properties

Formula: no data vapor pressure: no data

Formula Weight: no data vapor density: no data

boiling point: no data Specific gravity: 1.02

melting point: no data ph: no data

solubility: miscible appearance: clear colorless liquid acetic acid

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Section 10: Stability and Reactivity

Chemical Stability stable

Conditions to Avoid: no data

Incompatibility with other materials: oxidizers, strong acids

Hazardous Decomposition Products: oxides of carbon

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
000064197	not listed	not listed
007732185	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. **UN Number:** 2790

Section 15: Regulatory Information

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
000064197	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#	FL	MA	MN	PA	WA
000064197					
007732185	not listed				

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

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.
000064197	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)
000064197	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)
000064197	Not listed	Not listed
007732185	Not listed	Not listed

Section 16: Other Information

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END OF MSDS

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Date Issued: 1/20/2011
 Supersedes Date: _____

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Cat#: SPS-CI(F)
 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-monosodium salt	006409774	1
2	Water	007732185	99

OSHA (ACGIH) Exposure Limits

CAS#	Name	IDLH	TWA		STEL		CEILING	
			ppm	mg/	ppm	mg/m3	ppm	mg/m3
006409774	2-Anthracenesulfonic acid, 9-amino-9,10-dihydro-1,3-dihydroxy-9,10-dioxo-monosodium salt	NE	NE	NE	NE	NE	NE	NE
007732185	Water	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

NA = not applicable

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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.

Section 5: Fire Fighting Measures

Flash point, deg F.: >200

Method:

UEL: no data

LEL: no data

Autoignition 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

NA = not applicable

NL = not listed

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NNR = not normally required

Section 11: Toxicological Information

Acute Data: no data
 Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

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