

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087A

Part Name: CHROMIC ACID SOLUTION-GMS SOLN. A

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Chromium trioxide	0001333820	3.8
2	Water	0007732185	96.2

## Section 3: Hazards Identification

Causes skin and eye burns.

May be fatal if inhaled, absorbed through skin or swallowed.

May cause target organ or system damage - kidney.

May cause target organ or system damage - lung.

Strong oxidizer. Contact with other combustible material can cause fire.

Hazard Ratings:

These ratings are Polysciences' Inc. 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	3

## Section 4: First Aid Measures

Contact medical personnel immediately.

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: nap

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

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: chromium 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.

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 butyl rubber gloves. Latex is not adequate.

Use chemical splash goggles and face shield.

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

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product. Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

### 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
melting point:	no data	ph:	no data
solubility:	soluble	appearance:	red liquid

### Section 10: Stability and Reactivity

Chemical Stability: stable  
Conditions to Avoid: none  
Incompatibility with other materials: organics; finely powdered metals; phosphorus; hydrogen sulfide  
Hazardous Decomposition Products: no data  
Hazardous Polymerization: will not occur

### Section 11: Toxicological Information

Acute Data: LD50 oral rat 80 mg/Kg  
Subchronic data: possible tumorigen; fertility effects; embryo and fetus effects; developmental abnormalities

### 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
0001333820	not listed	not listed
0007732185	not listed	not listed

### Section 14: Transportation Data

Proper Shipping Name	CHROMIUM TRIOXIDE
Chemical Name	
UN	UN1463
Class	5.1
PG	II

### Section 15: Regulatory Information

R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R34	Causes burns.
R8	Contact with combustible material may cause fire.
S0	No S Phrase applies. Use ambient temperature storage and normal chemical controls.
S7/9	Keep container tightly closed and in a well-ventilated place.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.

### GHS Precautionary and Hazard Statements

DANGER

WARNING

P380	Evacuate area.
P391	Collect spillage.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P280D Wear protective gloves Use butyl rubber gloves. Latex is not adequate.  
P285 In case of inadequate ventilation wear respiratory protection.  
H271 May cause fire or explosion; strong oxidiser.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H373 May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P305B IF IN EYES, Separate eyelids with finger tips.  
P315 Get immediate medical advice/attention.  
P351 Rinse cautiously with water for several minutes.



12flamoxidizers.l



corrosivetometal



General.bmp



Toxic.bmp

#### Section 16: Other Information

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087B

Part Name: SODIUM METABISULFITE-GMS SOLN. B

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Sodium metabisulfite	0007681574	1
2	Water	0007732185	99

## Section 3: Hazards Identification

Causes eye irritation.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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	0	0

## Section 4: First Aid Measures

Contact medical personnel.

Flush eyes with flowing water for at least 15 minutes.

If breathing is difficult, contact emergency personnel.

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

Remove contaminated clothing.

Remove to fresh air.

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:

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.

Ventilate the area.

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

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product.

Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product.

Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

## 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
melting point:	no data	ph:	no data
solubility:	no data	appearance:	liquid

## Section 10: Stability and Reactivity

Chemical Stability: stable  
Conditions to Avoid: moisture sensitive  
Incompatibility with other materials: strong acids, strong oxidizing agents  
Hazardous Decomposition Products: sulfur oxides  
Hazardous Polymerization: will not occur

## Section 11: Toxicological Information

Acute Data: Oral Rat LD50: >2000 mg/kg  
Skin Rat LD50: >2000 mg/kg  
Intravenous Rat LD50: 115 mg/kg  
Parenteral Mouse LD50: 910 mg/kg  
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
0007681574	not listed	not listed
0007732185	not listed	not listed

## Section 14: Transportation Data

Proper Shipping Name: NOT REGULATED  
Chemical Name:  
UN:  
Class:  
PG:

## Section 15: Regulatory Information

R36: Irritating to eyes.  
S0: No S Phrase applies. Use ambient temperature storage and normal chemical controls.  
S7/9: Keep container tightly closed and in a well-ventilated place.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

## GHS Precautionary and Hazard Statements

DANGER

P380	Evacuate area.
P391	Collect spillage.
P285	In case of inadequate ventilation wear respiratory protection.
H319	Causes serious eye irritation.
P301A	IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305B	IF IN EYES, Separate eyelids with finger tips.
P313	Get medical advice/attention.
P340	Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P351 Rinse cautiously with water for several minutes.

P361 Remove/Take off immediately all contaminated clothing.



corrosivetometal

#### **Section 16: Other Information**

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087C

Part Name: 5% SILVER NITRATE-GMS SOLN. C

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Silver nitrate	0007761888	4.76
2	Water	0007732185	95.23

## Section 3: Hazards Identification

Causes skin, eye and respiratory tract burns.

Oxidizing material.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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	3

## Section 4: First Aid Measures

Brush off the skin.

Contact medical personnel.

Flush eyes with flowing water for at least 15 minutes.

For eye contact, obtain emergency medical attention.

If breathing is difficult, contact emergency personnel.

If swallowed, NO NOT INDUCE vomiting. Give 8 oz. of water or milk to drink. Call a physician or the POISON CONTROL CENTER immediately.

Never give anything by mouth to an unconscious person.

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: carbon oxides

## 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.

Prevent contact with combustible materials.

Protect personnel from exposure.

Use appropriate personal protective equipment.

## Section 7: Handling and Storage

Store at 4 deg. C.

## 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.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product. Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

### 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
melting point:	no data	ph:	no data
solubility:	no data	appearance:	liquid

### Section 10: Stability and Reactivity

Chemical Stability: stable  
Conditions to Avoid: high temperatures  
Incompatibility with other materials: oxidizing agents and reducing agents  
Hazardous Decomposition Products: no data  
Hazardous Polymerization: will not occur

### Section 11: Toxicological Information

Acute Data: LD50 oral rat 1173 mg/kg  
Subchronic data: IARC Group 2A

### Section 12: Ecological Information

LC50 rainbow trout 0.006 mg/l 96 h; EC50 Water flea 0.0006 mg/l 48 h

### 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
0007732185	not listed	not listed
0007761888	not listed	not listed

### Section 14: Transportation Data

Proper Shipping Name	Silver nitrate
Chemical Name	
UN	UN1493
Class	5.1
PG	II

### Section 15: Regulatory Information

R34	Causes burns.
R8	Contact with combustible material may cause fire.
S47	Keep at temperature not exceeding 4 °C
S7/9	Keep container tightly closed and in a well-ventilated place.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.

### GHS Precautionary and Hazard Statements

DANGER

P221	Take any precaution to avoid mixing with combustibles...
P281	Use personal protective equipment as required.
P380	Evacuate area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
H270	May cause or intensify fire; oxidiser.



H319 Causes serious eye irritation.  
P301 IF SWALLOWED:  
P301A IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 IF IN EYES:  
P305B IF IN EYES, Separate eyelids with finger tips.  
P313 Get medical advice/attention.  
P335 Brush off loose particles from skin.  
P351 Rinse cautiously with water for several minutes.



12flamoxidizers.l



corrosivetometa

#### Section 16: Other Information

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087D

Part Name: METHENAMINE SOLUTION-GMS SOLN. D

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	1,3,5,7-Tetraazatricyclo[3.3.1.1 <sup>3,7</sup> ]decane	0000100970	3
2	Water	0007732185	97

## Section 3: Hazards Identification

May be irritant if swallowed

May cause allergic skin reaction.

May cause skin, eye and respiratory tract irritation.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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	3	1

## Section 4: First Aid Measures

Begin rescue breathing if necessary and contact medical personnel.

Contact medical personnel immediately.

Flush eyes with flowing water for at least 15 minutes.

If breathing is difficult, contact emergency personnel.

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

Remove contaminated clothing.

Remove to fresh air.

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

## Section 5: Fire Fighting Measures

Flash point, deg F.: 482F Method: CC

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

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: none known

## 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.

Protect personnel from exposure.

Remove ignition sources.

Use appropriate personal protective equipment.

## Section 7: Handling and Storage

Store at 4 deg. C.

## 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.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product. Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

### 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
melting point:	no data	ph:	no data
solubility:	no data	appearance:	liquid

### Section 10: Stability and Reactivity

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

### Section 11: Toxicological Information

Acute Data: LD50 oral (mouse) - 569 mg/kg  
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
0000100970	not listed	not listed
0007732185	not listed	not listed

### Section 14: Transportation Data

Proper Shipping Name: Not Regulated  
Chemical Name:  
UN:  
Class:  
PG:

### Section 15: Regulatory Information

R36/37/38: Irritating to eyes, respiratory system and skin.  
R43: May cause sensitization by skin contact.  
S47: Keep at temperature not exceeding 4 °C  
S7/9: Keep container tightly closed and in a well-ventilated place.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

### GHS Precautionary and Hazard Statements

DANGER

WARNING

P281: Use personal protective equipment as required.  
P380: Evacuate area.  
P381: Eliminate all ignition sources if safe to do so.  
P390: Absorb spillage to prevent material damage.

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P280A Wear protective gloves  
P285 In case of inadequate ventilation wear respiratory protection.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
P301A IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304A IF INHALED:Begin rescue breathing if necessary and contact medical personnel.  
P315 Get immediate medical advice/attention.  
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P351 Rinse cautiously with water for several minutes.  
P361 Remove/Take off immediately all contaminated clothing.



General.bmp



Toxic.bmp

#### Section 16: Other Information

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087E

Part Name: 5% BORAX SOLUTION-GMS SOLN. E

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Sodium tetraborate decahydrate	0001303964	5
2	Water	0007732185	95

## Section 3: Hazards Identification

May cause skin, eye and respiratory tract irritation.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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.

If breathing is difficult, contact emergency personnel.

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

Remove to fresh air.

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: none known

## 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.

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.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product.

Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product.

Permiation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

## 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
melting point:	no data	ph:	no data
solubility:	no data	appearance:	liquid

#### Section 10: Stability and Reactivity

Chemical Stability: no data  
Conditions to Avoid: no data  
Incompatibility with other materials: no data  
Hazardous Decomposition Products: none known  
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
0001303964	not listed	not listed
0007732185	not listed	not listed

#### Section 14: Transportation Data

Proper Shipping Name NOT REGULATED

Chemical Name

UN

Class

PG

#### Section 15: Regulatory Information

R36/37/38 Irritating to eyes, respiratory system and skin.  
S0 No S Phrase applies. Use ambient temperature storage and normal chemical controls.  
S7/9 Keep container tightly closed and in a well-ventilated place.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

#### GHS Precautionary and Hazard Statements

WARNING

P281	Use personal protective equipment as required.
P390	Absorb spillage to prevent material damage.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280A	Wear protective gloves
H315	Causes skin irritation.
P301A	IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

- P314 Get medical advice/attention if you feel unwell.  
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P351 Rinse cautiously with water for several minutes.



General.bmp

#### **Section 16: Other Information**

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087F

Part Name: 0.2% GOLD CHLORIDE-GMS SOLN. F

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Gold acid chloride trihydrate	0016961254	0.2
2	Water	0007732185	99.8

## Section 3: Hazards Identification

Causes skin and eye burns.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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

## Section 4: First Aid Measures

Contact medical personnel immediately.

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.: 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.

Absorb liquids on absorbent material.

Protect personnel from exposure.

## Section 7: Handling and Storage

Store at 4 deg. C.

## 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.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product.

Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product.

Permiation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

## 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
melting point:	no data	ph:	no data
solubility:	soluble	appearance:	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
0007732185	not listed	not listed
0016961254	not listed	not listed

#### Section 14: Transportation Data

Proper Shipping Name: NOT REGULATED  
Chemical Name:  
UN:  
Class:  
PG:

#### Section 15: Regulatory Information

R34 Causes burns.  
S47 Keep at temperature not exceeding 4 °C  
S7/9 Keep container tightly closed and in a well-ventilated place.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

#### GHS Precautionary and Hazard Statements

DANGER

P380 Evacuate area.  
P390 Absorb spillage to prevent material damage.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P280A Wear protective gloves  
P285 In case of inadequate ventilation wear respiratory protection.  
H314 Causes severe skin burns and eye damage.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P305B IF IN EYES, Separate eyelids with finger tips.  
P313 Get medical advice/attention.  
P315 Get immediate medical advice/attention.  
P351 Rinse cautiously with water for several minutes.



corrosivetometal

**Section 16: Other Information**

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 3

## Section 1: Chemical Product and Company Identification

Cat#: 25087G

Part Name: 2% SODIUM THIOSULPHATE-GMS SOLN. G

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Sodium thiosulfate pentahydrate	0010102177	2
2	Water	0007732185	98

## Section 3: Hazards Identification

Causes eye irritation.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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

Flush eyes with flowing water for at least 15 minutes.

If breathing is difficult, contact emergency personnel.

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: 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.

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.

No special protection is indicated.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product.

Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product.

Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

## Section 9: Physical and Chemical Properties

Formula: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>·5H<sub>2</sub>O                      vapor pressure: no data  
Formula Weight: nav                              vapor density: no data  
boiling point: 100 C                              Specific gravity: 1.0  
melting point: 0 C                                ph: no data  
solubility: miscible                                appearance: clear colorless liquid

#### Section 10: Stability and Reactivity

Chemical Stability: stable  
Conditions to Avoid: no data  
Incompatibility with other materials: no data  
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
0007732185	not listed	not listed
0010102177	not listed	not listed

#### Section 14: Transportation Data

Proper Shipping Name: NOT REGULATED  
Chemical Name:  
UN:  
Class:  
PG:

#### Section 15: Regulatory Information

R36: Irritating to eyes.  
S0: No S Phrase applies. Use ambient temperature storage and normal chemical controls.  
S7/9: Keep container tightly closed and in a well-ventilated place.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

#### GHS Precautionary and Hazard Statements

DANGER

P281: Use personal protective equipment as required.  
P380: Evacuate area.  
P390: Absorb spillage to prevent material damage.  
H319: Causes serious eye irritation.  
P301A: IF SWALLOWED do not induce vomiting. Do not give anything to drink. Obtain medical attention without delay.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P351: Rinse cautiously with water for several minutes.



corrosive to metal

**Section 16: Other Information**

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

# Material Safety Data Sheet

91-155/EEC

Issue Date:05/15/2012

Page 1 of 2

## Section 1: Chemical Product and Company Identification

Cat#: 25087H

Part Name: 0.5% LIGHT GREEN STOCK SOLN.-GMS SOLN. H

Supplier: Polysciences, Inc.  
400 Valley Road  
Warrington, PA 18976 USA  
Telephone #011-215-343-6484

## Section 2: Composition/ Information on Ingredients

Note: Items listed with a CASRN... number have no CAS# available.

Item#	Name	CAS#	% in product
1	Acetic acid	0000064197	0.01
2	Light green SF yellowish	0005141208	0.19
3	Water	0007732185	99.8

## Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments 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	1	0

## Section 4: First Aid Measures

## 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: nitrogen compounds; sulfur 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 4 deg. C.

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

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product.

Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permiation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

## Section 9: Physical and Chemical Properties

Formula:	mixture	vapor pressure:	no data
Formula Weight:	mixture	vapor density:	no data
boiling point:	no data	Specific gravity:	1
melting point:	no data	ph:	no data
solubility:	soluble	appearance:	CLEAR, COLORLESS, LIQUID

**Section 10: Stability and Reactivity**

Chemical Stability: stable

Conditions to Avoid: no data

Incompatibility with other materials: no data

Hazardous Decomposition Products: no data

Hazardous Polymerization: will not occur

**Section 11: Toxicological Information**

Acute Data: LD50 oral rat >2 grams/Kg

Subchronic data: IARC cancer review - animal limited evidence; human no adequate evidence; reproductive effector

**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
0000064197	not listed	not listed
0005141208	not listed	not listed
0007732185	not listed	not listed

**Section 14: Transportation Data**

Proper Shipping Name: NOT REGULATED

Chemical Name:

UN:

Class:

PG:

**Section 15: Regulatory Information**

R0: No R risk phrase applies use normal chemical controls

S47: Keep at temperature not exceeding 4 °C

S7/9: Keep container tightly closed and in a well-ventilated place.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

**GHS Precautionary and Hazard Statements**

P285: In case of inadequate ventilation wear respiratory protection.

H000: Low hazard for normal industrial use

**Section 16: Other Information**

POLYSCIENCES, INC. 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. POLYSCIENCES, INC. makes no representations 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, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS