02/14/2018	Kit Components	
Product code	Description	
SSKTGMS	MasterTech G.M.S. Stain Kit	
Components:		
SSKC095	Sodium Borate Concentrate	
XXSSKC093	Methenamine Silver Compound	
SSKC094	1% Sodium Bisulfite	
SSKC092	0.3% Gold Chloride	
SSKC096	2% Sodium Thiosulfate	

Light Green Counterstain

5% Chromic Acid

SSSTLGC

SSKC091



Review Date 02/14/2018 Revision Date 02/07/2018

1 Identification of the Substance/Mixture and Company

Product Name: Sodium Borate Concentrate

SDS Code: SSKC095

Product Description: Kit Component

Manufacturer/Supplier: American MasterTech 1330 Thurman Street Lodi, CA 95240

USA

(800) 860-4073

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture



GHS08 Health hazard

Repr. 1 H360 May damage fertility or the unborn child.

Label elements

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



GHS08

Signal word Danger

Hazard statements

May damage fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

HMIS-ratings (scale 0 - 4)

Health = 1Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

3 Composition

Chemical characterization: Mixtures

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

Dangerous components:

1303-96-4 Disodium tetraborate, decahydrate

<10%

4 First Aid Measures

Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints. **After skin contact:** Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:	
1303-96-4 Disodium tetraborate, decahydrate	6 mg/m³
PAC-2:	
1303-96-4 Disodium tetraborate, decahydrate	190 mg/m ³
PAC-3:	
1303-96-4 Disodium tetraborate, decahydrate	1,100 mg/m ³

7 Handling and Storage

Handling:

Precautions for safe handling: No special precautions are necessary if used correctly. Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Com	ponents with limit values that require monitoring at the workplace:
1303	-96-4 Disodium tetraborate, decahydrate
REL	Long-term value: 5 mg/m ³
TLV	Short-term value: 6* mg/m ³
	Long-term value: 2* mg/m³
	*as inhalable fraction

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

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Breathing equipment: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic physical and che	emical properties
General Information	
Appearance	
Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
Density:	Not determined.
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in / Miscibility with	
Solubility in / Misciplifty with	
Water:	Fully miscible.
	: Not determined.
Water: Partition coefficient (n-octanol/water) Dynamic:	: Not determined. Not determined.
Water: Partition coefficient (n-octanol/water)	: Not determined.

10 Stability and Reactivity

Reactivity: No further relevant information available.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. **Conditions to avoid:** No further relevant information available. **Incompatible materials:** No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

Primary irritant effect: On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization: No sensitizing effects known. **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, ADR, IMDG, IATA	Not applicable
Environmental hazards Marine pollutant:	No
Special precautions for user:	Not applicable.
Transport in bulk according to Annex II MARPOL73/78 and the IBC Code:	of Not applicable.
UN "Model Regulation":	Not applicable

15 Regulatory Information

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

Section 355 (extremely hazardous substances):	
None of the ingredients are listed.	
Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
TSCA (Toxic Substances Control Act)	

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

Carcinogenic categories

EPA (Environmental Protection Agency)	
1303-96-4 Disodium tetraborate, decahydrate	I (oral)
TLV (Threshold Limit Value established by ACGIH)	
1303-96-4 Disodium tetraborate, decahydrate	A4
NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients are listed.	

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



Signal word Danger

Hazard statements

May damage fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

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

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: Sodium Borate Concentrate

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Repr. 1: Reproductive toxicity – Category 1

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Review Date 02/14/2018 Revision Date 02/14/2018

1 Identification of the Substance/Mixture and Company

Product Name: Methenamine Silver Compound

SDS Code: XXSSKC093

Product Description: Kit Component

Manufacturer/Supplier: American MasterTech 1330 Thurman Street Lodi, CA 95240 USA

(800) 860-4073

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture



Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Acute 3 H402 Harmful to aquatic life.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

Label elements

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



Signal word Warning

Hazard-determining components of labeling:

methenamine

Hazard statements

May cause an allergic skin reaction.

Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

If on skin: Wash with plenty of water. Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system: NFPA ratings (scale 0 - 4)

Health = 1 Fire = 0 Reactivity = 0

HMIS-ratings (scale 0 - 4)

 $\begin{aligned} & \text{Health} &= 1 \\ & \text{Fire} &= 0 \\ & \text{Reactivity} = 0 \\ & \textbf{Other hazards} \end{aligned}$

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

3 Composition

Chemical characterization: Mixtures

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

Dangerous	components:	
100-97-0	methenamine	<1%
7761-88-8	silver nitrate	<1%

4 First Aid Measures

Description of first aid measures

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation. **After skin contact:** Immediately wash with water and soap and rinse thoroughly. **After eye contact:** Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:		
100-97-0	methenamine	55 mg/m ³
7761-88-8	silver nitrate	0.047 mg/m ³
PAC-2:		
100-97-0	methenamine	610 mg/m ³
7761-88-8	silver nitrate	0.9 mg/m ³
PAC-3:		
100-97-0	methenamine	3,600 mg/m ³
7761-88-8	silver nitrate	5.4 mg/m ³

7 Handling and Storage

Handling:

Precautions for safe handling: No special precautions are necessary if used correctly.

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

	•
Information on basic physical and c	hemical properties
General Information	
Appearance	
Form:	Solid material
Color:	Light brown
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
Density:	Not determined.
Relative density:	Not determined.
Vapour density:	Not determined.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Fully miscible.

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

Dynamic: Not determined.

Kinematic: Not determined.

Other information: No further relevant information available.

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. **Conditions to avoid:** No further relevant information available. **Incompatible materials:** No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

7761-88-8 silver nitrate

Oral LD50 50 mg/kg (mouse)

Primary irritant effect: On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization: Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Ecotoxical effects: Remark: Harmful to fish

Additional ecological information:

General notes: Harmful to aquatic organisms **Results of PBT and vPvB assessment**

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Uncleaned packagings:

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

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA UN proper shipping name DOT, ADR, ADN, IMDG, IATA Not applicable Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class Not applicable Packing group DOT, ADR, IMDG, IATA Environmental hazards Not applicable. Special precautions for user: Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable. UN "Model Regulation": Not applicable		
DOT, ADR, ADN, IMDG, IATA Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class Not applicable Packing group DOT, ADR, IMDG, IATA Not applicable Environmental hazards Not applicable. Special precautions for user: Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.	0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Not applicable
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Class Packing group DOT, ADR, IMDG, IATA Not applicable Environmental hazards Not applicable. Special precautions for user: Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.	Transport hazard class(es)	
DOT, ADR, IMDG, IATA Not applicable Environmental hazards Not applicable. Special precautions for user: Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.		Not applicable
Special precautions for user: Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.		Not applicable
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.	Environmental hazards	Not applicable.
MARPOL73/78 and the IBC Code: Not applicable.	Special precautions for user:	Not applicable.
UN "Model Regulation": Not applicable		
	UN "Model Regulation":	Not applicable

15 Regulatory Information

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

Section 355 (extremely hazardous subst
--

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

7761-88-8 silver nitrate

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

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



GHS07

Signal word Warning

Hazard-determining components of labeling:

methenamine

Hazard statements

May cause an allergic skin reaction.

Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves.

If on skin: Wash with plenty of water.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Review Date 02/14/2018 Revision Date 02/14/2018

Product Name: Methenamine Silver Compound

16 Other Information

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

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronvms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard - Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

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Review Date 02/14/2018 Revision Date 02/07/2018

1 Identification of the Substance/Mixture and Company

Product Name: 1% Sodium Bisulfite

SDS Code: SSKC094

Product Description: Kit Component

Manufacturer/Supplier: American MasterTech 1330 Thurman Street Lodi, CA 95240 **USA**

(800) 860-4073

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Label elements

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Classification system: NFPA ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. vPvB: Not applicable.

3 Composition

Chemical characterization: Mixtures

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

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 1% Sodium Bisulfite

Dangerous components:

7631-90-5 sodium hydrogensulphite . . . %

1%

4 First Aid Measures

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints. **After skin contact:** Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions: Dilute with plenty of water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:	
7631-90-5 sodium hydrogensulphite %	15 mg/m ³
PAC-2:	
7631-90-5 sodium hydrogensulphite %	66 mg/m ³
PAC-3:	
7631-90-5 sodium hydrogensulphite %	400 mg/m ³

7 Handling and Storage

Handling:

Precautions for safe handling: No special measures required.

Revision Date 02/07/2018

Product Name: 1% Sodium Bisulfite

Review Date 02/14/2018

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Components with limit values that require monitoring at the workplace:

7631-90-5 sodium hydrogensulphite . . . %

REL | Long-term value: 5 mg/m³ TLV | Long-term value: 5 mg/m³

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

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance

Form: Liquid
Color: Colorless
Odor: Pungent
Odor threshold: Not determined.

pH-value: Not determined.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 1% Sodium Bisulfite

Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits: Lower: Upper:	Not determined. Not determined.
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
Density at 20 °C (68 °F): Relative density: Vapour density: Evaporation rate:	1.0048 g/cm³ (8.38506 lbs/gal) Not determined. Not determined. Not determined.
Solubility in / Miscibility with Water:	Fully miscible.
Partition coefficient (n-octanol/wate Dynamic: Kinematic:	r): Not determined. Not determined. Not determined. Not determined. No further relevant information available.
Other information:	ino turtner relevant information available.

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. **Conditions to avoid:** No further relevant information available. **Incompatible materials:** No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

Primary irritant effect: On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization: No sensitizing effects known. **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 1% Sodium Bisulfite

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

IARC (International Agency for Research on Cancer)	
7631-90-5 sodium hydrogensulphite %	3
NTP (National Toxicology Program)	
None of the ingredients are listed.	
OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients are listed.	

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Generally not hazardous for water

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Waste treatment methods:

Recommendation:

Smaller quantities can be disposed of with household waste.

Disposal must be according to official regulations.

Uncleaned packagings:

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

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 1% Sodium Bisulfite

Packing group
DOT, ADR, IMDG, IATA
Not applicable

Environmental hazards

Marine pollutant: No

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code: Not applicable.

UN "Model Regulation": Not applicable

15 Regulatory Information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

7631-90-5 sodium hydrogensulphite . . . %

A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 1% Sodium Bisulfite

16 Other Information

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

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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us —



Review Date 02/14/2018 Revision Date 02/07/2018

1 Identification of the Substance/Mixture and Company

Product Name: 0.3% Gold Chloride

SDS Code: SSKC092

Product Description: Kit Component

Manufacturer/Supplier: American MasterTech 1330 Thurman Street Lodi, CA 95240

USA

(800) 860-4073

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Label elements

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Classification system: NFPA ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

3 Composition

Chemical characterization: Mixtures

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

Dangerous components: Not applicable

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 0.3% Gold Chloride

4 First Aid Measures

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints. **After skin contact:** Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions: Dilute with plenty of water. **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:

None of the ingredients are listed.

PAC-2:

None of the ingredients are listed.

PAC-3:

None of the ingredients are listed.

7 Handling and Storage

Handling:

Precautions for safe handling: No special measures required.

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

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 0.3% Gold Chloride

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance

Form: Liquid
Color: Yellow
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined. **Boiling point/Boiling range:** 100 °C (212 °F)

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 0.3% Gold Chloride

Flash point: Not applicable. Flammability (solid, gaseous): Not applicable. Not determined. **Decomposition temperature:** Product is not selfigniting. **Auto igniting:** Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Not determined. Lower: Not determined. Upper: Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg) Not determined. **Density:** Not determined. Relative density: Not determined. Vapour density: **Evaporation rate:** Not determined. Solubility in / Miscibility with Water: Fully miscible. Partition coefficient (n-octanol/water): Not determined. **Dynamic:** Not determined. **Kinematic:** Not determined. No further relevant information available. Other information:

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. **Conditions to avoid:** No further relevant information available. **Incompatible materials:** No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

Primary irritant effect: On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization: No sensitizing effects known. **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 0.3% Gold Chloride

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Generally not hazardous for water

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Waste treatment methods:

Recommendation:

Smaller quantities can be disposed of with household waste.

Disposal must be according to official regulations.

Uncleaned packagings:

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

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, ADR, IMDG, IATA	Not applicable

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 0.3% Gold Chloride

Environmental hazards
Marine pollutant:
No

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code: Not applicable.

UN "Model Regulation": Not applicable

15 Regulatory Information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

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

TSCA new (21st Century Act) (Substances not listed)

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 0.3% Gold Chloride

16 Other Information

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

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronvms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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US -



Review Date 02/14/2018 Revision Date 02/07/2018

1 Identification of the Substance/Mixture and Company

Product Name: 2% Sodium Thiosulfate

SDS Code: SSKC096

Product Description: Kit Component

Manufacturer/Supplier: American MasterTech 1330 Thurman Street Lodi, CA 95240 **USA**

(800) 860-4073

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Label elements

GHS label elements Not applicable Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Classification system: NFPA ratings (scale 0 - 4)

Health = 1Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1Fire = 0Reactivity = 0Other hazards

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

vPvB: Not applicable.

3 Composition

Chemical characterization: Mixtures

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

Dangerous components: Not applicable

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 2% Sodium Thiosulfate

4 First Aid Measures

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints. **After skin contact:** Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions: Dilute with plenty of water. **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:			
7772-98-7	sodium thiosulfate	38 mg/m ³	
89-83-8	thymol	2.9 mg/m ³	
PAC-2:	PAC-2:		
7772-98-7	sodium thiosulfate	410 mg/m ³	
89-83-8	thymol	32 mg/m ³	
PAC-3:	PAC-3:		
7772-98-7	sodium thiosulfate	2,500 mg/m ³	
89-83-8	thymol	190 mg/m ³	

7 Handling and Storage

Handling:

Precautions for safe handling: No special measures required.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 2% Sodium Thiosulfate

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic physical and chemical properties General Information

Appearance

Form: Liquid
Color: Colorless
Odor: Nearly odorless
Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 100 °C (212 °F)

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 2% Sodium Thiosulfate

Flash point: Not applicable. Flammability (solid, gaseous): Not applicable. Not determined. **Decomposition temperature:** Auto igniting: Product is not selfigniting. Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Not determined. Lower: Not determined. Upper: Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg) Density at 20 °C (68 °F): 1.00938 g/cm³ (8.42328 lbs/gal) Not determined. Relative density: Not determined. Vapour density: **Evaporation rate:** Not determined. Solubility in / Miscibility with Water: Fully miscible. Partition coefficient (n-octanol/water): Not determined. **Dynamic:** Not determined. **Kinematic:** Not determined. No further relevant information available. Other information:

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. **Conditions to avoid:** No further relevant information available. **Incompatible materials:** No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

Primary irritant effect: On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization: No sensitizing effects known. **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 2% Sodium Thiosulfate

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Generally not hazardous for water

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Waste treatment methods:

Recommendation:

Smaller quantities can be disposed of with household waste.

Disposal must be according to official regulations.

Uncleaned packagings:

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

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, ADR, IMDG, IATA	Not applicable

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 2% Sodium Thiosulfate

Environmental hazards
Marine pollutant:
No

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code: Not applicable.
UN "Model Regulation": Not applicable

15 Regulatory Information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 2% Sodium Thiosulfate

are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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Review Date 02/14/2018 Revision Date 01/31/2018

1 Identification of the Substance/Mixture and Company

Product Name: Light Green Counterstain

SDS Code: SSSTLGC

Product Description: Histology Stain

Manufacturer/Supplier: American MasterTech 1330 Thurman Street Lodi, CA 95240

USA

(800) 860-4073

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

Label elements

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Classification system: NFPA ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

3 Composition

Chemical characterization: Mixtures

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

Dangerous components: Not applicable

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 01/31/2018

Product Name: Light Green Counterstain

4 First Aid Measures

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints. **After skin contact:** Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions: Dilute with plenty of water. **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information. **Protective Action Criteria for Chemicals**

PAC-1:	
64-19-7 acetic acid	5 ppm
89-83-8 thymol	2.9 mg/m ³
PAC-2:	
64-19-7 acetic acid	35 ppm
89-83-8 thymol	32 mg/m ³
PAC-3:	
64-19-7 acetic acid	250 ppm
89-83-8 thymol	190 mg/m ³

7 Handling and Storage

Handling:

Precautions for safe handling: No special measures required.

Review Date 02/14/2018 Revision Date 01/31/2018

Product Name: Light Green Counterstain

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Goggles recommended during refilling.

9 Physical and Chemical Properties

Information on basic	physical and	chemical	properties
General Information			

Appearance

Form: Liquid Green Odor: Acidic

Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 100 °C (212 °F)

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 01/31/2018

Product Name: Light Green Counterstain

Flash point: Not applicable. Flammability (solid, gaseous): Not applicable. Not determined. **Decomposition temperature:** Auto igniting: Product is not selfigniting. Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Not determined. Lower: Not determined. Upper: Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg) Density at 20 °C (68 °F): 1.00008 g/cm³ (8.34567 lbs/gal) Not determined. Relative density: Not determined. Vapour density: **Evaporation rate:** Not determined. Solubility in / Miscibility with Water: Fully miscible. Partition coefficient (n-octanol/water): Not determined. **Dynamic:** Not determined. **Kinematic:** Not determined. No further relevant information available. Other information:

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. **Conditions to avoid:** No further relevant information available. **Incompatible materials:** No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

Primary irritant effect: On the skin: No irritant effect. On the eye: No irritating effect.

Sensitization: No sensitizing effects known. **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Review Date 02/14/2018 Revision Date 01/31/2018

Product Name: Light Green Counterstain

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Generally not hazardous for water

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Waste treatment methods:

Recommendation:

Smaller quantities can be disposed of with household waste.

Disposal must be according to official regulations.

Uncleaned packagings:

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

14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, ADR, IMDG, IATA	Not applicable

Review Date 02/14/2018 Revision Date 01/31/2018

Product Name: Light Green Counterstain

Environmental hazards
Marine pollutant:
No

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code: Not applicable.
UN "Model Regulation": Not applicable

15 Regulatory Information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements Not applicable

Hazard pictograms Not applicable

Signal word Not applicable

Hazard statements Not applicable

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 01/31/2018

Product Name: Light Green Counterstain

are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

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Review Date 02/14/2018 Revision Date 02/07/2018

1 Identification of the Substance/Mixture and Company

Product Name: 5% Chromic Acid

SDS Code: SSKC091 **Product Description:** Manufacturer/Supplier: American MasterTech 1330 Thurman Street

USA

(800) 860-4073

Lodi, CA 95240

European Authorized Representative:

Emergo Europe Prinsessegracht 20 2514 AP The Hague, The Netherlands

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

2 Hazards Identification

Classification of the substance or mixture



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

H315 Causes skin irritation. Skin Irrit. 2

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

H402 Harmful to aquatic life. Aquatic Acute 3

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

Label elements

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

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

Hazard pictograms



Signal word Danger

Hazard-determining components of labeling:

chromium (VI) trioxide

Hazard statements

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

HMIS-ratings (scale 0 - 4)

Health = *2

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

3 Composition

Chemical characterization: Mixtures

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

Dangerous components:

1333-82-0 chromium (VI) trioxide

5%

4 First Aid Measures

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures

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

Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:	
1333-82-0 chromium (VI) trioxide	0.29 mg/m ³
PAC-2:	
1333-82-0 chromium (VI) trioxide	5 mg/m³
PAC-3:	
1333-82-0 chromium (VI) trioxide	30 mg/m^3

7 Handling and Storage

Handling:

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

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

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

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

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

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

Control parameters

Com	Components with limit values that require monitoring at the workplace:	
1333	-82-0 chromium (VI) trioxide	
PEL	Long-term value: 0.005* mg/m³ Ceiling limit value: 0.1** mg/m³ *as Cr(VI) **as CrO3; see 29 CFR 1910.1026	
REL	Long-term value: 0.0002 mg/m³ as Cr; See Pocket Guide Apps. A and C	
TLV	Short-term value: NIC-0.0005* mg/m³ Long-term value: (0.05) NIC-0.0002* mg/m³ as Cr; *inhalable, BEI, NIC-Skin, DSEN, RSEN	

Revision Date 02/07/2018

SAFETY DATA SHEET

In Accordance with ISO/DIS 11014

Product Name: 5% Chromic Acid

Review Date 02/14/2018

Ingredients with biological limit values:

1333-82-0 chromium (VI) trioxide

BEI 25 μg/L

Medium: urine

Time: end of shift at end of workweek Parameter: Total chromium (fume)

10 μg/L Medium: urine

Time: increase during shift Parameter: Total chromium (fume)

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

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Breathing equipment:

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

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

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

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses

Tightly sealed goggles

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance

Form: Fluid
Color: Colorless
Odor: Characteristic
Odor threshold: Not determined.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

pH-value: Not determined. Change in condition Melting point/Melting range: Undetermined. **Boiling point/Boiling range:** 0 °C (32 °F) Flash point: Not applicable. Not applicable. Flammability (solid, gaseous): **Decomposition temperature:** Not determined. Auto igniting: Product is not selfigniting. Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Lower: Not determined. Not determined. Upper: Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg) Not determined. **Density: Relative density:** Not determined. Vapour density: Not determined. Not determined. **Evaporation rate:** Solubility in / Miscibility with Water: Fully miscible. Partition coefficient (n-octanol/water): Not determined. **Dynamic:** Not determined. **Kinematic:** Not determined. Other information: No further relevant information available.

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

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

Possibility of hazardous reactions: No dangerous reactions known. Conditions to avoid: No further relevant information available. Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

1333-82-0 chromium (VI) trioxide

Oral LD50 80 mg/kg (rat)

Primary irritant effect:

On the skin: Irritant to skin and mucous membranes.

In Accordance with ISO/DIS 11014

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

On the eye: Irritating effect.

Sensitization:

Sensitization possible through inhalation. Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful Irritant

The product can cause inheritable damage.

Carcinogenic categories

IARC (International Agency for Research on Cancer)	
1333-82-0 chromium (VI) trioxide	1
NTP (National Toxicology Program)	
1333-82-0 chromium (VI) trioxide	K
OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients are listed.	

12 Ecological Information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Ecotoxical effects: Remark: Harmful to fish

Additional ecological information:

General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Harmful to aquatic organisms

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Uncleaned packagings:

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

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

14 Transport Information		
UN-Number DOT, ADR, ADN, IMDG, IATA	Not applicable	
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not applicable	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA Class	Not applicable	
Packing group DOT, ADR, IMDG, IATA	Not applicable	
Environmental hazards	Not applicable.	
Special precautions for user:	Not applicable.	
Transport in bulk according to Annex MARPOL73/78 and the IBC Code:	II of Not applicable.	
UN "Model Regulation":	Not applicable	

15 Regulatory Information

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

SARA
Section 355 (extremely hazardous substances):
None of the ingredients are listed.
Section 313 (Specific toxic chemical listings):
1333-82-0 chromium (VI) trioxide
TSCA (Toxic Substances Control Act):
All ingredients are listed.
Proposition 65
Chemicals known to cause cancer:
1333-82-0 chromium (VI) trioxide

· F · · · · · · · ·
Chemicals known to cause cancer:
1333-82-0 chromium (VI) trioxide
Chemicals known to cause reproductive toxicity for females:
1333-82-0 chromium (VI) trioxide
Chemicals known to cause reproductive toxicity for males:
1333-82-0 chromium (VI) trioxide
Chemicals known to cause developmental toxicity:

Carcinogenic categories

1333-82-0 chromium (VI) trioxide

EPA (Environmental Protection Agency)	
1333-82-0 chromium (VI) trioxide	A(inh), D(oral), K/L(inh), CBD(oral)
TLV (Threshold Limit Value established by ACGIH)	
1333-82-0 chromium (VI) trioxide	A1

Revision Date 02/07/2018

Product Name: 5% Chromic Acid

Review Date 02/14/2018

NIOSH-Ca (National Institute for Occupational Safety and Health)

1333-82-0 chromium (VI) trioxide

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



Signal word Danger

Hazard-determining components of labeling:

chromium (VI) trioxide

Hazard statements

Causes skin irritation.

Causes serious eve irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Specific treatment (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Review Date 02/14/2018 Revision Date 02/07/2018

Product Name: 5% Chromic Acid

National regulations:

Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

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

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 02/14/2018 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

Resp. Sens. 1: Respiratory sensitisation - Category 1

Skin Sens. 1: Skin sensitisation - Category 1

Muta. 1B: Germ cell mutagenicity - Category 1B

Carc. 1A: Carcinogenicity - Category 1A

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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