

SECTION 1: IDENTIFICATION**1.1. Product Identifier****Product Form:** Mixture**Product Name:** ZEUS ELISA Plate**1.2. Intended Use of the Product**

Diagnostic Test Component.

1.3. Name, Address, and Telephone of the Responsible Party**Company**

ZEUS Scientific, LLC

200 Evans Way

Branchburg, NJ 08876

USA

T 908-526-3744 (Continental USA)

T 800-286-2111 (Additional Information)

www.zeusscientific.com**1.4. Emergency Telephone Number****Emergency Number :** 908-526-3744**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the Substance or Mixture****Classification (GHS-US)**

Not classified

2.2. Label Elements**GHS-US Labeling** No labeling applicable**2.3. Other Hazards**

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US) No data available**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances**

Not applicable

3.2. Mixture

ZEUS ELISA Plate contains the following components:

- 96 well polystyrene plate

- Moisture dessicant

- Polu foil pouch

SECTION 4: FIRST AID MEASURES**4.1. Description of First Aid Measures****General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).**Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.**Skin Contact:** Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.**Eye Contact:** Rinse with plenty of water immediately. Remove contact lenses, if present and easy to do. Continue rinsing.**Ingestion:** Do NOT induce vomiting. Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.**4.2. Most Important Symptoms and Effects Both Acute and Delayed****General:** Not expected to present a significant hazard under anticipated conditions of normal use.**Inhalation:** Overexposure may be irritating to the respiratory system.**Skin Contact:** Contact during a long period may cause slight irritation.**Eye Contact:** Direct contact with the eyes is likely irritating.**Ingestion:** Ingestion is not likely to be harmful or have adverse effects.

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Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all unnecessary exposure.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

7.3. Specific End Use(s)

Diagnostic Test Component.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

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8.2. Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Not generally required. The use of personal protective equipment may be necessary as conditions warrant.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: In case of repeated or prolonged contact wear gloves.

Eye Protection: In case of splash hazard: chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Not available
Odor	: Not available
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: Not available
Solubility	: Not available
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available

Explosion Data – Sensitivity to Mechanical Impact : Not expected to present an explosion hazard due to mechanical impact.

Explosion Data – Sensitivity to Static Discharge : Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Incompatible materials.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products: None known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Not classified

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LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system.

Symptoms/Injuries After Skin Contact: Contact during a long period may cause slight irritation.

Symptoms/Injuries After Eye Contact: Direct contact with the eyes is likely irritating.

Symptoms/Injuries After Ingestion: Ingestion is not likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity No additional information available

12.2. Persistence and Degradability Not available

12.3. Bioaccumulative Potential Not available

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Neither this product nor its chemical components appear on any US federal lists.

15.2. US State Regulations

Neither this product nor its chemical components appear on any US state lists.

15.3. Canadian Regulations

ZEUS ELISA Plate

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 11/09/2023

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Party Responsible for the Preparation of This Document

ZEUS Scientific, LLC. 908-526-3744

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS



NTx8026 Chromogen Solution

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Date of Issue: 08/14/2023

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: NTx8026 Chromogen Solution

1.2. Intended Use of the Product

Laboratory Chemicals

1.3. Name, Address, and Telephone of the Responsible Party

Company

Zeus Scientific LLC

200 Evans Way

Branchburg, NJ 08876

USA

T 908-526-3744 (Continental USA)

T 800-286-2111 (Additional Information)

www.zeusscientific.com

1.4. Emergency Telephone Number

Emergency Number : 908-526-3744

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Flammable liquids Category 4

H227

2.2. Label Elements

GHS-US/CA Labeling

Signal Word (GHS-US/CA) : Warning

Hazard Statements (GHS-US/CA) : H227 - Combustible liquid.

Precautionary Statements (GHS-US/CA) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 - Wear protective gloves, protective clothing, and eye protection.

P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.

P403 - Store in a well-ventilated place.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Dimethyl sulfoxide	Dimethyl sulphoxide / Durasorb / Methane, sulfinylbis- / Methylsulfinylmethane / Sulfinylbis(methane) / Sulfoxide, dimethyl / Methane, 1,1'-sulfinylbis- / Dimethylsulphoxide / Dimethylsulfoxide / DMSO	(CAS-No.) 67-68-5	99	Flam. Liq. 4, H227
[1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl-	3,3',5,5'-Tetramethyl-[1,1'-biphenyl]-4,4'-diamine / 3,3',5,5'-tetramethylbenzidine / Tetramethylbenzidine / 3,3',5,5'-Tetramethylbenzidine	(CAS-No.) 54827-17-7	1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

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Full text of H-statements: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Immediately remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible liquid. Vapors may travel to source of ignition and flash back.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Sulfur oxides. Formaldehyde. Methylmercaptan. Dimethyl sulfide.

5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Avoid breathing (vapor, mist, spray). Do not get in eyes, on skin, or on clothing. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

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Emergency Procedures: Eliminate ignition sources first, then ventilate the area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: As an immediate precautionary measure, isolate spill or leak area in all directions. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Use only non-sparking tools. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Use only non-sparking tools. Take precautionary measures against static discharge. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Use explosion-proof electrical, ventilating, and lighting equipment. Take action to prevent static discharges. Ground and bond container and receiving equipment. Comply with applicable regulations.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Halogenated compounds. Sodium hydride. Metal nitrates.

7.3. Specific End Use(s)

Laboratory Chemicals

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Dimethyl sulfoxide (67-68-5)		
USA AIHA	WEEL TWA [ppm]	250 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles or glasses. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection: Wear suitable protective clothing.

NTx8026 Chromogen Solution

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Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Not specified
Odor	: Not specified
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: 87 °C (188.6 °F) (Dimethyl sulfoxide)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: No data available
Upper Flammable Limit	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Specific Gravity	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability:

Combustible liquid. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Halogenated compounds. Sodium hydride. Metal nitrates.

10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Carbon oxides (CO, CO₂). Sulfur oxides. Formaldehyde. Methylmercaptan. Dimethyl sulfide.

Hydrolysis may produce: Dimethyl sulfone.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Reproductive Toxicity: Not classified**Specific Target Organ Toxicity (Single Exposure):** Not classified**Aspiration Hazard:** Not classified**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.**Chronic Symptoms:** None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Dimethyl sulfoxide (67-68-5)	
LD50 Oral Rat	> 20000 mg/kg
LD50 Dermal Rat	≈ 40000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

Dimethyl sulfoxide (67-68-5)	
LC50 Fish 1	34 g/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 - Crustacea [1]	6830 mg/l
LC50 Fish 2	33 – 37 g/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and Degradability

NTx8026 Chromogen Solution	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

NTx8026 Chromogen Solution	
Bioaccumulative Potential	Not established.
Dimethyl sulfoxide (67-68-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.35 at 20 °C (at pH 7)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Treatment Methods: Product contaminated with biological materials should preferably be incinerated.**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.**Additional Information:** Handle empty containers with care because residual vapors are flammable.**Ecology - Waste Materials:** Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name	: COMBUSTIBLE LIQUID, N.O.S. (Dimethyl sulfoxide)
Identification Number	: NA1993
Packing Group	: III
Additional Information	: Shipments of less than 450 Liters (119 US Gallons) are not regulated for transport in accordance with 49 CFR 173.150(f)(2).

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According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

14.2. In Accordance with IMDG

Not regulated for transport

14.3. In Accordance with IATA

Not regulated for transport

14.4. In Accordance with TDG

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

NTx8026 Chromogen Solution

SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids)
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Dimethyl sulfoxide (67-68-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

[1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl- (54827-17-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

15.2. US State Regulations

Dimethyl sulfoxide (67-68-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

15.3. Canadian Regulations

Dimethyl sulfoxide (67-68-5)

Listed on the Canadian DSL (Domestic Substances List)

[1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl- (54827-17-7)

Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 08/14/2023

Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)



NTx8028 Stop Solution

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Date of Issue: 08/14/2023

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: NTx8028 Stop Solution

1.2. Intended Use of the Product

Laboratory Chemicals

1.3. Name, Address, and Telephone of the Responsible Party

Company

Zeus Scientific LLC

200 Evans Way

Branchburg, NJ 08876

USA

T 908-526-3744 (Continental USA)

T 800-286-2111 (Additional Information)

www.zeusscientific.com

1.4. Emergency Telephone Number

Emergency Number : 908-526-3744

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Corrosive to metals Category 1

H290

Hazardous to the aquatic environment – Chronic Hazard Category 3

H412

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :



GHS05

Signal Word (GHS-US/CA) :

Warning

Hazard Statements (GHS-US/CA) :

H290 - May be corrosive to metals.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US/CA) :

P234 - Keep only in original container.

P273 - Avoid release to the environment.

P390 - Absorb spillage to prevent material-damage.

P406 - Store in corrosive resistant container with a resistant inner liner.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Sulfuric acid	Sulphuric acid / SULFURIC ACID / Hydrogen sulfate / Sulphuric acid ...% / sulfuric acid / Sulfuric acid ...% / Sulfuric acid (H2SO4)	(CAS-No.) 7664-93-9	2.7	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402

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				Aquatic Chronic 2, H411
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Full text of H-statements: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Contact with metallic substances may release flammable hydrogen gas.

Reactivity: May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Sulfur oxides. Corrosive vapors.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

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6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb spillage to prevent material damage.

Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: May be corrosive to metals. There is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic.

Precautions for Safe Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in corrosive resistant container with a resistant inner liner.

Incompatible Materials: Strong bases, strong oxidizers. Metals. May be corrosive to metals.

7.3. Specific End Use(s)

Laboratory Chemicals

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Sulfuric acid (7664-93-9)		
USA ACGIH	ACGIH OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen contained in strong inorganic acid mists
USA OSHA	OSHA PEL (TWA) [1]	1 mg/m ³
USA NIOSH	NIOSH REL (TWA)	1 mg/m ³
USA IDLH	IDLH	15 mg/m ³
Alberta	OEL STEL	3 mg/m ³
Alberta	OEL TWA	1 mg/m ³
British Columbia	OEL TWA	0.2 mg/m ³ (contained in strong inorganic acid mists-thoracic)
Manitoba	OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
New Brunswick	OEL STEL	3 mg/m ³
New Brunswick	OEL TWA	1 mg/m ³
Newfoundland & Labrador	OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
Nova Scotia	OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
Nunavut	OEL STEL	0.6 mg/m ³ (thoracic fraction)
Nunavut	OEL TWA	0.2 mg/m ³ (thoracic fraction)
Northwest Territories	OEL STEL	0.6 mg/m ³ (thoracic fraction, strong acid mists only)
Northwest Territories	OEL TWA	0.2 mg/m ³ (thoracic fraction, strong acid mists only)
Ontario	OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
Prince Edward Island	OEL TWA	0.2 mg/m ³ (thoracic particulate matter)
Québec	VECD (OEL STEL)	3 mg/m ³
Québec	VEMP (OEL TWA)	1 mg/m ³

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Saskatchewan	OEL STEL	0.6 mg/m ³ (thoracic fraction)
Saskatchewan	OEL TWA	0.2 mg/m ³ (thoracic fraction)
Yukon	OEL STEL	1 mg/m ³
Yukon	OEL TWA	1 mg/m ³

8.2. Exposure Controls

Appropriate Engineering Controls: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles or glasses.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Not specified
Odor	: Not specified
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: No data available
Upper Flammable Limit	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Specific Gravity	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Metals. May be corrosive to metals.

10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Sulfur oxides. Corrosive vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product**Acute Toxicity (Oral):** Not classified**Acute Toxicity (Dermal):** Not classified**Acute Toxicity (Inhalation):** Not classified**LD50 and LC50 Data:**

No additional information available

Skin Corrosion/Irritation: Not classified. (Data indicate that solutions having less than 5% sulfuric acid are not irritating to skin)**Eye Damage/Irritation:** Not classified. (Data indicate that solutions having less than 5% sulfuric acid are not irritating to eyes)**Respiratory or Skin Sensitization:** Not classified**Germ Cell Mutagenicity:** Not classified**Carcinogenicity:** Not classified**Specific Target Organ Toxicity (Repeated Exposure):** Not classified**Reproductive Toxicity:** Not classified**Specific Target Organ Toxicity (Single Exposure):** Not classified**Aspiration Hazard:** Not classified**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.**Chronic Symptoms:** None expected under normal conditions of use.**11.2. Information on Toxicological Effects - Ingredient(s)****LD50 and LC50 Data:**

Sulfuric acid (7664-93-9)	
LD50 Oral Rat	2140 mg/kg
Sulfuric acid (7664-93-9)	
IARC Group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity**Ecology - General:** Harmful to aquatic life with long lasting effects.

Sulfuric acid (7664-93-9)	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 - Crustacea [1]	29 mg/l
LC50 Fish 2	42 mg/l (Exposure time: 96 h - Species: Gambusia affinis [static])
NOEC Chronic Fish	0.025 mg/l

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12.2. Persistence and Degradability

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Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

NTx8028 Stop Solution	
Bioaccumulative Potential	Not established.
Sulfuric acid (7664-93-9)	
BCF Fish 1	(no bioaccumulation)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Treatment Methods: Product contaminated with biological materials should preferably be incinerated.**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.**Ecology - Waste Materials:** Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains: Sulfuric acid)
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8
Packing Group : III
ERG Number : 154



14.2. In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains: Sulfuric acid)
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8
Packing Group : III
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B



14.3. In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains: Sulfuric acid)
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8
Packing Group : III
ERG Code (IATA) : 8L



14.4. In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains: Sulfuric acid)
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8
Packing Group : III



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SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

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SARA Section 311/312 Hazard Classes	Physical hazard - Corrosive to metals
Sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	1 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

15.2. US State Regulations

California Proposition 65

 **WARNING:** This product can expose you to Sulfuric acid, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Sulfuric acid (7664-93-9)	X			

Sulfuric acid (7664-93-9)

U.S. - Massachusetts - Right To Know List
 U.S. - New Jersey - Right to Know Hazardous Substance List
 U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
 U.S. - Pennsylvania - RTK (Right to Know) List

15.3. Canadian Regulations

Sulfuric acid (7664-93-9)

Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 08/14/2023**Revision**

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation
H350	May cause cancer
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)



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Date of Issue: 08/14/2023

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: NTx8045 Buffered Substrate Solution

1.2. Intended Use of the Product

Laboratory Chemicals

1.3. Name, Address, and Telephone of the Responsible Party

Company

Zeus Scientific LLC

200 Evans Way

Branchburg, NJ 08876

USA

T 908-526-3744 (Continental USA)

T 800-286-2111 (Additional Information)

www.zeusscientific.com

1.4. Emergency Telephone Number

Emergency Number : 908-526-3744

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Not classified

2.2. Label Elements

GHS-US/CA Labeling

No labeling applicable according to 29 CFR 1910.1200 and the Hazardous Products Regulations (HPR) SOR/2015-17.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Dimethyl sulfoxide	Dimethyl sulphoxide / Durasorb / Methane, sulfinylbis- / Methylsulfinylmethane / Sulfinylbis(methane) / Sulfoxide, dimethyl / Methane, 1,1'-sulfinylbis- / Dimethylsulphoxide / Dimethylsulfoxide / DMSO	(CAS-No.) 67-68-5	3	Flam. Liq. 4, H227
Hydrogen peroxide	Hydrogen peroxide (H2O2) / HYDROGEN PEROXIDE / Hydrogen peroxide, aqueous solution / Dihydrogen dioxide / Hydrogen peroxide solution ...% / Hydrogen peroxide solution / hydrogen peroxide	(CAS-No.) 7722-84-1	0.03	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

Full text of H-statements: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

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SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: May cause slight irritation to eyes.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Sodium oxides. Sulfur oxides. Formaldehyde. Methylmercaptan. Dimethyl sulfide.

5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

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Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Halogenated compounds. Sodium hydride. Metal nitrates.

7.3. Specific End Use(s)

Laboratory Chemicals

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Hydrogen peroxide (7722-84-1)		
USA ACGIH	ACGIH OEL TWA [ppm]	1 ppm
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA OSHA	OSHA PEL (TWA) [1]	1.4 mg/m ³
USA OSHA	OSHA PEL (TWA) [2]	1 ppm
USA NIOSH	NIOSH REL (TWA)	1.4 mg/m ³
USA NIOSH	NIOSH REL TWA [ppm]	1 ppm
USA IDLH	IDLH [ppm]	75 ppm
Alberta	OEL TWA	1.4 mg/m ³
Alberta	OEL TWA [ppm]	1 ppm
British Columbia	OEL TWA [ppm]	1 ppm
Manitoba	OEL TWA [ppm]	1 ppm
New Brunswick	OEL TWA	1.4 mg/m ³
New Brunswick	OEL TWA [ppm]	1 ppm
Newfoundland & Labrador	OEL TWA [ppm]	1 ppm
Nova Scotia	OEL TWA [ppm]	1 ppm
Nunavut	OEL STEL [ppm]	2 ppm
Nunavut	OEL TWA [ppm]	1 ppm
Northwest Territories	OEL STEL [ppm]	2 ppm
Northwest Territories	OEL TWA [ppm]	1 ppm
Ontario	OEL TWA [ppm]	1 ppm
Prince Edward Island	OEL TWA [ppm]	1 ppm
Québec	VEMP (OEL TWA) [ppm]	1 ppm
Saskatchewan	OEL STEL [ppm]	2 ppm
Saskatchewan	OEL TWA [ppm]	1 ppm
Yukon	OEL STEL	2.8 mg/m ³
Yukon	OEL STEL [ppm]	2 ppm
Yukon	OEL TWA	1.5 mg/m ³
Yukon	OEL TWA [ppm]	1 ppm

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Dimethyl sulfoxide (67-68-5)		
USA AIHA	WEEL TWA [ppm]	250 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles or glasses.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Not specified
Odor	: Not specified
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: No data available
Upper Flammable Limit	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Specific Gravity	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials.

10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Halogenated compounds. Sodium hydride. Metal nitrates.

10.6. Hazardous Decomposition Products:

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Thermal decomposition may produce: Carbon oxides (CO, CO₂). Sodium oxides. Sulfur oxides. Formaldehyde. Methylmercaptan. Dimethyl Sulfide. Hydrolysis may produce: Dimethyl sulfone.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Hydrogen peroxide (7722-84-1)	
LD50 Oral Rat	1193 mg/kg (Species: Sprague-Dawley; Exposure time: 4 h)
LD50 Dermal Rabbit	> 2000 mg/kg
ATE US/CA (dust, mist)	1.50 mg/l/4h

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Dimethyl sulfoxide (67-68-5)	
LD50 Oral Rat	> 20000 mg/kg
LD50 Dermal Rat	≈ 40000 mg/kg
Hydrogen peroxide (7722-84-1)	
IARC Group	3

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

Ecology - General: Not classified.

Hydrogen peroxide (7722-84-1)	
LC50 Fish 1	16.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 - Crustacea [1]	18 – 32 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	18 – 56 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Dimethyl sulfoxide (67-68-5)	
LC50 Fish 1	34 g/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 - Crustacea [1]	6830 mg/l
LC50 Fish 2	33 – 37 g/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and Degradability

NTx8045 Buffered Substrate Solution	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

NTx8045 Buffered Substrate Solution	
Bioaccumulative Potential	Not established.

Hydrogen peroxide (7722-84-1)	
BCF Fish 1	(no bioaccumulation)

Dimethyl sulfoxide (67-68-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.35 at 20 °C (at pH 7)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Treatment Methods: Product contaminated with biological materials should preferably be incinerated.

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Not regulated for transport

14.2. In Accordance with IMDG

Not regulated for transport

14.3. In Accordance with IATA

Not regulated for transport

14.4. In Accordance with TDG

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Hydrogen peroxide (7722-84-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the United States SARA Section 302

SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb (concentration >52%)
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Dimethyl sulfoxide (67-68-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

15.2. US State Regulations

Hydrogen peroxide (7722-84-1)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - Massachusetts - Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Dimethyl sulfoxide (67-68-5)

U.S. - New Jersey - Right to Know Hazardous Substance List

15.3. Canadian Regulations

Hydrogen peroxide (7722-84-1)

Listed on the Canadian DSL (Domestic Substances List)

Dimethyl sulfoxide (67-68-5)

Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest : 08/14/2023

Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

H227	Combustible liquid
H271	May cause fire or explosion; strong oxidizer
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

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H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)