SAFETY DATA SHEET

Article 1 - Product Identification

Product Name: 2019-nCoV S1 Human IgA ELISA Kit **Catalog # C19S1-A877**

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Manufacturer's Name:	SignalChem Biotech Inc.
Street Address:	110-13120 Vanier Place
City, Prov. Postal Code:	Richmond, BC, V6V 2J2
Fax:	604-232-4601
EMERGENCY PHONE:	604-232-4600

Article 2 - Hazards Identification - Controls

Emergency Overview: The product contains no substances which at their given concentration, are considered to be hazardous to health.
WHMIS Classification: Not WHMIS controlled
GHS Classification: Not a dangerous substance according to GHS.

Article 3 – Composition/Information on Ingredients

Chemical Characterization: Mixtures.
Description: This product consists of the substances listed below.

Common name	Chemical name	CAS-No.	Concentration
Sodium Chloride	Sodium Chloride	7647-14-5	0.72%
Sodium Phosphate, Dibasic	Sodium Phosphate, Dibasic	7782-85-6	0.248%
Potassium Phosphate, Monobasic	Potassium Phosphate, Monobasic	7778-77-0	0.024%
Potassium Chloride	Potassium Chloride	7447-40-7	0.02%
Protein	-	-	0.005%

Article 4 – First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breathe in fresh air. If cannot breathe, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Consult a physician.
- **After swallowing:** rinse the mouth with plenty of water and consult a physician.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Absorb on sand or vermiculite and place in closed containers for disposal.

Article 7 - Handling and Storage

- **Precautions for sate handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Store in a dry and well-ventilated place in -70 °C. Keep container upright and tightly closed.

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Article 8 - Exposure Controls/Personal Protection

- **Components with limit monitoring values at workplace:**
- **Appropriate engineering controls:**
  Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
  Respiratory protection:
  Use appropriate respirator if there is inadequate ventilation by following the government standards.
  Hand protection:
  Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  Eye/face protection:
  Safety goggles with side-shields approved under appropriate government standards.
  Skin/body protection:
  Use appropriate clothing, footwear and any additional protection measures to protect from splashing or contamination.

Article 9 – Physical and Chemical Properties

Appearance: Colorless fluid.	**Danger of explosion:** Product does not present an explosion hazard.
Odour/Odour Threshold: Not determined.	**Explosion limits:** Not available.
pH: Not available.	**Decomposition temperature:** Not available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Boiling point/Boiling range: Not determined.	**Density:** Not determined.
Flash point: Not determined.	**Relative density:** Not determined.
Flammability (solid, gaseous): Not determined.	**Vapor density:** Not determined.
Ignition temperature: Not determined	**Evaporation rate:** Not determined.
Auto-igniting: Product is not self-igniting.	**Solubility in / Miscibility with Water:** Fully miscible.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** None determined.
- **Incompatible materials:** Avoid contact with metals (aluminum, mercury, copper, lead, zinc) and acids. Do not dispose of Sodium Azide or other chemicals down the drain.
- **Hazardous decomposition products:** May emit toxic fumes under normal fire conditions. Sodium azide can react with heavy metals to form explosive azides.

Article 11 - Toxicological Information

- **Acute toxicity:** Not available.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** May cause irritation.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
  Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
  Ingestion: Not available.
  Skin: May be harmful if absorbed through skin. May cause skin irritation.
  Eyes: May cause eye irritation.
- **Signs and Symptoms of Exposure:** Not available.
- **Synergistic effects:** Not available.

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Article 12 - Ecological Information

- **Eco-toxicity:** Not applicable.
- **Biodegradability:** Not applicable.
- **Bio-accumulative potential:** Not applicable.
- **Mobility in soil:** Not applicable.
- **PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** Not applicable.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

Article 15 – Regulatory Information

- **GHS label elements:** Not applicable.
- **Signal word:** Not applicable.
- **Hazard statements:** Not applicable.

Article 2 - Hazards Identification - Buffers

Emergency Overview: The product contains no substances which at their given concentration, are considered to be hazardous to health.
WHMIS Classification: Not WHMIS controlled
GHS Classification: Not a dangerous substance according to GHS.

- **Hazard Pictograms:** None
- **Signal words:** None
- **Hazard statements:** None
- **Precautionary statements:** None
- **Other hazards:** None known

Article 3 - Composition/Information on Ingredients

Chemical Characterization: Mixtures.
Description: This product does not contain hazardous chemicals at concentrations of 1% or greater. This product is not known to contain carcinogens at concentrations of 0.1% or greater.

Article 4 - First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breath in fresh air. If cannot breathe, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Consult a physician.
- **After swallowing:** Rinse the mouth with plenty of water and consult a physician.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Clean contaminated surface thoroughly.

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Article 7 - Handling and Storage

- **Precautions for sate handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20 °C.

Article 8 - Exposure Controls/Personal Protection

- **Appropriate engineering controls:**
  Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
  Respiratory protection:
  Ensure adequate ventilation, especially in confined areas.
  Skin/body protection:
  Wear protective gloves and clothing. Use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  Eye/face protection:
  Safety glasses with side-shields (or goggles) approved under appropriate government standards.
  General hygiene considerations:
  Handle in accordance with good industrial hygiene and safety practice.

Article 9 – Physical and Chemical Properties

Appearance: Clear liquid.	**Danger of explosion:** No data available.
Odour/Odour Threshold: Not determined.	**Explosion limits:** No data available.
pH: No data available.	**Decomposition temperature:** No data available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** No data available
Boiling point/Boiling range: No data available	**Density:** No data available.
Flash point: No data available	**Relative density:** No data available.
Flammability (solid, gaseous): Not determined.	**Vapor density:** No data available.
Ignition temperature: No data available.	**Evaporation rate:** No data available.
Auto-igniting: No data available	**Solubility in / Miscibility with Water:** Not available.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No data available.
- **Incompatible materials:** No data available.
- **Hazardous decomposition products:** No data available.

Article 11 - Toxicological Information

- **Acute toxicity:** Product does not present an acute toxicity hazard based on known or supplied information.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
  Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
  Ingestion: May be harmful if swallowed.
  Skin: May be harmful if absorbed through skin. May cause skin irritation.
  Eyes: May cause eye irritation.
- **Signs and Symptoms of Exposure:** Not available.
- **Synergistic effects:** Not available.

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Article 12 - Ecological Information

- **Eco-toxicity:** Not applicable.
- **Biodegradability:** Not applicable.
- **Bio-accumulative potential:** Not applicable.
- **Mobility in soil:** Not applicable.
- **PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** Not applicable.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

Article 15 – Regulatory Information

Safety, health, and environmental regulations/legislation specific for the substance or mixture.
Canadian substance listings:

- **WHMIS Classification:** Non-hazardous.
- **GHS label elements:** Not applicable.
- **Signal word:** Not applicable.
- **Hazard statements:** Not applicable.

Article 2 - Hazards Identification - Antibody

- **WHMIS/GHS classification:** This mixture is self-classified as non-hazardous. It does not contain hazardous material at a concentration that would be considered hazardous.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:**
  P260: Do not breath dust or mist
  P264: Wash hands thoroughly after handling.
  P280: Wear protective gloves
  P301+P330+P331: IF SWALLOWED: rinse mouth. Do Not induce vomiting.
  P303+P361+P353: IF ON SKIN: Take off contaminated clothing. Rinse skin with water/shower.
  P363: Wash contaminated clothing before reuse.
  P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  P305+P351+P338: IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and safe to do so. Seek medical attention.

Article 3 – Composition/Information on Ingredients

Chemical Characterization: Mixture.
Description: This product consists of the substance listed below in a non-hazardous buffer formulation.

Common name	Chemical name	CAS-No.	Concentration
2-Chloroacetamide		79-07-2	<0.1%

Article 4 – First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breath in fresh air. If cannot breathe, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Consult a physician.
- **After swallowing:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician.

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Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Absorb on sand or vermiculite and place in closed containers for disposal.

Article 7 - Handling and Storage

- **Precautions for sate handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Store in a cool, dry place. Keep container upright and tightly closed.

Article 8 - Exposure Controls/Personal Protection

- **Components with limit monitoring values at workplace:**
  NA
- **Appropriate engineering controls:**
  Follow standard laboratory practices.
- **Individual protection measures:**
  Respiratory protection:
  Use appropriate respirator if there is inadequate ventilation by following the government standards.
  Hand protection:
  Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  Eye/face protection:
  Safety goggles with side-shields approved under appropriate government standards.
  Skin/body protection:
  Use appropriate clothing, footwear and any additional protection measures to protect from splashing or contamination.

Article 9 – Physical and Chemical Properties

Appearance: Colorless fluid.	**Danger of explosion:** Not available.
Odour/Odour Threshold: Not determined.	**Explosion limits:** Not available.
pH: Not available.	**Decomposition temperature:** Not available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** Not available.
Boiling point/Boiling range: Not determined.	**Density:** Not determined.
Flash point: Not determined.	**Relative density:** Not determined.
Flammability (solid, gaseous): Not determined.	**Vapor density:** Not determined.
Ignition temperature: Not determined.	**Evaporation rate:** Not determined.
Auto-igniting: Not available.	**Solubility in / Miscibility with Water:** Soluble.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** None known.
- **Hazardous decomposition products:** No hazardous decomposition products or polymerization under normal conditions.

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Article 11 - Toxicological Information

- **Acute toxicity:** Not available.
- **LD/LC50:** None expected.
- **Skin corrosion/irritation:** None expected.
- **Serious eye damage/eye irritation:** None expected.
- **Respiratory or skin sensitization:** None expected.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** Not available.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
  Inhalation: None expected.
  Ingestion: None expected.
  Skin: None expected.
  Eyes: None expected.
- **Signs and Symptoms of Exposure:** No data available
- **Chronic exposure:** None expected.

Article 12 - Ecological Information

- **Eco-toxicity:** No data available.
- **Biodegradability:** Not available.
- **Bio-accumulative potential:** Not available.
- **Mobility in soil:** Not available.
- **PBT and vPvB assessment:** Not available.
- **Other adverse effects:** Not available.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

Article 15 – Regulatory Information

- **TSCA (Toxic Substances Control Act):** On TSCA Inventory.
- **SARA 313 Components:** Not listed.
- **SARA 311/312:** Acute Health Hazard.
- **CERCLA Reportable Quantity:** Not listed.
- **California Proposition 65:** Not listed.

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Article 2 - Hazards Identification – TMB Substrate

- **WHMIS/GHS classification:** Contains Tetramethylbenzidine in a Proprietary Buffer
  Irritant, Dermal (Category 2)
  Reproductive Toxicity (Category 1B)
  Acute Toxicity, Dermal (Category 4)
  Acute Toxicity, Inhalation (Category 4)
  Eye Irritation (Category 2A)
- **Hazard Pictograms:**

- **Signal words:** WARNING : DANGER
- **Hazard statements:** H315: Causes skin irritation
  H319: Causes serious eye irriation
  H312: Harmful in contact with skin
  H332: Harmful if inhaled
  H335: May cause respiratory irritation
  H360: May damage the unborn child
- **Precautionary statements:**
  P201: Obtain special instructions before use.
  P202: Do not handle until all safety precautions have been read and understood.
  P261: Avoid breathing mist/fumes.
  P264: Wash hands thoroughly after handling.
  P270: Do not eat, drink, or smoke when using this product.
  P271: Only use in a well-ventilated area.
  P280: Wear protective gloves and protective clothing.
  P281: Use personal protective equipment as required.
  P301+P312: IF SWALLOWED: Call poison control center or doctor if you feel unwell.
  P302+P352: IF ON SKIN: wash with soap and plenty of water and rinse thoroughly.
  P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
  P362+P364: Take off contaminated clothing and wash before reuse.

Article 3 – Composition/Information on Ingredients

Chemical Characterization: Substance.
Description: This product consists of the substance listed below. There are no other ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and require reporting in this section.

Common name	Chemical name	CAS-No.	Concentration
Tetramethylbenzidine		54827-17-7	<0.05%

Article 4 – First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breathe in fresh air. If cannot breathe, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Consult a physician.
- **After swallowing:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

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Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Absorb on sand or vermiculite and place in closed containers for disposal.

Article 7 - Handling and Storage

- **Precautions for sate handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Store in a cool place. Keep container upright and tightly closed.

Article 8 - Exposure Controls/Personal Protection

- **Components with limit monitoring values at workplace:**
  NA
- **Appropriate engineering controls:**
  Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**

Respiratory protection:

Use appropriate respirator if there is inadequate ventilation by following the government standards.

Hand protection:

Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.

Eye/face protection:

Safety goggles with side-shields approved under appropriate government standards.

Skin/body protection:

Use appropriate clothing, footwear and any additional protection measures to protect from splashing or contamination.

Article 9 – Physical and Chemical Properties

Appearance: Liquid.	**Danger of explosion:** Not available.
Odour/Odour Threshold: Not determined.	**Explosion limits:** Not available.
pH: Not available.	**Decomposition temperature:** Not available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** Not available.
Boiling point/Boiling range: Not available.	**Density:** Not determined.
Flash point: Not available.	**Relative density:** Not determined.
Flammability (solid, gaseous): Not determined.	**Vapor density:** Not determined.
Ignition temperature: Not determined.	**Evaporation rate:** Not determined.
Auto-igniting: Not available.	**Solubility in / Miscibility with Water:** Fully miscible.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Heat and moisture.
- **Incompatible materials:** Not determined.
- **Hazardous decomposition products:** Not determined.

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Article 11 - Toxicological Information

- **Acute toxicity:** Not available.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Genotoxicity in vitro – mouse – lymphocyte, mutation in mammalian somatic cells.
- **Carcinogenicity:** Not classified to its carcinogenicity based on its IARC, or NTP, or OSHA, or ACGIH classification at levels less than 0.1%.
- **Reproductive toxicity:** May cause congenital malformation in the fetus. Presumed human reproductive toxicant.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
  Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
  Ingestion: May be harmful if swallowed.
  Skin: May be harmful if absorbed through skin. May cause skin irritation.
  Eyes: Causes serious eye irritation.
- **Signs and Symptoms of Exposure:** No data available
- **Synergistic effects:** Not available.

Article 12 - Ecological Information

- **Eco-toxicity:** No data available.
- **Biodegradability:** Not available.
- **Bio-accumulative potential:** Not available.
- **Mobility in soil:** Not available.
- **PBT and vPvB assessment:** Not available.
- **Other adverse effects:** Not available.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

Article 15 – Regulatory Information

- **TSCA (Toxic Substances Control Act):** On TSCA Inventory.
- **SARA 313 Components:** Not applicable.
- **SARA 311/312:** Not applicable.
- **CERCLA Reportable Quantity:** Not applicable.
- **California Proposition 65:** Not listed.

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Article 2 - Hazards Identification – Stop Solution

- **Stop Solution contains Sulfuric acid**
- **WHMIS/GHS classification:**
  Skin Irritation (Category 2), H315
  Eye Irritation (Category 2), H319
- **Hazard Pictograms:** GHS07

- **Signal words:** Warning
- **Hazard statements:** H315: Causes skin irritation
  H319: Causes serious eye irritation
- **Precautionary statements:**
  H315: P264: Wash hands thoroughly after handling
  P280: Wear protective gloves
  P302+P352: IF ON SKIN: wash with soap and plenty of water and rinse thoroughly
  P332+P313: If skin irritation occurs: Get medical advice/attention.
  P362+P364: Take off contaminated clothing and wash before reuse.
  H320: P264: Wash opened eyes with plenty of water for at least 15 minutes. Consult a physician.
  P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P337+P313: If eye irritation persists: Get medical advice/attention.
- **Other hazards:** none known.

Article 3 – Composition/Information on Ingredients

Chemical Characterization: Substance.
Description: This product consists of the substance listed below.

Common name	Chemical name	CAS-No.	Concentration
Sulfuric Acid	Sulfuric Acid	7664-93-9	<20%

Article 4 – First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breath in fresh air. If cannot breathe, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Consult a physician.
- **After swallowing:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician.
- **Potential acute / delayed health effects:** Causes serious eye irritation / causes burns. Causes skin irritation / causes burns. Harmful if inhaled. Harmful if swallowed. Irritating to mouth, throat and stomach. Causes burns.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Absorb on sand or vermiculite and place in closed containers for disposal.

Article 7 - Handling and Storage

- **Precautions for sate handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Store in a dry and well-ventilated place in -70 °C. Keep container upright and tightly closed.

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Article 8 - Exposure Controls/Personal Protection

- **Components with limit monitoring values at workplace:**
  NA
- **Appropriate engineering controls:**
  Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
  Respiratory protection:
  Use appropriate respirator if there is inadequate ventilation by following the government standards.
  Hand protection:
  Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  Eye/face protection:
  Safety goggles with side-shields approved under appropriate government standards.
  Skin/body protection:
  Use appropriate clothing, footwear and any additional protection measures to protect from splashing or contamination.

Article 9 – Physical and Chemical Properties

Appearance: Colorless fluid.	**Danger of explosion:** Not available.
Odour/Odour Threshold: Pungent.	**Explosion limits:** Not available.
pH: ~1	**Decomposition temperature:** Not available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** Not available.
Boiling point/Boiling range: Not available.	**Density:** Not determined.
Flash point: Not available.	**Relative density:** Not determined.
Flammability (solid, gaseous): Not determined.	**Vapor density:** Not determined.
Ignition temperature: Not determined.	**Evaporation rate:** Not determined.
Auto-igniting: Product is not self-igniting.	**Solubility in / Miscibility with Water:** Fully miscible.

Article 10 - Stability and Reactivity

- **Reactivity:** Contact with metals produces highly flammable hydrogen gas. Addition of water liberates excessive heat.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.
- **Conditions to avoid:** Bases, Halides, Metals, Alkalis, Acetonitrile.
- **Incompatible materials:** Most metals, oxidizers, reducers, bases, metal carbonates, cyanides, sulphides, carbides, oxides, metal acetylides, hydrides, halogens, organic or combustible materials, perchlorates, acetonitrile, permanganates, alcohols, picrates.
- **Hazardous decomposition products:** Products formed under fire conditions; Oxides of Sulphur, Hydrogen gas.

Article 11 - Toxicological Information

- **Acute toxicity:** Can cause severe burns upon contact while the vapours or mist are corrosive and can cause severe irritation or damage t the nose, throat and lungs. Ingestion of this product causes pain, nausea and vomiting and may be fatal if large doses are ingested.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Can cause severe burns.
- **Serious eye damage/eye irritation:** Can cause severe burns.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Can cause severe burns.
- **Potential health effects:**
  Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
  Ingestion: May be harmful if swallowed. Causes burns.
  Skin: May be harmful if absorbed through skin. Causes burns.
  Eyes: Causes eye burns.
- **Signs and Symptoms of Exposure:** No data available
- **Effects of Chronic Exposure:** Repeated skin contact may lead to dermatitis while repeated inhalation may cuase bronchitis, conjunctivitis, respiratory infections, emphysema and digestive disturbances.

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Article 12 - Ecological Information

- **Eco-toxicity:** This product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
- **Biodegradability:** Not available.
- **Bio-accumulative potential:** Not available.
- **Mobility in soil:** Not available.
- **PBT and vPvB assessment:** Not available.
- **Other adverse effects:** Not available.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** UN 2796, Suphuric Acid, Hazard Class 8, Packing group II.
- **IMDG:** UN 2796, Suphuric Acid, Hazard Class 8, Packing group II.
- **IATA:** UN 2796, Suphuric Acid, Hazard Class 8, Packing group II, EmS Number F-A, S-B.

Article 15 – Regulatory Information

- **Toxic Substances Control Act:** On TSCA Inventory.
- **SARA 313 Components:** Not listed.
- **SARA 311/312 Hazards:** Acute Health Hazard.
- **CERCLA Reportable Quantity:** 1000 lbs.
- **California Proposition 65:** Not listed.

Article 16 - Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.