



## MATERIAL SAFETY DATA SHEET

Section 1. Company Identification and Product Information			
<b>Product Name or Identity:</b>	IDS Clenbuterol ELISA		
<b>Manufacturer's Name:</b>	Neogen Corporation	<b>Emergency Phone No.:</b>	269-428-8400
	2620 S. Cleveland Avenue	<b>Fax No.:</b>	269-428-0093
	St. Joseph, MI 49085	<b>e-mail:</b>	foodsafety@neogen.com
<b>Date Prepared or Revised:</b> March 2011		<b>Chemtrec: (800) 424-9300</b> <b>Outside US and Canada: (703) 527-3887</b>	

Section 2. Composition / Information on Hazardous Ingredients			
<b>This product is a mixture of the substances listed below with the addition of nonhazardous materials.</b>			
Hazardous Components	CAS-No.	% Concentration	Hazard Symbol
Specific Chemical Identity: Sulfuric Acid (Stop Solution)	7664-93-9	2.6 – 2.9%	C (Corrosive)

Section 3. Health Hazard Identification	
<b>Health Hazards:</b> <i>(Acute and Chronic)</i>	<b>Information pertaining to particular dangers for man and environment.</b> R 35 Corrosive. Causes severe burns. R 36, 37, 38 Irritating to eyes, respiratory system, and skin.

Section 4. First Aid Measures	
<b>Emergency / First Aid Procedures:</b>	<p><b>General Information:</b> Effects should be less severe than from exposure to higher concentrations of sulfuric acid.</p> <p><b>Ingestion:</b> DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately, show product label or MSDS.</p> <p><b>Inhalation:</b> If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.</p> <p><b>Eye Contact:</b> Immediately rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Remove contact lenses if able. Seek medical attention immediately.</p> <p><b>Skin Contact:</b> Immediately wash with plenty of soap and water for at least 15 minutes while removing contaminated clothing. Wash clothing before reuse. Seek medical attention. Excess acid on skin can be neutralized with a 2% solution of bicarbonate of soda.</p>

Section 5. Fire and Explosion Hazard Data	
<b>Flash Point (Method Used):</b> N/A	<b>Flammable Limits:</b> LEL – N/A, UEL – N/A
<b>Extinguishing Media:</b> Use water spray, dry powder, or carbon dioxide.	
<b>Protective Equipment:</b> Firefighters should wear full protective equipment and self-contained breathing apparatus.	
<b>Unusual Fire and Explosion Hazards:</b> Contacts with metals causes formation of flammable and explosive hydrogen gas.	
<b>Hazardous Combustion Products:</b> Sulfuric Acid is not combustible, but it is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.	

Section 6. Accidental Release Measures	
<b>Personal Precautions:</b> Consider need for evacuation. Avoid inhalation of vapors and contact with skin and eyes. Wear suitable protective clothing, gloves, and eye protection. Place contaminated material in a chemical waste container.	
<b>Environmental Precautions:</b> Prevent dispersion of material. Avoid discharge into drains, water courses or onto the ground. Inform authorities if large amounts are involved. Do not flush into sewer.	
<b>Clean-up Methods:</b> Contain and recover liquid when possible. Neutralize with alkaline material, then absorb with an inert material and place into chemical waste container. Contact safety officer if questions arise and ventilate area.	

### Section 7. Handling and Storage

**Handling:** Avoid inhalation of vapors and contact with skin and eyes. Wear appropriate personal protective equipment. Protect against physical damage. Avoid prolonged or repeated exposure.

**Storage:** Keep container tightly closed in a well-ventilated place. Store in closed original container in a dry place. Keep away from heat, sparks, flame, and incompatible materials. Protect from physical damage.

### Section 8. Exposure Controls / Personal Protection

**Components with limit values that require monitoring:** Sulfuric Acid (7664-93-9), Formamide (75-12-7)

Chemical Name	Source	Type	Exposure Limits
Sulfuric Acid	US ACGIH TLV	TWA	0.2 mg/m <sup>3</sup>
Sulfuric Acid	US OSHA -1 PEL	TWA	1 mg/m <sup>3</sup>

**Engineering Controls:** Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist.

**Respiratory Protection:** Respiratory protection must be used if air contamination exceeds acceptable level. If engineering controls do not maintain airborne concentrations below recommended exposure limits an approved respirator must be worn. In the US, assure compliance with OSHA Standard 63 FR 1152. Use a NIOSH-approved respirator (See 29 CFR 1910.134, respiratory protection standard).

**Personal Protective Equipment:** Personal Protection listed below are general requirements for laboratory personnel. Follow the usual precautionary measures for handling chemicals / powder. Avoid contact with eyes, skin, and clothing. Proper ventilation required. Safety shower and eye bath required.

Keep away from food, beverages, and feed.

Wash hands before and after entering laboratory.

Immediately remove all soiled and contaminated clothing.

**Breathing Equipment:** In case of brief exposure, use a chemical fume hood or a NIOSH / MSHA-approved respirator.

**Hand Protection:** Use chemical resistant gloves. Be aware that the liquid may penetrate gloves.

**Eye Protection:** Wear approved safety goggles.

**Body Protection:** Wear lab coat or other protective work clothing.

**Environmental Exposure Controls:** Environmental manager must be informed of all major spillages.

### Section 9. Physical and Chemical Properties

<b>Appearance and Odor:</b> Clear solution	<b>Specific Gravity:</b> 1.06
<b>Boiling Point:</b> 100°C	<b>Vapor Pressure:</b> 17.535 mm of Hg @ 20°C
<b>Melting Point:</b> May start to solidify at 10.49°C	<b>Vapor Density (Air=1):</b> 3.4
<b>Solubility in Water:</b> Soluble	

### Section 10. Stability and Reactivity

<b>Stability:</b>	Unstable		
	Stable	X	Conditions to Avoid: Stable under normal conditions of use and storage.
<b>Incompatibility (Materials to Avoid):</b> Incompatible with alkalis. Reactive with metals, organic materials, and acids.			
<b>Hazardous Decomposition or Byproducts:</b> Carbon monoxide, Carbon dioxide, and Nitrogen oxides. Sulfuric Acid reacts with carbonates to generate Carbon dioxide gas.			
<b>Hazardous Polymerization:</b>	May Occur		Conditions to Avoid: Heat, sparks, open flame, and incompatible materials.
	Will Not Occur	X	

**Section 11. Toxicological Information****LD/LC50 values that are relevant:**

LD<sub>50</sub>: ORL-RAT, 2140 mg/kg, Sulfuric Acid

**Carcinogenicity Classification:**

**IARC (International Agency for Research on Cancer)** – Category 1 as “strong inorganic acid mists containing Sulfuric Acid. This classification applies only to mists containing Sulfuric Acid and not to Sulfuric Acid or Sulfuric Acid solutions.

**NTP (National Toxicology Program)** - Not Listed

**Eye:** Produces eye irritation. Exposed individuals may experience blurred vision, redness, pain, and burns to eye tissue.

**Ingestion:** Symptoms may include severe burns of the mouth, throat, and stomach. May cause sore throat, vomiting, and diarrhea.

**Inhalation:** Symptoms may include irritation of the nose and throat, labored breathing, as well as lung edema, damage to the mucous membranes and upper respiratory tract.

**Skin:** Symptoms may include redness, pain, and burns to the skin.

**Chronic:** Long term exposure to mist or vapors may cause damage to teeth. Chronic exposure to mists containing Sulfuric Acid is a cancer hazard.

**Target Organs:** Eye, Skin, Lungs, Central Nervous System, Liver, Kidneys

**Section 12. Ecological Information**

**Ecotoxicity Tests:** When released into the soil, this material may leach into groundwater. This material (Sulfuric acid) may be toxic to aquatic life.

**Section 13. Disposal Considerations**

**Waste Disposal Method:** Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Contact safety officer if questions arise and ventilate area. Dispose in accordance with all applicable federal (40 CFR 261.3), state, and local environmental regulations.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

Contact a licensed professional waste disposal service to dispose of this material if questions arise.

**Container Information:** Do not remove labels from containers until they have been cleaned. Since emptied containers retain product residue, follow label warnings even after container is emptied.

**Section 14. Transport Information****DOT Regulations:**

UN No. 3316

Proper Shipping name: Chemical Kit, (contains 2 -3% Sulfuric Acid)

Class 9

Packing Group: III

Label: Excepted/Limited Quantity

**Land Transport ADR/RID/TDG (cross-border):**

UN No. 3316

Proper Shipping name: Chemical Kit, (contains 2 - 3% Sulfuric Acid)

Class 9

Packing Group: III

Label: Excepted/Limited Quantity

**Maritime Transport IMDG:**

UN No. 3316

Proper Shipping name: Chemical Kit, (contains 2 - 3% Sulfuric Acid)

Class 9

Packing Group: III

Label: Excepted/Limited Quantity



**Marine Pollutant:** Not determined

**Air Transport ICAO-TI and IATA-DGR:**

UN No. 3316

Proper Shipping name: Chemical Kit, (contains 2 - 3% Sulfuric Acid)

Class 9

Packing Group: III

Label: Excepted/Limited Quantity

**Section 15. Regulatory Information**

**EU Regulations, Hazard Symbol(s):**

**Sulfuric Acid, C** (Corrosive)

**Risk Phrases:**

R 35 Corrosive. Causes severe burns.

R 36, 37, 38 Irritating to eyes, respiratory system, and skin.

**Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36, 37, 39 Wear suitable protective clothing, gloves, and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately.

**Section 16. Other Information**

This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Neogen Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY.