



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Murexide Indicator, 0.15% (w/v) in Ethylene Glycol

**Product Number:** 5221

**Other Identifying Product Numbers:** 5221-16, 5221-4

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Ricca Chemical Company

**Address:** 448 West Fork Drive  
Arlington, TX 76012 USA

**Telephone:** 888-467-4222

#### 1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

*For the full text of the Hazard and Precautionary Statements listed below, see Section 16.*

Hazard Class	Category	Hazard Statement	Precautionary Statements
Acute Toxicity - Oral	Category 4	H302	P264, P270, P301+P312, P330, P501
Eye Damage / Irritation	Category 2A	H319	P264, P280, P305+P351+P338, P337+P313
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501

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## 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves and eye protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water).
P330	Rinse mouth.
P337+P313	If eye irritation persists: Get medical attention.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.



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### 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

### 2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Ethylene Glycol	HOCH <sub>2</sub> CH <sub>2</sub> OH	62.06 g/mol	107-21-1	99.87%
Murexide	C <sub>8</sub> H <sub>8</sub> N <sub>6</sub> O <sub>6</sub>	284.18 g/mol	3051-09-0	0.13%

## SECTION 4: First-Aid Measures

### 4.1. General First Aid Information

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

**Inhalation:** Not expected to require first aid. If necessary, remove to fresh air.

**Skin Contact:** May cause irritation, allergic rash. Absorption is possible.

**Ingestion:** IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Dilute immediately with water or milk. Induce vomiting. Call a physician.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful or fatal if swallowed. Lethal dose in humans about 1.4 mL/kg or 100 mL. Harmful if absorbed through skin. May cause allergic skin reaction. May irritate eyes, skin and respiratory tract. Affects central nervous system. Wash areas of contact with plenty of water. If ingested, dilute with water and induce vomiting. Call a physician. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: May cause irritation, allergic rash. Absorption is possible. CHRONIC EFFECTS / CARCINOGENICITY: Repeated or high exposures may cause kidney damage, brain damage or skin allergy.

### 4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water).

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

Water spray, fog, carbon dioxide, dry chemical powder, alcohol foam, polymer foam



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### 5.2. Specific Hazards Arising from the Substance or Mixture

Moderate explosion hazard when in the form of vapor. Dangerous fire hazard when exposed to heat.

### 5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## SECTION 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

### 6.2. Cleanup and Containment Methods and Materials

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Ethylene Glycol (107-21-1)	TLV-Ceiling	USA	100 mg/m <sup>3</sup> Ceiling (aerosol only)	ACGIH - Threshold Limit Values - Ceilings (TLV-C)

### 8.2. Exposure Controls

**Engineering Controls:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

**Respiratory Protection:** Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

**Skin Protection:** Wear protective gloves and eye protection. Chemical resistant gloves.

**Eye Protection:** Wear protective gloves and eye protection. Safety glasses or goggles.

### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn. Chemical resistant gloves. Safety glasses or goggles.



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### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

**Appearance:** Dark red liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** -12 - -11°C

**Initial Boiling Point /Range:** Approximately 197°C - Approximately 197°C

**Flash Point:** 111°C

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** 0.1 hPa at 20°C

**Vapor Density:** 2.14

**Relative Density:** 1.11

**Solubility:** Data not available.

**Partition Coefficient (n-Octanol/Water):** -1.93

**Auto-Ignition Temperature:** Data not available.

**Decomposition Temperature:** Data not available.

**Viscosity:** Data not available.

**Explosive Properties:** Data not available.

**Oxidizing Properties:** Data not available.

### SECTION 10: Stability and Reactivity

#### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

#### 10.2. Possibility of Hazardous Reactions

Data not available.

#### 10.3. Conditions to Avoid and Incompatible Materials

Strong oxidizing agents such as Potassium Permanganate, Chromium Trioxide, Sodium Peroxide, Nitrates, Chlorates, and Perchlorates.

#### 10.4. Hazardous Decomposition Products

Will not occur.



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### SECTION 11: Toxicological Information

#### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

LD50, Oral, Rat: (Ethylene Glycol) 4700 mg/kg, details of toxic effects not reported other than lethal dose value.

**Skin Corrosion and Irritation:**

Not applicable.

**Serious Eye Damage and Irritation:**

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Respiratory Sensitization:**

Not applicable.

**Skin Sensitization:**

Not applicable.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific Target Organ Toxicity from Single Exposure:**

Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.



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### Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

### Aspiration Hazard:

Not applicable.

### Additional Toxicology Information:

Data not available.

## SECTION 12: Ecological Information

### 12.1. Ecotoxicity

Not applicable.

### 12.2. Persistence and Degradability

Data not available.

### 12.3. Bioaccumulative Potential

Data not available.

### 12.4. Mobility in Soil

Data not available.

### 12.5. Other Adverse Ecological Effects

Data not available.

## SECTION 13: Disposal Considerations

### 13.1. Waste Treatment Methods

Data not available.

## SECTION 14: Transportation Information

### 14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.



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Not regulated according to IATA Regulations.

### SECTION 15: Regulatory Information

#### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

#### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

#### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Ethylene Glycol (CAS # 107-21-1): 5000 lb final RQ; 2270 kg final RQ

#### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Ethylene Glycol (CAS # 107-21-1): 1.0 % de minimis concentration

#### 15.5. Massachusetts Right-to-Know Substance List

Ethylene Glycol (CAS # 107-21-1): Present

#### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Ethylene Glycol (CAS # 107-21-1): Environmental hazard

Ethylene Glycol (CAS # 107-21-1): Present

#### 15.7. New Jersey Worker and Community Right-to-Know Components

Ethylene Glycol (CAS # 107-21-1): sn 0878

Ethylene Glycol (CAS # 107-21-1): SN 0878 500 lb TPQ

#### 15.8. California Proposition 65

Ethylene Glycol (CAS # 107-21-1): developmental toxicity, 6/19/2015 (ingested)

#### 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Ethylene Glycol (CAS # 107-21-1): Present (DSL)

Murexide (CAS # 3051-09-0): Present (DSL)





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### 15.10. United States of America Toxic Substances Control Act (TSCA) List

Ethylene Glycol (CAS # 107-21-1): Present

Murexide (CAS # 3051-09-0): Present

### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful if swallowed. Causes serious eye irritation. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water). Rinse mouth. If eye irritation persists: Get medical attention.

Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

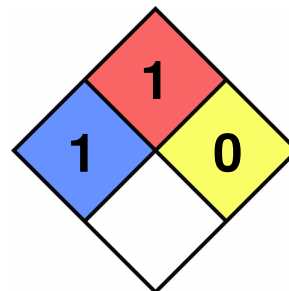
Not Applicable.



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### 16.3. National Fire Protection Association (NFPA) Rating

Health: 1  
Flammability: 1  
Reactivity: 0  
Special Hazard:





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### 16.4. Document Revision

**Last Revision Date:** 5/1/2015

### DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.