

## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Diphenylcarbazone Indicator, 0.1% (w/v) Alcoholic Solution

**Product Number:** 2600

**Other Identifying Product Numbers:** 2600-1, 2600-16, 2600-32, 2600-4

#### 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   |
|--|-------------|------------------|--|
| Eye Damage / Irritation  | Category 2A | H319             | P264, P280, P305+P351+P338, P337+P313  |
| Germ Cell Mutagenicity   | Category 1  | H340             | P201, P202, P280, P308+P313, P405, P501  |
| 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   |
| Flammable Liquids  | Category 2  | H225             | P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501 |

## Safety Data Sheet

### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

| Hazard Number | Hazard Statement  |
|---------------|---|
| H225          | Highly flammable liquid and vapor.                              |
| H319          | Causes serious eye irritation.                                  |
| H340          | May cause genetic defects.                                      |
| H360          | May damage fertility or the unborn child.                       |
| H370          | Causes damage to organs.  |
| H372          | Causes damage to organs through prolonged or repeated exposure. |



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### 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.   |
| P210                 | Keep away from heat, sparks and open flame. No smoking.   |
| P233                 | Keep container tightly closed.  |
| P240                 | Ground container and receiving equipment.   |
| P241                 | Use explosion-proof equipment.  |
| P242                 | Use only non-sparking tools.  |
| P243                 | Take precautionary measures against static discharge.   |
| P260                 | Do not breathe dust, fumes or mist.   |
| 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.  |
| P303+P361+P353       | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.                                      |
| P305+P351+P338       | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to d<br>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).  |
| 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.                                       |

### 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.



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### SECTION 3: Composition / Information on Ingredients

#### 3.1. Components of Substance or Mixture

| Chemical Name       | Formula   | Molecular Weight | CAS Number | Weight% |
|---------------------|---|------------------|------------|---------|
| Ethyl Alcohol       | CH <sub>3</sub> CH <sub>2</sub> OH  | 46.06 g/mol      | 64-17-5    | 95.12%  |
| Methyl Alcohol      | CH <sub>3</sub> OH  | 32.04 g/mol      | 67-56-1    | 4.75%   |
| s-Diphenylcarbazone | C <sub>13</sub> H <sub>12</sub> N <sub>4</sub> O                          | 240.26 g/mol     | 538-62-5   | 0.06%   |
| Diphenylcarbazide   | C <sub>6</sub> H <sub>5</sub> NHNHCONHNH<br>C <sub>6</sub> H <sub>5</sub> | 242.27 g/mol     | 140-22-7   | 0.06%   |

### 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:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Results in drying and cracking which can lead to secondary infections and dermatitis.

**Ingestion:** Dilute immediately with water or milk. Induce vomiting. Call a physician.

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

Flammable liquid. Primarily toxic by ingestion. If ingested, give large quantity of water and induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. May cause irritation to the eyes. Wash areas of contact with plenty of water. May cause irritation of the respiratory system. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Results in drying and cracking which can lead to secondary infections and dermatitis.

#### 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

Use water spray, dry chemical, alcohol foam, or carbon dioxide for extinguishing the surrounding fire. Water spray can be used to dilute spills to non-flammable mixtures.

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

Highly flammable liquid and vapor. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire. Explosion hazard when exposed to heat, flame or oxidizers.

#### 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.



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### SECTION 6: Accidental Release Measures

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

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection.

#### 6.2. Cleanup and Containment Methods and Materials

Absorb with inert material (vermiculite, sand). Ventilate, if necessary, site of spillage well to evaporate remaining liquid and dispel vapor. Do not flush to sewer. Always comply with local, state, and federal 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. Refrigeration will help maintain the strength of this solution.

### SECTION 8: Exposure Controls / Personal Protection

#### 8.1. Control Parameters

| Chemical Name            | Limit Type | Country | Exposure Limit                             | Information Source   |
|--------------------------|------------|---------|--|--|
| Ethyl Alcohol (64-17-5)  | TWA        | USA     | 1000 ppm TWA<br>1900 mg/m <sup>3</sup> TWA | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Ethyl Alcohol (64-17-5)  | TLV-STEL   | USA     | 1000 ppm STEL                              | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Methyl Alcohol (67-56-1) | TWA        | USA     | 200 ppm TWA<br>260 mg/m <sup>3</sup> TWA   | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Methyl Alcohol (67-56-1) | TLV-STEL   | USA     | 250 ppm STEL                               | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Methyl Alcohol (67-56-1) | TLV-TWA    | USA     | 200 ppm TWA                                | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |

#### 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:** Yellow liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** Data not available.

**Initial Boiling Point /Range:** Approximately 77°C - Approximately 77°C

**Flash Point:** Approximately 15.5°C

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

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

**Vapor Pressure:** Data not available.

**Vapor Density:** Data not available.

**Relative Density:** 0.80

**Solubility:** Data not available.

**Partition Coefficient (n-Octanol/Water):** Data not available.

**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

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Oxidizers, platinum, Sodium, Potassium Dioxide, Bromine

#### 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:**

Not applicable.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

LD50, Oral, Rat: (Methanol) 5628 mg/kg, (Diphenylcarbazone) >500 mg/kg, details of toxic effects not reported other than lethal dose value, (Ethanol) 7060 mg/kg, respiration changes noted.

**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:**

May cause genetic defects. 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.

**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 dust, fumes or mist. 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 dust, fumes or mist. 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)

UN Number: UN1987

Proper Shipping Name: Alcohols, n.o.s., (Ethanol and Methanol)

Hazard Class: 3

Packing Group: II

Hazard Placard Labels:





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### 14.2. Transportation by Air - International Air Transport Association (IATA)

**UN Number:** UN1987

**Proper Shipping Name:** Alcohols, n.o.s., (Ethanol and Methanol)

**Hazard Class:** 3

**Packing Group:** II

**Hazard Placard Labels:**



## 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

Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ; 2270 kg final RQ

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

Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration

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

Ethyl Alcohol (CAS # 64-17-5): Teratogen

Methyl Alcohol (CAS # 67-56-1): Present

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

Ethyl Alcohol (CAS # 64-17-5): Present

Methyl Alcohol (CAS # 67-56-1): Environmental hazard

Methyl Alcohol (CAS # 67-56-1): Present

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

Ethyl Alcohol (CAS # 64-17-5): carcinogen; flammable - third degree; mutagen; teratogen

Ethyl Alcohol (CAS # 64-17-5): sn 0844

Methyl Alcohol (CAS # 67-56-1): flammable - third degree; teratogen

Methyl Alcohol (CAS # 67-56-1): sn 1222

Methyl Alcohol (CAS # 67-56-1): SN 1222 TPQ: 500 lb

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### 15.8. California Proposition 65

Ethyl Alcohol (CAS # 64-17-5): carcinogen, initial date 4/29/11 (in alcoholic beverages)  
Ethyl Alcohol (CAS # 64-17-5): carcinogen, initial date 7/1/88 (when associated with alcohol abuse)  
Ethyl Alcohol (CAS # 64-17-5): developmental toxicity, initial date 10/1/87 (in alcoholic beverages)  
Methyl Alcohol (CAS # 67-56-1): developmental toxicity, initial date 3/16/12

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

Diphenylcarbazide (CAS # 140-22-7): Present  
s-Diphenylcarbazone (CAS # 538-62-5): Present  
Ethyl Alcohol (CAS # 64-17-5): Present  
Methyl Alcohol (CAS # 67-56-1): Present

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

Diphenylcarbazide (CAS # 140-22-7): Present  
s-Diphenylcarbazone (CAS # 538-62-5): Present  
Ethyl Alcohol (CAS # 64-17-5): Present  
Methyl Alcohol (CAS # 67-56-1): 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

Highly flammable liquid and vapor. Causes serious eye irritation. May cause genetic defects. 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. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust, fumes or mist. 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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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). If eye irritation persists: Get medical attention. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

Store in a well-ventilated place. Keep cool. Store locked up.

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

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### 16.2. Miscellaneous Hazard Classes

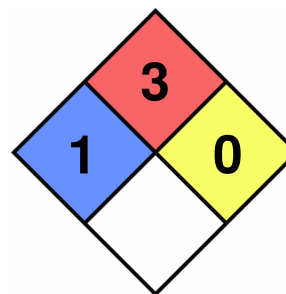
**Canadian Carcinogenicity Hazard Class:** Not Applicable.

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

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

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

**Health:** 1  
**Flammability:** 3  
**Reactivity:** 0  
**Special Hazard:**



## Safety Data Sheet

### 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.