



Safety Data Sheet

Classified according to WHMIS 2015

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Acid Alcohol, 1% (v/v) Hydrochloric Acid in 70% Denatured Alcohol

Product Number: 245

Other Identifying Product Numbers: 245-1, 245-16, 245-2.5, 245-32

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 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

Safety Data Sheet

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

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

| Hazard Class | Category | Hazard Statements | Precautionary Statements: |
|--|-------------|-------------------|--|
| Eye Damage / Irritation | Category 2A | H319 | P264, P280, P305+P351+P338, P337+P313 |
| Respiratory Sensitizer | Category 1 | H334 | P261, P285, P304+P341, P342+P311, P501 |
| 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 |
| Hazardous to the Aquatic Environment (Acute) | Category 3 | H402 | P273, P501 |

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. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| 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. |
| H402 | Harmful to aquatic life. |

Safety Data Sheet

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 fumes, mist, vapors, or spray. |
| P261 | Avoid breathing 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. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves and eye protection. |
| P285 | In case of inadequate ventilation wear respiratory protection. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| P304+P341 | IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. |
| 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). |
| P337+P313 | If eye irritation persists: Get medical attention. |
| P342+P311 | If experiencing respiratory symptoms: Call a POISON CENTER or physician. |
| P370+P378 | In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents in accordance with local, state, federal and international regulations. |

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

Safety Data Sheet

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

| Chemical Name | Formula | Molecular Weight | CAS Number | Weight% |
|-------------------|------------------------------------|------------------|------------|---------|
| Ethyl Alcohol | CH ₃ CH ₂ OH | 46.06 g/mol | 64-17-5 | 61.19 |
| Water | H ₂ O | 18.01 g/mol | 7732-18-5 | 35.25 |
| Methyl Alcohol | CH ₃ OH | 32.04 g/mol | 67-56-1 | 3.06 |
| Hydrochloric Acid | HCl | 36.46 g/mol | 7647-01-0 | 0.51 |

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:** IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
- 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. Dermal absorption causes many of the symptoms of inhalation.
- Ingestion:** Dilute immediately with water or milk. Induce vomiting. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Flammable liquid. Primarily toxic by ingestion. If ingested, give large quantity of water. Vomiting may occur spontaneously. Do not induce. 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. Dermal absorption causes many of the symptoms of inhalation.

4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. 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.



Safety Data Sheet

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

Use protective clothing and breathing equipment appropriate for the surrounding fire.

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. In case of inadequate ventilation wear respiratory 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. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

Safety Data Sheet

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; 1900 mg/m ³ 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; 260 mg/m ³ 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) |
| Hydrochloric Acid (7647-01-0) | TLV-Ceiling | USA | 2 ppm Ceiling | ACGIH - Threshold Limit Values - Ceilings (TLV-C) |
| Hydrochloric Acid (7647-01-0) | PEL-Ceiling | USA | 5 ppm Ceiling; 7 mg/m ³ Ceiling | U.S. - OSHA - Final PELs - Ceiling Limits |

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: In case of inadequate ventilation wear 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. In case of inadequate ventilation wear respiratory 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.



Safety Data Sheet

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: < 1

Melting/Freezing Point: Approximately 0°C

Initial Boiling Point/Range: Approximately 93°C - Approximately 93°C

Flash Point: Approximately 23.5°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: 0.86

Solubility: Miscible

Partition Coefficient: 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 Pentafluoride, Acetyl Bromide, Acetyl Chloride, heat, sparks, open flame.



Safety Data Sheet

10.4. Hazardous Decomposition Products

Will not occur.

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, (Hydrochloric Acid) 900 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:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

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.



Safety Data Sheet

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.

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

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

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.



Safety Data Sheet

SECTION 14: Transportation Information

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

Sizes: 1 L, 4 L, 10 L, 500 mL

UN Number: UN1987

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

Hazard Class: 3

Packing Group: II

Hazard Label(s):



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

Sizes: 1 L, 4 L, 10 L, 500 mL

UN Number: UN1987

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

Hazard Class: 3

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 4 L, 10 L, 500 mL

UN Number: UN1987

Proper Shipping Name: ALCOHOLS, N.O.S. (ethanol, methanol)

Hazard Class: 3

Packing Group: II

Hazard Label(s):



Safety Data Sheet

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

Hydrochloric Acid (CAS # 7647-01-0): 500 lb TPQ (gas only)

Hydrochloric Acid (CAS # 7647-01-0): 5000 lb EPCRA RQ (gas only)

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

Hydrochloric Acid (CAS # 7647-01-0): 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

Hydrochloric Acid (CAS # 7647-01-0): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

15.5. Massachusetts Right-to-Know Substance List

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

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

Hydrochloric Acid (CAS # 7647-01-0): Extraordinarily hazardous

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

Hydrochloric Acid (CAS # 7647-01-0): Environmental hazard

Hydrochloric Acid (CAS # 7647-01-0): Present

Water (CAS # 7732-18-5): 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 500 lb TPQ

Hydrochloric Acid (CAS # 7647-01-0): corrosive

Hydrochloric Acid (CAS # 7647-01-0): sn 1012

Hydrochloric Acid (CAS # 7647-01-0): SN 1012 500 lb TPQ (>=37% concentration); SN 2909 500 lb TPQ (Hydrogen chloride gas only)

Safety Data Sheet

15.8. California Proposition 65

- Ethyl Alcohol (CAS # 64-17-5): carcinogen, 4/29/2011 (in alcoholic beverages)
- Ethyl Alcohol (CAS # 64-17-5): carcinogen, 7/1/1988 (when associated with alcohol abuse)
- Ethyl Alcohol (CAS # 64-17-5): developmental toxicity, 10/1/1987 (in alcoholic beverages)
- Methyl Alcohol (CAS # 67-56-1): developmental toxicity, 3/16/2012

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

- Ethyl Alcohol (CAS # 64-17-5): Present (DSL)
- Ethyl Alcohol (CAS # 64-17-5): Present (NDSL)
- Methyl Alcohol (CAS # 67-56-1): Present (DSL)
- Methyl Alcohol (CAS # 67-56-1): Present (NDSL)
- Hydrochloric Acid (CAS # 7647-01-0): Present (DSL)
- Water (CAS # 7732-18-5): Present (DSL)

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

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

- Ethyl Alcohol (CAS # 64-17-5): Present
- Methyl Alcohol (CAS # 67-56-1): Present
- Hydrochloric Acid (CAS # 7647-01-0): Present [T]
- Water (CAS # 7732-18-5): Present

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

- Ethyl Alcohol (CAS # 64-17-5): 200-578-6
- Ethyl Alcohol (CAS # 64-17-5): 270-649-4
- Methyl Alcohol (CAS # 67-56-1): 200-659-6
- Methyl Alcohol (CAS # 67-56-1): 212-378-6
- Methyl Alcohol (CAS # 67-56-1): 217-435-9
- Methyl Alcohol (CAS # 67-56-1): 270-649-4
- Hydrochloric Acid (CAS # 7647-01-0): 231-595-7
- Hydrochloric Acid (CAS # 7647-01-0): 231-715-8
- Water (CAS # 7732-18-5): 231-791-2
- Water (CAS # 7732-18-5): 232-148-9

Safety Data Sheet

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 allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life.

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 fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. 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. If experiencing respiratory symptoms: Call a POISON CENTER or physician. 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.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

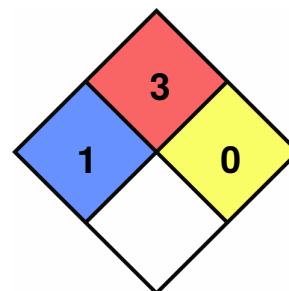
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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

Biohazardous Infectious Materials Hazard Class: 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: 2021-10-06

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.