

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product name** Hardness Reagent 6 Solution**Other means of identification****Product Code(s)** 4485**UN-No** 1170**Recommended use of the chemical and restrictions on use****Recommended Use** Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.**Details of the supplier of the safety data sheet**LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748**Emergency telephone numbers**

(CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

| | |
|--|-------------|
| Acute toxicity - Oral | Category 4 |
| Serious eye damage/eye irritation | Category 2A |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |
| Reproductive toxicity | Category 1A |
| Specific target organ toxicity (single exposure) | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Physical hazards Flammable Liquids. | Category 2 |

EMERGENCY OVERVIEW**DANGER****Hazard statements**

Harmful if swallowed. Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. .
Highly flammable liquid and vapor.

**Appearance** dark purple**Physical state** liquid**Odor** Alcohol**Precautionary Statements - Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection. Do not breathe dust /fume /gas /mist /vapors /spray. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Response: IF exposed or concerned: Get medical advice/attention. 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 advice/attention. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage:

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

Disposal:

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

Toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS***Chemical Family**

Ethanol solution.

| Chemical name | CAS No | Weight-% |
|----------------|-----------|----------|
| Calmagite | 3147-14-6 | 0.1 |
| Methyl alcohol | 67-56-1 | 4 |

| | | |
|---------------|---------|----|
| Ethyl alcohol | 64-17-5 | 80 |
|---------------|---------|----|

4. FIRST AID MEASURES

First Aid Measures

| | |
|--|--|
| General advice | Do not get in eyes, on skin, or on clothing. |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice. |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Call a physician immediately. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. Call a physician immediately. |
| Ingestion | Rinse mouth. Drink large quantity of water. Call a physician immediately. |
| <u>Self-protection of the first aider</u> | Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| Notes to Physician | Treat symptomatically. |

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Vapors may travel to source of ignition and flash back.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| | |
|----------------------------------|---|
| Personal precautions | See section 8. |
| Environmental precautions | See Section 12 for additional Ecological Information. |

Methods and material for containment and cleaning up

| | |
|--------------------------------|--|
| Methods for containment | Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. |
| Methods for cleaning up | Soak up with inert absorbent material. After cleaning, flush away traces with water. |

7. HANDLING AND STORAGE

Precautions for safe handling

| | |
|-----------------|--|
| Handling | Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. |
|-----------------|--|

Conditions for safe storage, including any incompatibilities

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of the reach of children.

Incompatible Products Strong inorganic acids and oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------------------|-------------------------------------|--|--|
| Calmagite 3147-14-6 | *- | *- | Not Established |
| Methyl alcohol 67-56-1 | STEL: 250 ppm TWA: 200 ppm S* | TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S* | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |
| Ethyl alcohol 64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³ | IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³ |

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Gloves & Lab Coat. Protective gloves. Nitrile rubber. Impervious clothing.

Respiratory protection Use only with adequate ventilation.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state liquid
Appearance dark purple
Odor Alcohol

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------|--------------------------------|---|
| pH | | Not Applicable |
| Melting point / freezing point | No information available | |
| Boiling point / boiling range | 78.5 °C / 173.3 °F | for SDA (3A) Ethyl Alcohol |
| Flash point | Not Applicable 16 °C / 60.8 °F | for SDA (3A) Ethyl Alcohol |
| Evaporation rate | | |
| Flammability (solid, gas) | No information available | |
| Flammability Limit in Air | | |
| Upper flammability limit: | No information available | |
| Lower flammability limit: | No information available | |
| Vapor pressure | No information available | |
| Vapor density | 1.6 | @ 20°C (Air=1) for SDA (3A) Ethyl Alcohol |

| | |
|------------------------------|--------------------------|
| Specific gravity | No information available |
| Water solubility | Soluble in water |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |

Other Information

| | |
|------------------|--------------------------|
| Softening point | No information available |
| Molecular weight | No information available |
| VOC Content (%) | No information available |
| Density | No information available |
| Bulk density | No information available |

10. STABILITY AND REACTIVITY

| | |
|----------------------------------|--|
| Stability | Stable under recommended storage conditions. |
| Hazardous polymerization | Hazardous polymerization does not occur. |
| Conditions to avoid | Heat, flames and sparks. |
| Incompatible materials | Strong inorganic acids and oxidizing agents. |
| Hazardous decomposition products | Carbon oxides (COx). |

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Component identification**

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|---------------------------|----------------------|--------------------------|---|
| Calmagite 3147-14-6 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h |
| Ethyl alcohol 64-17-5 | = 7060 mg/kg (Rat) | Not Established | = 124.7 mg/L (Rat) 4 h |

Information on toxicological effects

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---------------------------|-----------------|-----------------|-----------------|-----------------|
| Calmagite 3147-14-6 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | A3 | Group 1 | Known | X |

Chronic toxicity Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage.

| | |
|-------------------------------|----------------|
| ATEmix (oral) | 1,948.00 mg/kg |
| ATEmix (dermal) | 7,500.00 mg/kg |
| ATEmix (inhalation-dust/mist) | 12.53 mg/l |

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Unknown Aquatic Toxicity 0.1 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|---------------------------|-------------------|--|---|
| Calmagite 3147-14-6 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static |

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|---------------------------|-----------------|
| Calmagite 3147-14-6 | Not Established |
| Methyl alcohol 67-56-1 | -0.77 |
| Ethyl alcohol 64-17-5 | -0.32 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------|-----------------|--------------------------------|------------------------|------------------------|
| Calmagite 3147-14-6 | Not Established | - | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Included in waste stream: F039 | Not Established | U154 |
| Ethyl alcohol 64-17-5 | Not Established | - | Not Established | Not Established |

| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---------------------------|--------------------------------------|------------------------|------------------------|------------------------|
| Calmagite 3147-14-6 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

| Chemical name | California Hazardous Waste Status |
|---------------------------|-----------------------------------|
| Calmagite 3147-14-6 | *- |
| Methyl alcohol 67-56-1 | Toxic Ignitable |
| Ethyl alcohol 64-17-5 | Toxic Ignitable |

14. TRANSPORT INFORMATION**DOT**

| | |
|----------------------|---|
| Proper shipping name | ETHANOL SOLUTION (Ethyl Alcohol Solution) |
| UN-No | 1170 |
| Hazard Class | 3 |
| Packing group | II |

IATA

| | |
|----------------------|----------------------------------|
| UN-No | 1170 |
| Proper shipping name | ETHANOL / ETHYL ALCOHOL SOLUTION |
| Hazard Class | 3 |
| Packing group | II |

IMDG/IMO

| | |
|----------------------|----------------------------------|
| UN-No | 1170 |
| Proper shipping name | ETHANOL / ETHYL ALCOHOL SOLUTION |
| Hazard Class | 3 |
| Packing group | II |

| | |
|----------------------|----------------------------------|
| UN-No | 1170 |
| Proper shipping name | ETHANOL / ETHYL ALCOHOL SOLUTION |
| Hazard Class | 3 |
| Packing group | II |

ADR

| | |
|----------------------|----------------------------------|
| UN-No | 1170 |
| Proper shipping name | ETHANOL / ETHYL ALCOHOL SOLUTION |
| Hazard Class | 3 |
| Packing group | II |

15. REGULATORY INFORMATION**International Inventories**

| | |
|---------------|----------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical

or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|---------------------------|-------------------------------|
| Calmagite 3147-14-6 | Not Established |
| Methyl alcohol 67-56-1 | 1.0 |
| Ethyl alcohol 64-17-5 | Not Established |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Calmagite 3147-14-6 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|---------------------------|--------------------------|-----------------|--|
| Calmagite 3147-14-6 | *- | Not Established | - |
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Ethyl alcohol 64-17-5 | *- | Not Established | - |

US State Regulations**California Proposition 65**

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

| Chemical name | California Proposition 65 |
|---------------------------|---------------------------|
| Calmagite 3147-14-6 | Not Established |
| Methyl alcohol 67-56-1 | Developmental |
| Ethyl alcohol 64-17-5 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---------------------------|-----------------|-----------------|-----------------|
| Calmagite 3147-14-6 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | X | X | X |
| Ethyl alcohol 64-17-5 | X | X | X |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| | |
|------------------------------|--|
| Chemical name | CPSC (Consumer Product Safety Commission) - Specially Regulated Substances |
| Methyl alcohol 67-56-1 | Special labeling, 16 CFR 1500.14 |
| 16. OTHER INFORMATION | |

NFPA

Health hazard 1

Flammability 3

Instability 0

Physical and Chemical
Hazards N/A

Health hazard 2

Flammability 3

Stability 0



| | |
|--------------|---|
| HEALTH | 2 |
| FLAMMABILITY | 3 |
| REACTIVITY | 0 |

Prepared by

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Disclaimer

Regulatory Affairs Department

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SDS sections updated 15

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet