

MATERIAL SAFETY DATA SHEET

LaMOTTE COMPANY
 PO BOX 329 - CHESTERTOWN - MARYLAND - 21620
 TELEPHONE # FOR INFORMATION 410-778-3100
 24 Hour Emergency Number (CHEM-TEL) 800-255-3924

1. PRODUCT IDENTIFICATION

Alkalinity Titration Reagent

Code Nr. **6102**

2. HAZARDOUS INGREDIENTS

| NAME | CAS # | TSCA # | % | PEL | TLV |
|-------------------|-----------|--------|------|----------------|---------|
| Hydrochloric Acid | 7647-01-0 | | <0.1 | C 7 mg/cubic m | C 5 ppm |
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3. NON-HAZARDOUS INGREDIENTS EXCEPT WATER (7732-18-5)

| NAME | CAS # | % |
|---------------|-------|---|
| Water to 100% | | |
| | | |
| | | |

4. PHYSICAL DATA

Appearance: Clear Colorless Liquid
 Solubility in Water: Soluble Odor: None Boiling Point: >100 deg C Melt. Point: N/A
 Vapor Pressure: <17 @ 20degC Vapor Density: <1 (Air=1) pH: 2

5. FIRE AND EXPLOSION DATA

Flash Point (method used) N/A Flammable Limit: LEL: N/A UEL: N/A
 Extinguishing Media: Not a fire hazard
 HAZARD: Health - 1 Flammability - 0 Reactivity - 0 Scale: 4 - Extreme, 3 - High, 2 - Moderate, 1 - Slight, 0 - Least
 Special Fire Fighting Procedures:
 N/A
 Unusual Fire & Explosion Hazard:
 N/A

6. REACTIVITY DATA

Stability: Conditions to avoid: N/A
 Stable Incompatibility (Materials to avoid): N/A
 Unstable Hazardous Decomposition Products: N/A

7. HEALTH HAZARD DATA

Toxicity: Unknown
 Primary Route of Entry: Inhalation Skin Carcinogenicity: None NTP
 Ingestion N/A OSHA IARC
 Other Health Related Comments:
 Target Organs: N/A
 Signs and symptoms of exposure:
 May irritate eyes and skin.
 Medical Condition Aggravated by Exposure: N/A

8. EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush thoroughly with water for 15 minutes.
 Ingestion: Drink glass of water. Consult physician.
 Inhalation:
 N/A
 Skin Contact:
 Flush with water. Remove affected clothing and wash skin with soap and water.

9. SPILL AND DISPOSAL PROCEDURES

Spill and Leak:
 Cover spill with sodium bicarbonate. Scoop up neutralized slurry and wash down drain with water.
 Disposal:
 Add slowly to a solution of sodium carbonate. Pour neutralized solution down drain with excess water. Dispose according to federal, state and local regulations.

10. PRECAUTIONARY MEASURES

In Handling: Gloves Eye Protection N/A Other: Lab Coat
 Ventilation Normal Mechanical Respiratory Protection
 Work Hygiene Practices: Avoid contact with skin and clothing.

11. SPECIAL PRECAUTIONS

N/A
 DATE: 2/1/2000 The above information is believed to be correct but does not claim to be all inclusive and should be used only as a guide.
 * This is a toxic chemical subject to reporting requirements of section 313 of EPCRA and 40CFR 372

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LaMOTTE COMPANY
PO BOX 329 - CHESTERTOWN - MARYLAND - 21620
TELEPHONE # FOR INFORMATION 410-778-3100

24 Hour Emergency Number (CHEM-TEL) 800-256-3924

1. PRODUCT IDENTIFICATION

Bromocresol Green-Methyl Red Indicator Tablets

Code Nr. **T-2311**

2. HAZARDOUS INGREDIENTS

| NAME | CAS # | TSCA # | % | PEL | TLV |
|--------------------|-----------|--------|----|-------------------------|-------------------------|
| Potassium Chloride | 7747-40-7 | | 98 | 15 mg/cubic m (dust) | 10 mg/cubic m (dust) |
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3. NON-HAZARDOUS INGREDIENTS EXCEPT WATER (7732-18-5)

| NAME | CAS # | % |
|--------------------|------------|------|
| Sodium Thiosulfate | 10102-17-7 | 0.2 |
| Bromocresol Green | 76-60-8 | 0.1 |
| Methyl Red | 493-52-7 | <0.1 |
| | | |
| | | |

4. PHYSICAL DATA

| | | | |
|--|---------------------------|--------------------------------------|-----------------------------|
| <i>Appearance:</i> Small Blue-green Tablet | | | |
| <i>Solubility in Water:</i> N/A | <i>Odor:</i> None | <i>Boiling Point:</i> N/A | <i>Melt. Point:</i> Unknown |
| <i>Vapor Pressure:</i> N/A | <i>Vapor Density:</i> N/A | <i>pH:</i> 6(1 tablet in 10mL water) | |

5. FIRE AND EXPLOSION DATA

| | | |
|---|----------------------------------|-----------------|
| <i>Flash Point (method used):</i> N/A | <i>Flammable Limit: LEL:</i> N/A | <i>UEL:</i> N/A |
| <i>Extinguishing Media:</i> Not a fire hazard | | |
| <i>HMS Hazard: Health - 1 Flammability - 0 Reactivity - 0 Scale: 4 - Extreme, 3 - High, 2 - Moderate, 1 - Slight, 0 - Least</i> | | |
| <i>Special Fire Fighting Procedures:</i> N/A | | |
| <i>Unusual Fire & Explosion Hazard:</i> N/A | | |

6. REACTIVITY DATA

| | |
|---|---|
| <i>Stability:</i> | <i>Conditions to avoid:</i> Heat, moisture |
| <input checked="" type="checkbox"/> <i>Stable</i> | <i>Incompatibility (Materials to avoid):</i> N/A |
| <input type="checkbox"/> <i>Unstable</i> | <i>Hazardous Decomposition Products:</i> N/A |

7. HEALTH HAZARD DATA

| | | | |
|---|--|--|---|
| <i>Toxicity:</i> oral rat LD50: 2600 mg/kg for Potassium Chloride; oral man LDLo: 20 mg/kg | | | |
| <i>Primary Route of Entry:</i> | <input type="checkbox"/> <i>Inhalation</i> | <input type="checkbox"/> <i>Skin</i> | <i>Carcinogenicity:</i> |
| | <input checked="" type="checkbox"/> <i>Ingestion</i> | <input checked="" type="checkbox"/> <i>N/A</i> | <input checked="" type="checkbox"/> <i>None</i> <input type="checkbox"/> <i>NTP</i> |
| | | | <input type="checkbox"/> <i>OSHA</i> <input type="checkbox"/> <i>IARC</i> |
| <i>Other Health Related Comments:</i> Potassium chloride investigated as a mutagen | | | |
| <i>Target Organs:</i> N/A | | | |
| <i>Signs and symptoms of exposure:</i> May irritate eyes and skin. Ingestion of large quantities may cause gastrointestinal irritation and circulatory problems. | | | |
| <i>Medical Condition Aggravated by Exposure:</i> N/A | | | |

8. EMERGENCY FIRST AID PROCEDURES

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| <i>Eye Contact:</i> Flush thoroughly with plenty of water. |
| <i>Ingestion:</i> Drink water. Consult physician. |
| <i>Inhalation:</i> N/A |
| <i>Skin Contact:</i> Rinse skin with water. |

9. SPILL AND DISPOSAL PROCEDURES

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|---|
| <i>Spill and Leak:</i> Sweep up. Dissolve in water and flush down drain with excess water. |
| <i>Disposal:</i> Dissolve in water. Flush down drain with excess water. Dispose according to federal, state and local regulations. |

10. PRECAUTIONARY MEASURES

| |
|---|
| <i>In Handling:</i> <input type="checkbox"/> <i>Gloves</i> <input checked="" type="checkbox"/> <i>Eye Protection</i> <input type="checkbox"/> <i>N/A</i> <input type="checkbox"/> <i>Other:</i> |
| <i>Ventilation:</i> <input checked="" type="checkbox"/> <i>Normal</i> <input type="checkbox"/> <i>Mechanical</i> <input type="checkbox"/> <i>Respiratory Protection</i> |
| <i>Work/Hygiene Practices:</i> Avoid handling tablets. |

11. SPECIAL PRECAUTIONS

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|-----|
| N/A |
|-----|

DATE: 6/3/02 The above information is believed to be correct but does not claim to be all inclusive and should be used only as a guide.

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PO BOX 329 - CHESTERTOWN - MARYLAND - 21620
TELEPHONE # FOR INFORMATION 410-778-3100

24 Hour Emergency Number (CHEM-TEL) 800-255-3924

1. PRODUCT IDENTIFICATION

Phenolphthalein Tablets

Code Nr. **T-2246**

2. HAZARDOUS INGREDIENTS

| NAME | CAS # | TSCA # | % | PEL | TLV |
|--------------------|-----------|--------|-----|--------------------------|--------------------------|
| Potassium Chloride | 7447-40-7 | | >98 | 15 mg/cubic m total dust | 10 mg/cubic m total dust |
| Phenolphthalein | 77-09-8 | | <1 | N/A | N/A |
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3. NON-HAZARDOUS INGREDIENTS EXCEPT WATER (7732-18-5)

| NAME | CAS # | % |
|---------|-------|----|
| Fillers | ---- | <2 |
| | | |
| | | |

4. PHYSICAL DATA

| | | | |
|------------------------------|--------------------|-----------------------------|------------------------|
| Appearance: White Tablet | | | |
| Solubility in Water: Soluble | Odor: None | Boiling Point: N/A | Melt. Point: 770 deg C |
| Vapor Pressure: N/A | Vapor Density: N/A | pH: 6 (1 tablet/10mL water) | |

5. FIRE AND EXPLOSION DATA

| | | |
|---|---------------------------|----------------|
| Flash Point (method used): N/A | Flammable Limit: LEL: N/A | UEL: N/A |
| Extinguishing Media: Not a fire hazard | | |
| HMIS Hazard: Health - 1 | Flammability - 0 | Reactivity - 0 |
| Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least | | |
| Special Fire Fighting Procedures: N/A | | |
| Unusual Fire & Explosion Hazard: N/A | | |

6. REACTIVITY DATA

| | |
|---|---|
| Stability: <input checked="" type="checkbox"/> Stable | Conditions to avoid: Heat, moisture |
| <input type="checkbox"/> Unstable | Incompatibility (Materials to avoid): N/A |
| Hazardous Decomposition Products: N/A | |

7. HEALTH HAZARD DATA

| | |
|---|--|
| Toxicity: Potassium chloride- orl rat LD50: 2600 mg/kg; orl man LDLo: 20 mg/kg | |
| Primary Route of Entry: <input type="checkbox"/> Inhalation <input type="checkbox"/> Skin <input checked="" type="checkbox"/> Ingestion | Carcinogenicity: <input type="checkbox"/> None <input checked="" type="checkbox"/> NTP <input type="checkbox"/> OSHA <input type="checkbox"/> IARC |
| Other Health Related Comments: CA Prop.65 Warning: This product contains phenolphthalein, a chemical known to the state of Calif to cause cancer. | |
| Target Organs: N/A | |
| Signs and symptoms of exposure: May irritate eyes and skin. Ingestion of large quantities may cause gastrointestinal irritation and circulatory problems. | |
| Medical Condition Aggravated by Exposure: Impaired kidneys increase effects of KCl | |

8. EMERGENCY FIRST AID PROCEDURES

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|---|
| Eye Contact: Flush with water for 15 minutes. |
| Ingestion: Drink plenty of water. Consult a physician. |
| Inhalation: N/A |
| Skin Contact: Flush with water. Wash with soap and water. |

9. SPILL AND DISPOSAL PROCEDURES

| |
|--|
| Spill and Leak: Sweep up, dissolve in water. Wash down drain with water. |
| Disposal: Dissolve and wash down drain with excess water. Dispose according to federal, state and local regulations. |

10. PRECAUTIONARY MEASURES

| |
|---|
| In Handling: <input checked="" type="checkbox"/> Gloves <input checked="" type="checkbox"/> Eye Protection <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Other: Lab Coat |
| Ventilation: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Mechanical <input type="checkbox"/> Respiratory Protection |
| Work/Hygienic Practices: Avoid handling tablets. |

11. SPECIAL PRECAUTIONS

| |
|--------------|
| N/A |
| DATE: 6/5/02 |

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TELEPHONE # FOR INFORMATION 410-778-3100

24 Hour Emergency Number (CHEM-TEL) 800-255-3924

1. PRODUCT IDENTIFICATION

Barium Chloride Solution, 10% Code Nr. **6117**

2. HAZARDOUS INGREDIENTS

| NAME | CAS # | TSCA # | % | PEL | TLV |
|---------------------------|------------|------------|----|-------------------------|-------------------------|
| Barium Chloride Dihydrate | 10326-27-9 | 10361-37-2 | 10 | 0.5 mg/cubic m as Ba | 0.5 mg/cubic m as Ba |
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3. NON-HAZARDOUS INGREDIENTS EXCEPT WATER (7732-18-5)

| NAME | CAS # | % |
|---------------|-------|---|
| Water to 100% | | |
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| | | |

4. PHYSICAL DATA

| | | | |
|------------------------------------|---------------------------|------------------------|------------------|
| Appearance: Clear Colorless Liquid | | | |
| Solubility in Water: Soluble | Odor: None | Boiling Point: Unknown | Melt. Point: N/A |
| Vapor Pressure: <17 @ 20 deg C | Vapor Density: <1 (Air=1) | pH: 6 | |

5. FIRE AND EXPLOSION DATA

| | | |
|---|---------------------------|----------------|
| Flash Point (method used): N/A | Flammable Limit: LEL: N/A | UEL: N/A |
| Extinguishing Media: Not a fire hazard | | |
| HMIS Hazard: Health - 2 | Flammability - 0 | Reactivity - 1 |
| Scale: 4 - Extreme, 3 - High, 2 - Moderate, 1 - Slight, 0 - Least | | |
| Special Fire Fighting Procedures: N/A | | |
| Unusual Fire & Explosion Hazard: N/A | | |

6. REACTIVITY DATA

| |
|---|
| Stability: Conditions to avoid: N/A |
| <input checked="" type="checkbox"/> Stable Incompatibility (Materials to avoid): N/A |
| <input type="checkbox"/> Unstable |
| Hazardous Decomposition Products: Hydrogen chloride |

7. HEALTH HAZARD DATA

| | |
|---|---|
| Toxicity: oral human LD ₅₀ : 11.4 mg/kg for solid barium chloride | |
| Primary Route of Entry: <input type="checkbox"/> Inhalation <input checked="" type="checkbox"/> Skin <input type="checkbox"/> N/A | Carcinogenicity: <input checked="" type="checkbox"/> None <input type="checkbox"/> NTP <input type="checkbox"/> OSHA <input type="checkbox"/> IARC |
| Other Health Related Comments: | |
| Target Organs: Heart, Central Nervous System | |
| Signs and symptoms of exposure: May be fatal if swallowed. Abdominal pain and vomiting. May irritate eyes and skin. | |
| Medical Condition Aggravated by Exposure: N/A | |

8. EMERGENCY FIRST AID PROCEDURES

| |
|---|
| Eye Contact: Flush with water for 15 minutes. Consult a physician. |
| Ingestion: Rinse out mouth. Induce vomiting. Call a doctor immediately. |
| Inhalation: Remove to fresh air. |
| Skin Contact: Immediately flush with water while removing affected clothing. Wash skin with soap and water. |

9. SPILL AND DISPOSAL PROCEDURES

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| Spill and Leak: Collect spilled liquid. Add excess dilute sulfuric Acid; let stand overnight. Remove insoluble Barium Sulfate precipitate & bury in approved landfill. Neutralize remaining sulfuric acid w/sodium bicarbonate & flush to drain w/excess water |
| Disposal: Treat as above, or send collected Barium Chloride liquid directly to hazardous waste disposal. Do NOT flush to sewer. Dispose according to federal, state and local regulations. |

10. PRECAUTIONARY MEASURES

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|--|
| In Handling: <input checked="" type="checkbox"/> Gloves <input checked="" type="checkbox"/> Eye Protection <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Other: Lab Coat |
| Ventilation: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Mechanical <input type="checkbox"/> Respiratory Protection |
| Work/Hygienic Practices: Avoid contact with skin and eyes. Wash thoroughly after handling. |

11. SPECIAL PRECAUTIONS

| |
|-----|
| N/A |
|-----|

DATE: 2/2/03 The above information is believed to be correct but does not claim to be all inclusive and should be used only as a guide.

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