



MSDS  
Material Safety Data Sheet

PO Box 329 • 802 Washington Avenue • Chestertown, MD 21620 • USA  
Telephone Number For Information 410-778-3100

24 Hour Emergency Number (CHEM-TEL): USA, Canada, Puerto Rico 800-255-3924;  
Outside North American continent 813-248-0585 (call collect)

**1. Product Identification**

|                             |                       |                         |  |
|-----------------------------|-----------------------|-------------------------|--|
| <b>Product Code:</b>        | <b>5128</b>           | <b>Manufactured By:</b> | LaMotte Company                                |
| <b>Product Description:</b> | Formaldehyde Solution |                         | 802 Washington Avenue<br>Chestertown, MD 21620 |

**2. Composition/Information on Ingredients**

| Hazardous | Name          | CAS #     | %     | OSHA<br>PEL       | ACGIH<br>TLV      |
|-----------|---------------|-----------|-------|-------------------|-------------------|
| Yes       | Formaldehyde  | 50-00-0   | 37    | 1 ppm             | CL 1 ppm          |
| Yes       | Methanol      | 67-56-1   | 10-15 | 260<br>mg/cubic m | 200<br>mg/cubic m |
| No        | Water to 100% | 7732-18-5 | 48-53 |                   |                   |

**3. Hazards Overview**

**Primary Route of Entry:** Ingestion Inhalation Skin

**Poison! Danger! Cancer hazard. Vapor and liquid harmful. May be fatal or cause blindness if swallowed. Harmful if inhaled or absorbed through skin. Causes irritation or burns to skin, eyes, and respiratory tract. Strong sensitizer: May cause severe allergic reaction. Flammable liquid and vapor.**

Skin, eye, liver, kidney, lung problems.  
Possible allergic reaction. Causes severe burns to eyes, nose, mouth.

**HMIS Hazard:** (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)  
Health: 3      Flammability: 2      Reactivity: 2

**Carcinogenicity:** Yes. NTP OSHA IARC  
IARC- 29,345,82 Confirmed carcinogen. Suspected of causing tumors, fetal damage; mutagen; respiratory allergen.

**Other Health Related Comments:**

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of this product.

**4. First Aid Measures**

- Eye Contact:** Immediately flush with water for 15 minutes. Get medical attention immediately.
- Skin Contact:** Immediately flush with water for 15 minutes while removing affected clothing. Wash skin with soap and water. Get medical attention immediately if contact is extensive.
- Ingestion:** If victim is conscious give milk or plenty of water to dilute the formaldehyde. If vomiting occurs, keep head lower than hips to avoid aspirating material into the lungs. Get medical attention immediately
- Inhalation:** Remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Call a doctor.

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**Product Code: 5128**

**Product Description: Formaldehyde Solution**

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## **5. Fire Fighting Measures**

**Flash Point: 60deg C (140 F) CC      LEL: 7%      UEL: 73%**

### **Fire Rating**

**Extinguishing Media:** Dry chemical, CO<sub>2</sub>, water spray, or alcohol-resistant foam

**Special Fire Fighting Procedures:** Firefighters wear SCBA.

**Hazardous Combustion and/or Decomposition Products:** N/A

**Unusual Fire & Explosion Hazard:** Vapor may travel to source of ignition and flash back.

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## **6. Accidental Release Measures**

Ventilate area. Do not breathe vapors. Eliminate sources of ignition. Treat with Spill-X-FP formaldehyde polymerizer, or cover with sand or organic absorbent. Container and recover liquid when possible, using non-sparking tools. Do not flush to sewer. Hold for disposal as hazardous waste. A formaldehyde spill may also be treated with sodium bisulfite to complex and destroy the formaldehyde as described in Section 13.

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## **7. Handling & Storage**

Store tightly closed in cool, dry, ventilated location, away from incompatibles. Protect from freezing. Containers should be bonded and grounded for transfers to avoid static sparks.

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## **8. Exposure Controls/Personal Protection**

### **Ventilation**

A system of local and/or general exhaust is recommended.

### **Protection When Handling**

Gloves   Eye Protection   Lab Coat   Other: Respirator with a formaldehyde cartridge for spill clean-up.

**Work/Hygienic Practices:** Use in fume hood or with good ventilation. Avoid contact with eyes, skin, clothing. Do not eat, drink, or smoke in area of use. Wash after use.

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## **9. Physical & Chemical Properties**

|                             |                        |                        |                    |
|-----------------------------|------------------------|------------------------|--------------------|
| <b>Appearance:</b>          | Colorless Clear Liquid | <b>Boiling Point:</b>  | 96 deg C (205 F)   |
|                             |                        | <b>Melting Point:</b>  | -15 deg C (5 F)    |
|                             |                        | <b>pH:</b>             | 2-3 (30% solution) |
| <b>Odor:</b>                | Strong, pungent        | <b>Vapor Density:</b>  | 1.03, Air=1        |
| <b>Solubility in Water:</b> | Soluble                | <b>Vapor Pressure:</b> | 1.3 mm@ 20 deg C   |

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## **10. Stability & Reactivity**

|                             |                                   |
|-----------------------------|-----------------------------------|
| <b>Stable:</b>              | Yes                               |
| <b>Conditions to Avoid:</b> | Heat, flame, sources of ignition  |
| <b>Materials to Avoid:</b>  | Strong oxidizers, acids and bases |

**Hazardous Decomposition Products:** CO<sub>x</sub> and formaldehyde vapor (gas)

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**Product Code: 5128****Product Description: Formaldehyde Solution**

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**11. Toxicological Information****Formaldehyde solution: Oral rat LD50: 100 mg/kg.****Inhalation human TC Lo: 17 mg/cubic m/30 minutes**

Formaldehyde is an OSHA regulated carcinogen. IARC category 2A. Investigated as a tumorigen, mutagen, reproductive effector.

**Methanol: Oral rat LD50: 5628 mg/kg.** Investigated as a tumorigen, mutagen, reproductive effector.**Target Organs:** Lungs Respiratory System Eyes Liver

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**12. Ecological Information**

Information not Available

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**13. Disposal Considerations**

Untreated formaldehyde waste should be disposed of as hazardous waste, according to federal, state and local regulations. To treat formaldehyde for disposal to drain or sewer: Avoid breathing formaldehyde vapor. Cover formaldehyde spill with sodium bisulfite. Add water, to form a slurry. Scoop into a large beaker. After 1 hour flush liquid down drain with excess water.

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**14. Transport Information**

Domestic:

**Proper Shipping Name: FORMALDEHYDE SOLUTIONS, FLAMMABLE (>25% FORMALDEHYDE)****Hazard Class/Div: 3****UN1198****Packing Group: III**

International:

**Proper Shipping Name: FORMALDEHYDE SOLUTION, FLAMMABLE (>25% FORMALDEHYDE)****Hazard Class/Div: 3, 6.1****UN1198****Packing Group: III**

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**15. Regulatory Information****Chemical Inventory Status**

| <b>Ingredient</b>      | <b>USA</b>  | <b>Europe</b> | <b>---Canada---</b> |             | <b>Australia</b> | <b>Japan</b> |
|------------------------|-------------|---------------|---------------------|-------------|------------------|--------------|
|                        | <b>TSCA</b> | <b>EC</b>     | <b>DSL</b>          | <b>NDSL</b> |                  |              |
| Formaldehyde (50-00-0) | Yes         | Yes           | Yes                 | No          | Yes              | Yes          |
| Methanol (67-56-1)     | Yes         | Yes           | Yes                 | No          | Yes              | Yes          |
| Water to 100%          | Yes         | Yes           | Yes                 | No          | Yes              | Yes          |

**Federal, State, & International Regulations**

| <b>Ingredient</b>      | <b>---SARA 302---</b> |            | <b>----- SARA 313 -----</b> |                          | <b>CERCLA</b> | <b>RCRA<br/>261.33</b> | <b>TSCA<br/>8(D)</b> |
|------------------------|-----------------------|------------|-----------------------------|--------------------------|---------------|------------------------|----------------------|
|                        | <b>RQ</b>             | <b>TPQ</b> | <b>Listed</b>               | <b>Chemical Category</b> |               |                        |                      |
| Formaldehyde (50-00-0) | 100                   | 500        | Yes                         | No                       | 100           | U122                   | No                   |
| Methanol (67-56-1)     | No                    | No         | Yes                         | No                       | 5000          | U154                   | No                   |
| Water to 100%          | No                    | No         | No                          | No                       | No            | No                     | No                   |

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**Product Code: 5128**

**Product Description: Formaldehyde Solution**

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| <b>Ingredient</b>   | <b>----- SARA 311/312 -----<br/>Hazard Categories</b>                                | <b>----- Australia -----</b> |                            | <b>This MSDS is<br/>WHMIS Compliant</b> |
|---|--|------------------------------|----------------------------|---|
|   |  | <b>Hazchem<br/>Code</b>      | <b>Poison<br/>Schedule</b> |   |
| Formaldehyde (50-00-0)  | Acute: Yes Chronic: Yes Fire: Yes<br>Pressure: No Reactivity: No<br>(Mixture/Liquid) | 2SE                          | S6                         |   |
| Methanol (67-56-1)  | Acute: Yes Chronic: Yes Fire: Yes<br>Pressure: No Reactivity: No<br>(Mixture/Liquid) | 2SE                          | S6                         |   |
| Water   |  |                              |                            |   |
| <b>For product #5128 liquid<br/>mixture, taken as a whole</b> | Acute: Yes Chronic: Yes Fire: Yes<br>Pressure: No Reactivity: No<br>(Mixture/Liquid) | 2SE                          | S6                         | Yes                                     |

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**16. Other Information**

**Warning:** This product contains formaldehyde, a chemical known to the state of California to cause cancer.

**Prepared By:** IP

**Revised:** 4/18/2005



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**Outside North American continent 813-248-0585 (call collect)**

**1. Product Identification**

|                             |                    |                         |  |
|-----------------------------|--------------------|-------------------------|--|
| <b>Product Code:</b>        | <b>6315</b>        | <b>Manufactured By:</b> | LaMotte Company                                |
| <b>Product Description:</b> | Zinc Buffer Powder |                         | 802 Washington Avenue<br>Chestertown, MD 21620 |

**2. Composition/Information on Ingredients**

| Hazardous | Name                      | CAS #     | %   | OSHA<br>PEL   | ACGIH<br>TLV |
|-----------|---------------------------|-----------|-----|---------------|--------------|
| Yes       | Sodium Borate, 10-hydrate | 1303-96-4 | 100 | 10 mg/cubic m | 1 mg/cubic m |

**3. Hazards Overview**

**Primary Route of Entry: Ingestion Inhalation Skin**

**Warning! Harmful if swallowed, inhaled, or absorbed through skin.** May irritate eyes, skin, respiratory system.  
Ingestion causes nausea, vomiting.

**HMIS Hazard:** (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)

Health: 2      Flammability: 0      Reactivity: 1

**Carcinogenicity:**      None

**Other Health Related Comments:**

**4. First Aid Measures**

- Eye Contact:** Flush with water for 15 minutes. Get prompt medical attention.
- Skin Contact:** Flush thoroughly with water. Wash with soap and water.
- Ingestion:** Induce vomiting immediately. Give plenty of water. Get prompt medical attention.
- Inhalation:** Remove to fresh air.

**5. Fire Fighting Measures**

**Flash Point:** N/A      **LEL:** N/A      **UEL:** N/A

**Fire Rating**

- Extinguishing Media:**      Not a fire hazard
- Special Fire Fighting Procedures:**      N/A
- Hazardous Combustion and/or Decomposition Products:**      N/A
- Unusual Fire & Explosion Hazard:**      N/A

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**Product Code: 6315**

**Product Description: Zinc Buffer Powder**

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### **6. Accidental Release Measures**

Avoid breathing dust. Sweep up. Small amount: Dissolve in water and wash down drain. Large amount.: Hold for disposal as hazardous waste.

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### **7. Handling & Storage**

Store tightly closed in cool, dry, ventilated area.

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### **8. Exposure Controls/Personal Protection**

#### **Ventilation**

Use with adequate ventilation.

#### **Protection When Handling**

Gloves Eye Protection Lab Coat

**Work/Hygienic Practices:** Wash hands after handling.

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### **9. Physical & Chemical Properties**

|                             |                          |                        |                         |
|-----------------------------|--------------------------|------------------------|-------------------------|
| <b>Appearance:</b>          | White Crystalline powder | <b>Boiling Point:</b>  | 320 deg C (Loses water) |
|                             |                          | <b>Melting Point:</b>  | 75 deg C                |
|                             |                          | <b>pH:</b>             | 9 (0.1g/10mL water)     |
| <b>Odor:</b>                | None                     | <b>Vapor Density:</b>  | N/A                     |
| <b>Solubility in Water:</b> | Slight                   | <b>Vapor Pressure:</b> | N/A                     |

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### **10. Stability & Reactivity**

|                             |                    |
|-----------------------------|--------------------|
| <b>Stable:</b>              | Yes                |
| <b>Conditions to Avoid:</b> | N/A                |
| <b>Materials to Avoid:</b>  | Acids, metal salts |

**Hazardous Decomposition Products:** N/A

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### **11. Toxicological Information**

**Sodium Borate 10-hydrate: Oral rat LD50: 2660 mg/kg.** Estimated lethal dose (human) 15-20 grams. Investigated as a mutagen, reproductive effector.

Sodium Borate anhydrous: Investigated as a reproductive effector.

**Target Organs:**

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### **12. Ecological Information**

When released into the soil this material may leach into ground water.

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### **13. Disposal Considerations**

Small amount: Dissolve and wash down drain with excess water. Large amount: Dispose of as hazardous waste according to federal, state and local regulations.

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**Product Code: 6315**

**Product Description: Zinc Buffer Powder**

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**14. Transport Information**

Not regulated for transport

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**15. Regulatory Information**

**Chemical Inventory Status**

| <b>Ingredient</b>                                     | <b>USA</b>  | <b>Europe</b> | <b>---Canada---</b> |             | <b>Australia</b> | <b>Japan</b> |
|---|-------------|---------------|---------------------|-------------|------------------|--------------|
|   | <b>TSCA</b> | <b>EC</b>     | <b>DSL</b>          | <b>NDSL</b> |                  |              |
| Borates,Tetra, Sodium Salts,<br>Anhydrous (1330-43-4) | Yes         | Yes           | Yes                 | No          | Yes              | Yes          |

**Federal, State, & International Regulations**

| <b>Ingredient</b>                                     | <b>---SARA 302---</b> |            | <b>----- SARA 313 -----</b> |                          |               | <b>RCRA</b>   | <b>TSCA</b> |
|---|-----------------------|------------|-----------------------------|--------------------------|---------------|---------------|-------------|
|   | <b>RQ</b>             | <b>TPQ</b> | <b>Listed</b>               | <b>Chemical Category</b> | <b>CERCLA</b> | <b>261.33</b> | <b>8(D)</b> |
| Borates,Tetra, Sodium Salts,<br>Anhydrous (1330-43-4) | No                    | No         | No                          | No                       | No            | No            | No          |

| <b>Ingredient</b>                                     | <b>----- SARA 311/312 -----</b> |                       |                 | <b>----- Australia -----</b> |                 | <b>This MSDS is</b>    |
|---|---------------------------------|-----------------------|-----------------|------------------------------|-----------------|------------------------|
|   | <b>Hazard Categories</b>        |                       |                 | <b>Hazchem</b>               | <b>Poison</b>   | <b>WHMIS Compliant</b> |
|   | <b>Acute: Yes</b>               | <b>Chronic: Yes</b>   | <b>Fire: No</b> | <b>Code</b>                  | <b>Schedule</b> |                        |
| Borates,Tetra, Sodium Salts,<br>Anhydrous (1330-43-4) | <b>Pressure: No</b>             | <b>Reactivity: No</b> |                 | None<br>allocated            | S5              | Yes                    |

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**16. Other Information**

**Prepared By: IP**

**Revised: 4/8/2005**



# MSDS

P.O. Box 329 - 802 Washington Avenue Chestertown, MD 21620 - USA

## MATERIAL SAFETY DATA SHEET

TELEPHONE # FOR INFORMATION 410 778-3100

24 HOUR EMERGENCY NUMBER (CHEM-TEL): USA, Canada, Puerto Rico 800-255-3924;

Outside North American Continent 813-248-0585 (call Collect)

### 1. Product Identification

**Product Code:** 6565

**Product Description:** Sodium Cyanide, 10%

**Manufactured By:** LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

### 2. Composition/Information On Ingredients

| Hazard | CAS#/Name                     | %       | PEL                      | TLV                      |
|--------|-------------------------------|---------|--------------------------|--------------------------|
| Yes    | 143-33-9<br>Sodium Cyanide    | 10      | 5 mg/cubic m, skin as CN | 5 mg/cubic m, skin as CN |
| Yes    | 1310-73-2<br>Sodium Hydroxide | 0.2     | C 2 mg/cubic m           | C 2 mg/cubic m           |
| No     | 7732-18-5<br>Water            | to 100% |                          |                          |

### 3. Hazards Overview

**Primary Route Of Entry:** Ingestion Inhalation

Poison! Danger! Can cause severe irritation to eyes, skin, lungs. Harmful or fatal if swallowed. Poisoning can also occur by absorption through the skin.

#### HMIS Hazard

Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least

Health: 3      Flammability: 0      Reactivity: 1

**Carcinogenicity:** None:

#### **Other Health Related Comments:**

Danger! May be rapidly fatal if swallowed. See Section 11.



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**Product Code:** 6565

**Product Description:** Sodium Cyanide, 10%

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#### **4. First Aid Measures**

**Eye Contact:** IMMEDIATELY flush with water for 15 minutes. Consult a physician.

**Skin Contact:** IMMEDIATELY flush with water for 15 minutes. Remove affected clothing and wash skin with soap and water.. Consult physician.

**Ingestion:** IMMEDIATELY induce vomiting and call a doctor. Prompt treatment is essential.

**Inhalation:** Remove to fresh air. If breathing is difficult give oxygen. Seek prompt medical attention.

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#### **5. Fire Fighting Measures**

**Flash Point (Method Used):** N/A

**LEL:** N/A

**UEL:** N/A

**Extinguishing Media:** Not a fire hazard

**Special Fire Fighting Procedures:** Firefighters wear SCBA.

**Unusual Fire & Explosion Hazard:** Contact with acid liberates poisonous hydrogen cyanide gas

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#### **6. Accidental Release Measures**

Absorb on inert material (vermiculite) or spill pads. Place in clean, dry plastic pail with lid and dispose of as hazardous waste. Do not flush to sewer. OR: Scoop up into beaker. Follow procedure in Section 13 for decomposing the cyanide.

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#### **7. Handling & Storage**

Store tightly closed in cool, dry ventilated "poison" area--away from incompatible materials like strong acids or oxidizers. Water or weak alkaline solutions (pH<10) of cyanides can evolve dangerous amounts of hydrogen cyanide in confined areas.

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## **8. Exposure Controls/Personal Protection**

### **Ventilation**

Mechanical

A system of local and/or general exhaust is recommended.

### **Protection When Handling**

Eye Protection Gloves Lab Coat

**Work/Hygenic Practices:** Keep #6565 from skin & clothing. Do not eat or smoke when using. Wash thoroughly after handling.

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## **9. Physical & Chemical Properties**

**Appearance:** Clear Colorless Liquid

**Solubility In Water:** Soluble

**Odor:** slight (almond) odor

**pH:** 12

**Vapor Density:** Unknown

**Vapor Pressure:** Unknown

**Boiling Point:** >100 deg C

**Melting Point:** N/A

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## **10. Stability & Reactivity**

**Stable:** Yes

**Conditions To Avoid:** Heat

**Incompatibility (Materials To Avoid):** Strong acids, strong oxidizers

**Hazardous Decomposition Products:** Hydrogen Cyanide Gas (highly toxic!)

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## **11. Toxicological Information**

Oral human LDLo: 2.9 mg/kg for solid sodium cyanide (highly toxic). Sodium cyanide investigated as a tumorigen.

**Target Organs:** Blood Lung Respiratory System

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**Product Code:** 6565

**Product Description:** Sodium Cyanide, 10%

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## **12. Ecological Information**

This material is expected to be very toxic to aquatic life and very toxic to terrestrial life, as well.

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## **13. Disposal Considerations**

In fume hood, cool beaker of waste cyanide in ice water. Decompose by adding a strong alkaline soln. of calcium hypochlorite (or commercial bleach) 'til bubbling ceases & there is a detectable excess of chlorine. Let stand for 24 hours. Flush to drain.

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## **14. Transportation Information**

### **Proper Shipping Name:**

**DOT:** CYANIDE SOLUTIONS, N.O.S. (10% SODIUM CYANIDE)

**IATA:** CYANIDE SOLUTION, N.O.S.  
(10% SODIUM CYANIDE)

### **Hazard Class/Div:**

**DOT:** 6.1

**IATA:** 6.1

**UN:** 1935

**Packing Group:** I

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## **15. Regulatory Information**

### **Chemical Inventory Status**

| Hazard | Ingredient                    | USA  | Europe | --- Canada --- |      | Australia | Japan |
|--------|-------------------------------|------|--------|----------------|------|-----------|-------|
|        |                               | TSCA | EC     | DSL            | NDSL |           |       |
| Yes    | 143-33-9<br>Sodium Cyanide    | Yes  | Yes    | Yes            | No   | Yes       | Yes   |
| Yes    | 1310-73-2<br>Sodium Hydroxide | Yes  | Yes    | Yes            | No   | Yes       | Yes   |
| No     | 7732-18-5<br>Distilled Water  | Yes  | Yes    | Yes            | No   | Yes       | Yes   |

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**Product Code:** 6565

**Product Description:** Sodium Cyanide, 10%

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**Federal, State, & International Regulations**

| <b>Ingredient</b>             | <b>--- SARA 302 ---</b> |            | <b>----- SARA 313 -----</b> |                          | <b>CERCLA</b> | <b>RCRA<br/>261.33</b> | <b>TSCA<br/>8(D)</b> |
|-------------------------------|-------------------------|------------|-----------------------------|--------------------------|---------------|------------------------|----------------------|
|                               | <b>RQ</b>               | <b>TPQ</b> | <b>Listed</b>               | <b>Chemical Category</b> |               |                        |                      |
| 143-33-9<br>Sodium Cyanide    | 10                      | 100        | No                          | Cyanide comp.            | 10            | P106                   | No                   |
| 1310-73-2<br>Sodium Hydroxide | No                      | No         | No                          | No                       | 1000          | No                     | No                   |
| 7732-18-5<br>Distilled Water  | No                      | No         | No                          | No                       | No            | No                     | No                   |

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**Product Code:** 6565

**Product Description:** Sodium Cyanide, 10%

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--- SARA 311/312 ---

----- Australia -----

**Hazard Categories**

| <b>Ingredient</b>                      | <b>Acute</b> | <b>Chronic</b> | <b>Fire</b> | <b>Pressure</b> | <b>Reactivity</b> | <b>Hazchem Code</b> | <b>Poison Schedule</b> | <b>This MSDS Is WHMIS Compliant</b> |
|--|--------------|----------------|-------------|-----------------|-------------------|---------------------|------------------------|-------------------------------------|
| 143-33-9<br>Sodium Cyanide             | Yes          | Yes            | No          | No              | No                | 4X                  | S7                     |                                     |
| 1310-73-2<br>Sodium Hydroxide          | Yes          | No             | No          | No              | Yes               | 2R                  | S6                     |                                     |
| 7732-18-5<br>Distilled Water           | No           | No             | No          | No              | No                | None Allocated      | None Allocated         |                                     |
| <b>product<br/>6565<br/>as a whole</b> | Yes          | Yes            | No          | No              | No                | 4X                  | S7                     | Yes                                 |

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**16. Other Information**

Keep cyanide solution out of reach of children.

**Prepared By:** IP, Regulatory Affairs Department

**Revised:** 6/1/2006

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**Material Safety Data Sheet**

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**Outside North American continent 813-248-0585 (call collect)**

**1. Product Identification**

|                             |                |                         |  |
|-----------------------------|----------------|-------------------------|--|
| <b>Product Code:</b>        | <b>6319</b>    | <b>Manufactured By:</b> | LaMotte Company                                |
| <b>Product Description:</b> | Methyl Alcohol |                         | 802 Washington Avenue<br>Chestertown, MD 21620 |

**2. Composition/Information on Ingredients**

| Hazardous | Name     | CAS #   | %   | OSHA<br>PEL | ACGIH<br>TLV |
|-----------|----------|---------|-----|-------------|--------------|
| Yes       | Methanol | 67-56-1 | 100 | 200 ppm     | 200 ppm      |

**3. Hazards Overview**

**Primary Route of Entry: Ingestion Inhalation Skin**

**Poison! Danger! Vapor and liquid harmful. May be fatal or cause blindness if swallowed.** Irritating to skin, eyes and respiratory tract. Inhalation can cause headache, dizziness, nausea. Affects central nervous system and liver.  
Flammable liquid and vapor.

**HMIS Hazard:** (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)

Health: 3      Flammability: 3      Reactivity: 1

**Carcinogenicity:**      None

**Other Health Related Comments:**

**4. First Aid Measures**

- Eye Contact:** Immediately flush with water for 15 minutes. Consult physician.
- Skin Contact:** Flush with water. Wash with soap and water. Consult physician.
- Ingestion:** Call a physician immediately.
- Inhalation:** Remove to fresh air. If breathing has stopped give artificial respiration, then oxygen.

**5. Fire Fighting Measures**

**Flash Point: 52 deg F-closed cup    LEL: 6%    UEL: 36%**

**Flammable liquid: Do not use near heat, sparks, flame, static electricity or other sources of ignition.**

**Fire Rating**

- Extinguishing Media:** Dry chemical, CO2, or water spray
- Special Fire Fighting Procedures:** Firefighters wear self-contained breathing apparatus
- Hazardous Combustion and/or Decomposition Products:** COx, formaldehyde
- Unusual Fire & Explosion Hazard:** Vapors may travel along surfaces to ignition source and flash back.

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**Product Code: 6319**

**Product Description: Methyl Alcohol**

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### **6. Accidental Release Measures**

Eliminate all sources of ignition. Absorb on paper. Evaporate on iron pan in fume hood.

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### **7. Handling & Storage**

Store in cool, dry, well-ventilated location, away from any area where fire hazard exists. Large containers should be bonded and grounded for transfers to avoid static sparks. Do not use near heat or flame.

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### **8. Exposure Controls/Personal Protection**

#### **Ventilation**

A system of local and/or general exhaust is recommended.

#### **Protection When Handling**

Gloves Eye Protection Lab Coat

**Work/Hygienic Practices:** Use with adequate ventilation and avoid contact with skin.

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### **9. Physical & Chemical Properties**

|                             |                        |                        |                  |
|-----------------------------|------------------------|------------------------|------------------|
| <b>Appearance:</b>          | Clear Colorless Liquid | <b>Boiling Point:</b>  | 148 deg F (64 C) |
|                             |                        | <b>Melting Point:</b>  | N/A              |
|                             |                        | <b>pH:</b>             | N/A              |
| <b>Odor:</b>                | Alcohol                | <b>Vapor Density:</b>  | 1.1(Air=1)       |
| <b>Solubility in Water:</b> | Soluble                | <b>Vapor Pressure:</b> | 97mm @ 68 deg F  |

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### **10. Stability & Reactivity**

|                             |   |
|-----------------------------|---|
| <b>Stable:</b>              | Yes   |
| <b>Conditions to Avoid:</b> | Heat, flame, sources of ignition  |
| <b>Materials to Avoid:</b>  | Strong oxidizers such as nitrates, perchlorates, or sulfuric acid. May react with metallic aluminum to generate flammable hydrogen gas. |

**Hazardous Decomposition Products:** CO<sub>x</sub>, formaldehyde

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### **11. Toxicological Information**

**Oral human LDLo:** 143 mg/kg; Usual fatal dose: 100-125 milliliters.  
**Oral rat LD50:** 5628 mg/kg. Methanol investigated as a mutagen, reproductive effector.

**Target Organs:** Eyes, Liver, Central Nervous System

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### **12. Ecological Information**

When released into the soil, water, or air methanol is expected to readily biodegrade; it is expected to be slightly toxic to aquatic life.

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### **13. Disposal Considerations**

**Small quantity:** Flush down drain with excess water. **Large quantity:** Atomize into an incinerator. Dispose according to federal, state and local regulations.

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**Product Code: 6319**

**Product Description: Methyl Alcohol**

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**14. Transport Information**

Domestic:

**Proper Shipping Name:** METHANOL

**Hazard Class/Div:** 3

**UN/NA:** UN1230

**Packing Group:** II

International:

**Proper Shipping Name:** METHANOL

**Hazard Class/Div:** 3, 6.1

**UN/NA:** UN1230

**Packing Group:** II

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**15. Regulatory Information**

**Chemical Inventory Status**

| <b>Ingredient</b>  | <b>USA</b>  | <b>Europe</b> | <b>---Canada---</b> |             | <b>Australia</b> | <b>Japan</b> |
|--------------------|-------------|---------------|---------------------|-------------|------------------|--------------|
|                    | <b>TSCA</b> | <b>EC</b>     | <b>DSL</b>          | <b>NDSL</b> |                  |              |
| Methanol (67-56-1) | Yes         | Yes           | Yes                 | No          | Yes              | Yes          |

**Federal, State, & International Regulations**

| <b>Ingredient</b>  | <b>---SARA 302---</b> |            | <b>----- SARA 313 -----</b> |                          |               | <b>RCRA</b>    | <b>TSCA</b> |
|--------------------|-----------------------|------------|-----------------------------|--------------------------|---------------|----------------|-------------|
|                    | <b>RQ</b>             | <b>TPQ</b> | <b>Listed</b>               | <b>Chemical Category</b> | <b>CERCLA</b> |                |             |
| Methanol (67-56-1) | No                    | No         | Yes                         | No                       | 5000          | 261.33<br>U154 | 8(D)<br>No  |

**----- Australia -----**

| <b>Ingredient</b>                                     | <b>----- SARA 311/312 -----</b> |                |               | <b>Hazchem</b> | <b>Poison</b> | <b>This MSDS is</b> |
|---|---------------------------------|----------------|---------------|----------------|---------------|---------------------|
|   | <b>Hazard Categories</b>        |                |               |                |               |                     |
| Methanol (67-56-1)                                    | Acute: Yes                      | Chronic: Yes   | Fire: Yes     | 2PE            | S6            | Yes                 |
|   | Pressure: No                    | Reactivity: No | (Pure/Liquid) |                |               |                     |
| <b>For product #6319 liquid,<br/>taken as a whole</b> | Acute: Yes                      | Chronic: Yes   | Fire: Yes     | 2PE            | S6            | Yes                 |
|   | Pressure: No                    | Reactivity: No |               |                |               |                     |

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**16. Other Information**

Do not use near heat or flame.

**Prepared By:** IP

**Revised:** 4/11/2005





# MSDS

## Material Safety Data Sheet

PO Box 329 • 802 Washington Avenue • Chestertown, MD 21620 • USA

Telephone Number For Information 410-778-3100

**24 Hour Emergency Number (CHEM-TEL): USA, Canada, Puerto Rico 800-255-3924;**

**Outside North American continent 813-248-0585 (call collect)**

### 1. Product Identification

**Product Code:**

**6314**

**Product Description:**

Zinc Indicator Solution

**Manufactured By:**

LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

### 2. Composition/Information on Ingredients

| Hazardous | Name                                | CAS #      | %    | OSHA<br>PEL | ACGIH<br>TLV |
|-----------|-------------------------------------|------------|------|-------------|--------------|
| Yes       | Methanol                            | 67-56-1    | >99  | 200 ppm     | 200 ppm      |
| Yes       | Zincon monosodium salt, monohydrate | 62625-22-3 | 0.13 | N/E         | N/E          |

### 3. Hazards Overview

**Primary Route of Entry:** Ingestion Inhalation Skin

**Poison! Danger! Vapor and liquid harmful. May be fatal or cause blindness if swallowed.** Irritating to skin, eyes and respiratory tract. Inhalation can cause headache, dizziness, nausea. Affects central nervous system and liver. Flammable liquid and vapor.

**HMIS Hazard:** (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)

Health: 3      Flammability: 3      Reactivity: 1

**Carcinogenicity:** None

**Other Health Related Comments:**

### 4. First Aid Measures

**Eye Contact:** Immediately flush with water for 15 minutes. Consult physician.

**Skin Contact:** Flush with water. Wash with soap and water.

**Ingestion:** Call a physician immediately.

**Inhalation:** Remove to fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult give oxygen.

### 5. Fire Fighting Measures

**Flash Point:** 52 deg F CC    **LEL:** 6.7%    **UEL:** 36.5%

#### Fire Rating

**Extinguishing Media:** Dry chemical, CO<sub>2</sub>, or water spray

**Special Fire Fighting Procedures:** Firefighters wear self-contained breathing apparatus

**Hazardous Combustion and/or Decomposition Products:** CO<sub>x</sub> and formaldehyde

**Unusual Fire & Explosion Hazard:** Vapors may travel to ignition source and flash back.

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**Product Code: 6314**

**Product Description: Zinc Indicator Solution**

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### **6. Accidental Release Measures**

Eliminate all sources of ignition. Absorb on paper. Evaporate on iron pan in hood.

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### **7. Handling & Storage**

Store in cool, dry, well-ventilated location, away from any area where fire hazard exists. Large containers should be bonded and grounded for transfers to avoid static sparks. Do not use near heat or flame.

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### **8. Exposure Controls/Personal Protection**

#### **Ventilation**

A system of local and/or general exhaust is recommended.

#### **Protection When Handling**

Gloves Eye Protection Lab Coat

**Work/Hygienic Practices:** Use with adequate ventilation. Avoid contact with skin.

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### **9. Physical & Chemical Properties**

|                             |                 |                        |                  |
|-----------------------------|-----------------|------------------------|------------------|
| <b>Appearance:</b>          | Deep Red Liquid | <b>Boiling Point:</b>  | 64 deg C (148 F) |
|                             |                 | <b>Melting Point:</b>  | N/A              |
|                             |                 | <b>pH:</b>             | N/A              |
| <b>Odor:</b>                | Alcohol         | <b>Vapor Density:</b>  | 1.1(Air=1)       |
| <b>Solubility in Water:</b> | Soluble         | <b>Vapor Pressure:</b> | 97mm @ 20 deg C  |

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### **10. Stability & Reactivity**

|                             |   |
|-----------------------------|---|
| <b>Stable:</b>              | Yes   |
| <b>Conditions to Avoid:</b> | Heat, flame, sources of ignition  |
| <b>Materials to Avoid:</b>  | Strong oxidizers such as nitrates, perchlorates, or sulfuric acid. May react with metallic aluminum to generate flammable hydrogen gas. |

**Hazardous Decomposition Products:** COx and formaldehyde

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### **11. Toxicological Information**

**Oral human LDLo: 143 mg/kg for methanol;** Usual fatal dose: 100-125 milliliters.  
Oral rat LD50: 5628 mg/kg. Methanol investigated as a mutagen, reproductive effector.

**Target Organs:** Eyes, Liver, Central Nervous System

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### **12. Ecological Information**

When released into the soil, water, or air methanol is expected to readily biodegrade; it is expected to be slightly toxic to aquatic life.

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### **13. Disposal Considerations**

Small quantity: Flush down drain with excess water. Large quantity: Atomize into an incinerator. Dispose according to federal, state and local regulations.

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**Product Code: 6314****Product Description: Zinc Indicator Solution**

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**14. Transport Information**

Domestic:

**Proper Shipping Name:** METHANOL**Hazard Class/Div:** 3**UN/NA:** UN1230**Packing Group:** II

International:

**Proper Shipping Name:** METHANOL**Hazard Class/Div:** 3, 6.1**UN/NA:** UN1230**Packing Group:** II

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**15. Regulatory Information****Chemical Inventory Status**

| <b>Ingredient</b>                                   | <b>USA</b>  | <b>Europe</b> | <b>---Canada---</b> |             | <b>Australia</b> | <b>Japan</b> |
|---|-------------|---------------|---------------------|-------------|------------------|--------------|
|   | <b>TSCA</b> | <b>EC</b>     | <b>DSL</b>          | <b>NDSL</b> |                  |              |
| Methanol (67-56-1)                                  | Yes         | Yes           | Yes                 | No          | Yes              | Yes          |
| Zincon monosodium salt,<br>monohydrate (62625-22-3) | Yes         | Yes           | Yes                 | No          | Yes              | ?            |

**Federal, State, & International Regulations**

| <b>Ingredient</b>                                   | <b>---SARA 302---</b> |            | <b>----- SARA 313 -----</b> |                          |               | <b>RCRA<br/>261.33</b> | <b>TSCA<br/>8(D)</b> |
|---|-----------------------|------------|-----------------------------|--------------------------|---------------|------------------------|----------------------|
|   | <b>RQ</b>             | <b>TPQ</b> | <b>Listed</b>               | <b>Chemical Category</b> | <b>CERCLA</b> |                        |                      |
| Methanol (67-56-1)                                  | No                    | No         | Yes                         | No                       | 5000          | U154                   | No                   |
| Zincon monosodium salt,<br>monohydrate (62625-22-3) | No                    | No         | No                          | NO                       | No            | No                     | No                   |

| <b>Ingredient</b>                                     | <b>----- SARA 311/312 -----</b> |              |           | <b>----- Australia -----</b> |                            | <b>This MSDS is<br/>WHMIS Compliant</b> |
|---|---------------------------------|--------------|-----------|------------------------------|----------------------------|---|
|   | <b>Hazard Categories</b>        |              |           | <b>Hazchem<br/>Code</b>      | <b>Poison<br/>Schedule</b> |   |
| Methanol (67-56-1)                                    | Acute: Yes                      | Chronic: Yes | Fire: Yes | 2PE                          | S6                         |   |
| Zincon monosodium salt,<br>monohydrate (62625-22-3)   | Acute: Yes                      | Chronic: No  | Fire: No  | None<br>allocated            | None allocated             |   |
| <b>For product #6314 liquid,<br/>taken as a whole</b> | Acute: Yes                      | Chronic: Yes | Fire: Yes | 2PE                          | S6                         | Yes                                     |

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**16. Other Information**

Do not use near heat or flame.

**Prepared By:** IP**Revised:** 4/12/2005