

# Material Safety Datasheet (MSDS)

Updated: 09/11/2020

Version 1

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Applied Biological Materials Inc.

1-3671 Viking Way,  
Richmond, BC, CANADA  
V6V 2J5

## Section 1 – Product and Company Information

|                             |                                           |
|-----------------------------|-------------------------------------------|
| Product Name                | Polybrene                                 |
| Catalog # From Manufacturer | G062                                      |
| Original Manufacturer       | Applied Biological Materials Inc.         |
| Company                     | Applied Biological Materials Inc.         |
| Address                     | #1-3671 Viking Way Richmond BC V6V 2J5 CA |
| Technical Phone             | 604-247-2416                              |
| Fax                         | 604-247-2414                              |
| Emergency Phone             | 866-757-2414                              |

## Section 2 – Composition/Information on Ingredient

|                  |                           |
|------------------|---------------------------|
| Substance Name   | Hexadimethrine bromide    |
| Formula          | $(C_{13}H_{30}Br_2N_2)_n$ |
| Molecular Weight | No data available.        |
| CAS Number       | 28728-55-4                |
| EEC-No           | 684-236-5                 |

### Section 3 – Hazards Identification

|                             |                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>WHMIS Classification</b> | <ul style="list-style-type: none"><li>• Health Hazard: 1</li><li>• Flammability: 0</li><li>• Reactivity: 0</li></ul> |
| <b>NFPA Rating</b>          | <ul style="list-style-type: none"><li>• Health: 1</li><li>• Flammability: 0</li><li>• Reactivity: 0</li></ul>        |

### Section 4 – First Aid Measures

|                     |                                                                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | Rinse out with plenty of water. Remove contact lenses.                                                                                      |
| <b>Skin Contact</b> | Take off immediately all contaminated clothing. Rinse skin with water/ shower.                                                              |
| <b>Inhalation</b>   | Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice. |
| <b>Ingestion</b>    | Make victim drink water (two glasses at most).<br>Consult a physician if necessary.                                                         |

### Section 5 – Fire Fighting Measures

|                                              |                                                                                                                                                                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>          | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                                                                                                          |
| <b>Specific Hazards</b>                      | <ul style="list-style-type: none"><li>• Carbon oxides</li><li>• Nitrogen oxides (NOx)</li><li>• Hydrogen bromide gas</li><li>• Not combustible.</li><li>• Ambient fire may liberate hazardous vapours.</li></ul> |
| <b>Protective Equipment for Firefighters</b> | In the event of fire, wear self-contained breathing apparatus.                                                                                                                                                   |

## Section 6 – Accidental Release Measures

|                                  |                                                                                                                                                                                                                          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>      | Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.                                   |
| <b>Methods for Cleaning Up</b>   | Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area. |
| <b>Environmental Precautions</b> | Do not let product enter drains.                                                                                                                                                                                         |

## Section 7 – Handling and Storage

|                 |                                                                       |
|-----------------|-----------------------------------------------------------------------|
| <b>Handling</b> | For precautions see section 2.                                        |
| <b>Storage</b>  | Tightly closed. Storage class (TRGS 510): 12: Non Combustible Liquids |

## Section 8 – Exposure Controls/ PPE

|                                      |                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering Controls</b>          | <ul style="list-style-type: none"><li>• Change contaminated clothing. Wash hands after working with substance.</li></ul>                                                                                                                                                                                                                                                    |
| <b>Personal Protective Equipment</b> | <ul style="list-style-type: none"><li>• <b>Eye Protection:</b> Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.</li><li>• <b>Skin and Body Protection:</b> not required.</li><li>• <b>Respiratory Protection:</b> Not required; except in case of aerosol formation.</li></ul> |
| <b>General Hygiene Measures</b>      | <ul style="list-style-type: none"><li>• Handle in accordance with good industrial hygiene and safety practice. Do not let product enter drains.</li></ul>                                                                                                                                                                                                                   |

## Section 9 – Physical and Chemical Properties

|                                 |                          |
|---------------------------------|--------------------------|
| <b>Appearance</b>               | Clear, colorless, liquid |
| <b>Odour</b>                    | No data available.       |
| <b>Melting Point (°C)</b>       | No data available.       |
| <b>Boiling Temperature (°C)</b> | No data available.       |
| <b>Density</b>                  | No data available.       |
| <b>Vapour Pressure</b>          | No data available.       |
| <b>Solubility in Water</b>      | Soluble                  |
| <b>Flash Point</b>              | No data available.       |
| <b>Explosion Limits</b>         | No data available.       |
| <b>Ignition Temperature</b>     | No data available.       |

## Section 10 – Stability and Reactivity

|                                         |                                                                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stability</b>                        | <ul style="list-style-type: none"><li>The product is chemically stable under standard ambient conditions (room temperature).</li></ul> |
| <b>Hazardous Decomposition Products</b> | <ul style="list-style-type: none"><li>In the event of fire: see section 5</li></ul>                                                    |
| <b>Incompatible Materials</b>           | <ul style="list-style-type: none"><li>No data available.</li></ul>                                                                     |

## Section 11 – Toxicological Information

|                                       |                                                                                                                                                                                                                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Route of Exposure</b>              | <ul style="list-style-type: none"><li>Skin Contact: No data available.</li><li>Skin Absorption: No data available.</li><li>Eye Contact: No data available.</li><li>Inhalation: No data available.</li><li>Ingestion: Acute toxicity estimate Oral - &gt; 5,000 mg/kg (Calculation method).</li></ul> |
| <b>Signs and Symptoms of Exposure</b> | <ul style="list-style-type: none"><li>Acute toxicity estimate Oral - &gt; 5,000 mg/kg (Calculation method).<br/>LD50 Oral - Mouse - &gt; 1,000 mg/kg</li></ul>                                                                                                                                       |

## Section 12 – Ecological Information

|                                      |                                                                      |
|--------------------------------------|----------------------------------------------------------------------|
| <b>Toxicity</b>                      | <ul style="list-style-type: none"><li>• No data available.</li></ul> |
| <b>Persistence and Degradability</b> | <ul style="list-style-type: none"><li>• No data available.</li></ul> |
| <b>Bioaccumulative Potential</b>     | <ul style="list-style-type: none"><li>• No data available.</li></ul> |
| <b>Mobility in Soil</b>              | <ul style="list-style-type: none"><li>• No data available.</li></ul> |

## Section 13 – Disposal Considerations

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b> | <ul style="list-style-type: none"><li>• Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See <a href="http://www.retrologistik.com">www.retrologistik.com</a> for processes regarding the return of chemicals and containers, or contact us there if you have further questions.</li></ul> |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Section 14 – Transportation Information

|             |                                                                  |
|-------------|------------------------------------------------------------------|
| <b>DOT</b>  | <ul style="list-style-type: none"><li>• Not regulated.</li></ul> |
| <b>IATA</b> | <ul style="list-style-type: none"><li>• Not regulated.</li></ul> |

## Section 15 – Regulatory Information

- WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
- DSL: No
- NDSL: No

## Section 16 – Other Information

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

The information contained in this Material Safety Datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions.

Applied Biological Materials Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material Safety Datasheet.