



## Material Safety Data Sheet

### Polybrene®: *sc-134220*

#### CHEMICAL IDENTIFICATION

**Synonyms:** Hexamethrine bromide, 1,5-Dimethyl-1,5-diazaundecamethylene polymethobromide

**Description:** Polybrene® is a cationic polymer used to increase the efficiency of infection of certain cells with a retrovirus in cell culture. Polybrene acts by neutralizing the charge repulsion between the virions and cell surface. It has other uses, including a role in protein sequencing.

#### COMPOSITION/INFORMATION ON INGREDIENTS

**CAS #:** 28728-55-4

**Molecular Formula:**  $C_{13}H_{30}Br_2N_2$

**Molecular Weight:** 374.1987 [g/mol]

**Solubility:** Soluble in water

**Storage:** Store at -20°C.

**Purity:** N/A

**pH:** N/A

#### HAZARDS IDENTIFICATION

**Appearance:** Clear, colorless liquid

**Classification:** This product is unclassified according to Directive 1999/45/EC.

#### HAZARDOUS

**Eyes:** Possible mild eye irritant

**Skin:** Possible mild skin irritant, and may be harmful if absorbed through the skin

**Ingestion:** Possibly harmful if swallowed

**Medical Conditions Aggravated by Exposure:** Not known

#### FIRE EXTINGUISHING MEASURES

**Flash Point:** N/A

**Flammable Limits:** N/A

**Extinguishing Media:** This product is flammable; select extinguishing media best suited to extinguish the surrounding fire

**Special Fire Fighting Procedures:** None

**Unusual Fire and Explosion Hazards:** None

#### FIRST-AID MEASURES

**Eyes:** First check the victim for contact lenses and remove if present. Immediately flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention. (Show label whenever possible).

**Skin:** Remove contaminated clothing and shoes. Immediately rinse skin with copious amounts of water for at least 15 minutes.

**Ingestion:** If swallowed, wash out mouth provided person is conscious. Remove contaminated clothing and shoes. Seek medical attention. (Show label whenever possible).

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention. (Show label whenever possible). If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician.

#### ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Restrict traffic in area of spill. Wear gloves, lab coat and protective boots if quantity is large.

**Small Spills:** Clean up spills immediately. Avoid contact with skin and eyes.

**Environmental Precautions:** This product has low potential for environmental effects.

**Clean Up Measures:** Contain spill and absorb with sand, earth, or vermiculite. Collect residues and place in labeled plastic containers. Larger spill may be absorbed in sand, sawdust or vermiculite, and stored in closed containers pending final disposition. To remove residual contamination, wash spill area with detergent and water. This water may be disposed to the sanitary sewer.

#### HANDLING AND STORAGE

**Handling:** Avoid contact with eyes and skin. Wear gloves. Do not inhale aerosols. May be harmful if swallowed and in contact with skin. Use personal protective equipment outlined in following section.

**Storage:** Store at -20° C.

#### EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory protection:** Not required for normal use.

**Ventilation:** General room ventilation.

**Eye protection:** Safety goggles with side shields.

**Protective Clothing and Equipment:** Nitrile gloves and laboratory coat.

**General Precautions:** Use good laboratory precautions and practices. Wash hands thoroughly after handling.

## Polybrene®: *sc-134220*

### PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Clear, colorless liquid.

**Boiling Point:** 101° C to 102° C

**Evaporation Rate (Butyl Acetate=1):** N/A

**Melting Point:** -1° C

**Solubility in Water:** Soluble

**Specific Gravity (H<sub>2</sub>O=1):** 1.01

**Vapor Density (Air=1):** NA

**Vapor Pressure (mm Hg):** <0.1 mm Hg

### STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal temperatures and pressures

**Conditions to Avoid:** None known

**Hazardous Decomposition:** Oxides of carbon and nitrogen, hydrogen bromide

**Hazardous Polymerization:** Will no occur

### TOXICOLOGICAL INFORMATION

**Target Organs:** Blood, kidneys

**Inhalation:** May cause mild respiratory tract irritation.

**Ingestion:** May cause gastrointestinal irritation, and be harmful if swallowed.

**Skin Contact:** May cause mild skin corrosion, and be harmful if adsorbed through the skin.

**Eye contact:** May cause mild eye irritation.

**Carcinogenicity:** Hexadimethrine bromide and water are not listed as carcinogenic by ACGIH, IARC, NTP, OSHA or California proposition 65.

**Medical Conditions Gggravated by Exposure:** Not known.

### DISPOSAL CONSIDERATIONS

This product may be disposed to an industrial sewer system if permitted by local regulation. This product must be disposed in a manner consistent with national, state, and local regulations.

### ECOLOGICAL INFORMATION

Data not yet available.

### TRANSPORT INFORMATION

The transportation of this product is not regulated by IMDG (sea), ADR (road), RID (rail), ICAO/IATA (air), or USDOT as a dangerous good or hazardous material.

### REGULATORY INFORMATION

**Classification:** Non-hazardous

**Risk Phrases:** S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Safety Phrases:** Wear suitable protective clothing.

**Japan:** Hexadimethrine bromide is not listed under the Poisonous and Deleterious Substances Control Law.

**United States:** Hexadimethrine bromide is not listed on the EPA Toxic Substances Control Act (TSCA) Inventory. In the United States, its use is restricted to research and development and activities regulated by the Food and Drug Administration.

### OTHER INFORMATION

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Santa Cruz Biotechnology shall not be held liable for any damage resulting from handling or from contact with the product.

Polybrene® is a registered trademark of Abbott Laboratories Corp.