MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT(S) AND COMPANY IDENTIFICATION

Company Name: Biaffin GmbH & Co KG
Address: Heinrich-Plett-Straße 40, D-34132 Kassel, Germany
For Information Call: +49 (0) 561 804 4662
Quick Identifier: Chelerythrine Chloride
Chemical Name: 1,2-Dimethoxy-N-methyl(1,3)benzodioxolo(5,6-c)phenanthridinium chloride
Common Name/Trade Name: Chelerythrine Chloride
Product Number: PKI-CHEL
Formula: C21H18NO4Cl
EC Number(s): N/A

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient Name: 1,2-Dimethoxy-N-methyl(1,3)benzodioxolo(5,6-c)phenanthridinium chloride
CAS Number(s): 3895-92-9
EC Number(s): N/A
According to Regulation (EC) No1272/2008
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)

SECTION 3 - HAZARDS IDENTIFICATION

Physical/chemical hazards: not applicable
Human health hazards: Caution! Possible cancer hazard. Contains material which may cause cancer based on animal data. Contains material which may cause heritable genetic effects based on animal data.

SECTION 4 - FIRST AID MEASURES

Emergency and First Aid Procedures: Potentially harmful. Avoid prolonged or repeated exposure.
Inhalation: If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration. Get medical attention.
Eyes: Flush with copious amounts of water. Assure adequate flushing by separating the eyelids. Call a physician.
Skin: Flush with copious amounts of water. Remove contaminated clothing and shoes. Call a physician.
Ingestion: If swallowed, wash out mouth with copious amounts of water. Never give anything by mouth to an unconscious person. If large quantities are swallowed call a physician immediately.

SECTION 5 - FIRE AND EXPLOSION HAZARDS

Special Fire Fighting Procedures: Wear protective clothing to prevent contact with skin and eyes
Extinguisher Media: Water spray, carbon dioxide, dry chemical powder or foam
Unusual Fire and Explosion Hazards: May emit toxic fumes under fire conditions. Thermal decomposition products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2) and halogenated compounds.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Precautions to be Taken in Handling and Storage: Use appropriate protective equipment and methods to clean up spilled substances promptly
Steps to be Taken in Case Material in Release or Spilled: Cordon off area of spill; wear self-contained breathing apparatus, protective clothing and heavy rubber gloves.
Waste Disposal Methods: Absorb solutions with finely-powdered liquid-binding material; decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to Section 13.

SECTION 7 - HANDLING & STORAGE

Storage: Store solid and solutions at -20 °C. Keep tightly closed. Store under argon.
Handling: Avoid contact with skin, eyes and clothing; material may be an irritant.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

Respiratory Protection (Specify Type): NIOSH/MSHA-approved respirator
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SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance and Odor</td>
<td>Solid – odor not determined</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Low</td>
</tr>
<tr>
<td>Specific Gravity: N/A</td>
<td>Melting Point: N/A</td>
</tr>
<tr>
<td>Vapor Pressure: N/A</td>
<td>Boiling Point: N/A</td>
</tr>
<tr>
<td></td>
<td>pH: N/A</td>
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</tbody>
</table>

SECTION 10 - STABILITY & REACTIVITY

Stability: Light sensitive. Avoid strong oxidizing agents.
Thermal Decomposition: Protect from light and heat
Dangerous Reactions: No dangerous reactions identified.
Dangerous Products of Decomposition: Thermal decomposition may produce toxic gases such as carbon oxides (CO, CO2), nitrogen oxides (NO, NO2) and sulfur oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

Refer to Section 3 for health effects information. The toxicological properties of this material have not been fully investigated. Always follow Good Laboratory and Industrial Hygiene Practices and wear proper personal protective equipment when handling chemicals. We recommend treating all chemicals with caution.
Routes of Exposure: Inhalation, ingestion, skin and eye contact.
LD50: No oral LD50 is available
Carcinogenicity: Unknown
Mutagenic/Teratogenic Effects: Unknown

SECTION 12 - ECOLOGICAL INFORMATION

Do not allow product to reach ground water, water course, or sewage system.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with all applicable Federal, State and local regulations. Chemical residues are generally classified as special waste and, as such, the transportation, storage, treatment and disposal of this waste material must be conducted in compliance with all applicable Federal, State and local regulations. Rinse empty containers thoroughly before disposal and/or recycling.

SECTION 14 - TRANSPORT INFORMATION

Department of Transportation Requirements: This substance is considered to be non-hazardous for transport
Proper Shipping Name: Not regulated
Hazard Class: N/A
Packaging Group: N/A
Reportable Quantity: N/A
Labels Required: N/A
UN/NA Code: N/A

SECTION 15 - REGULATORY INFORMATION

GHS label Pictogram

Signal word: Warning
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Hazard statement(s)
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 16 - OTHER USEFUL INFORMATION
This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The above information is correct to the best of our knowledge. Users should make independent decisions regarding completeness of the information based on all sources available. The Biaffin GmbH & Co KG shall not be held liable for any damage resulting from handling or contact with the above product.

Biaffin GmbH & Co KG, AVZ 2, Heinrich-Plett-Strasse 40, D-34132 Kassel, Germany
Phone: +49 (0) 561 804 4661 | Fax: +49 (0) 561 804 4665
E-mail: info@proteinkinase.de, http://www.proteinkinase.de