

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

- 1.1 Product Code:** 600361
Product Name: Cell-Based Assay Monochlorobimane
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
Flammable Liquids, Category 4
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



GHS Signal Word: Warning

GHS Hazard Phrases:

H227: Combustible liquid.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

GHS Precaution Phrases:

P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.

P264: Wash {hands} thoroughly after handling.

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+313: If skin irritation occurs, get medical advice/attention.

P337+313: If eye irritation persists, get medical advice/attention.

P362+364: Take off contaminated clothing and wash it before reuse.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:	Causes skin and serious eye irritation. DMSO has the potential to carry toxic materials or materials of unknown toxicity into the body. DMSO is readily absorbed through skin. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.
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Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
76421-73-3 NA	Monochlorobimane	0.0 -5.0 %	NA NA	Skin Corr. 2: H315 Eye Damage 2: H319 STOT (SE) 3: H335 H336
67-68-5 PV6210000	Dimethyl sulfoxide, anhydrous	95.0 -100.0 %	200-664-3 NA	Flam. Liq. 4: H227 Eye Damage 2A: H319 Skin Corr. 2: H315

Section 4. First Aid Measures

4.1 Description of First Aid Measures:	No data available. In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention. In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse. In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel. In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
4.2 Important Symptoms and Effects, Both Acute and Delayed:	Exposure may cause: hematuria or shortness of breath (dyspnea). Exposure may cause: gastrointestinal irritation with nausea, vomiting, diarrhea, headache, dizziness, and drowsiness. Eye contact may cause blurry vision, burning sensation, redness, tearing, and vasodilation.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
5.1 Unsuitable Extinguishing Media:	A solid water stream may be inefficient.
5.2 Flammable Properties and Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge.
Flash Pt:	89.00 C Method Used: Closed Cup
Explosive Limits:	LEL: 3.5% at 25.0 C UEL: 42% at 25.0 C
Autoignition Pt:	215.00 C
5.3 Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or

equivalent), and full protective gear to prevent contact with skin and eyes.

Note: Combustible as diluted in dimethyl sulfoxide

Section 6. Accidental Release Measures

- 6.1 Protective Precautions,** Avoid breathing vapors and provide adequate ventilation.
Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,
Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental** Take steps to avoid release into the environment, if safe to do so.
Precautions:
- 6.3 Methods and Material For** Contain spill and collect, as appropriate.
Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.
Up:

Section 7. Handling and Storage

- 7.1 Precautions To Be Taken** Avoid breathing dust/fume/gas/mist/vapours/spray.
in Handling: Avoid prolonged or repeated exposure.
 Keep away from sources of ignition.
 Take precautionary measures against static discharge.
- 7.2 Precautions To Be Taken** Keep away from heat, sparks and flame.
in Storing: Keep container tightly closed.
 Store in accordance with information listed on the product insert.
- Other Precautions:** Hygroscopic.
 Light sensitive.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
76421-73-3	Monochlorobimane	No data.	No data.	No data.
67-68-5	Dimethyl sulfoxide, anhydrous	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
76421-73-3	Monochlorobimane	No data.	No data.	No data.
67-68-5	Dimethyl sulfoxide, anhydrous	No data.	No data.	No data.

8.2 Exposure Controls:

- 8.2.1 Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne
(Ventilation etc.): levels below recommended exposure limits.
- 8.2.2 Personal protection equipment:**
- Eye Protection:** Safety glasses
- Protective Gloves:** Compatible chemical-resistant gloves
- Other Protective Clothing:** Lab coat
- Respiratory Equipment** NIOSH approved respirator, as conditions warrant.
(Specify Type):
- Work/Hygienic/Maintenan** Do not take internally.
ce Practices: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
 Wash thoroughly after handling.
 No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Appearance and Odor: A solution in DMSO
Melting Point: No data.
Boiling Point: No data.
Flash Pt: 89.00 C Method Used: Closed Cup
Evaporation Rate: No data.
Explosive Limits: LEL: 3.5% at 25.0 C UEL: 42% at 25.0 C
Vapor Pressure (vs. Air or mm Hg): 0.37 MM_HG at 20.0 C
Vapor Density (vs. Air = 1): No data.
Specific Gravity (Water = 1): No data.
Solubility in Water: No data.
Autoignition Pt: 215.00 C

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [] Stable [X]
10.3 Stability Note(s): No data available.
Polymerization: Will occur [] Will not occur [X]
10.4 Conditions To Avoid: heat, flames and sparks
10.5 Incompatibility - Materials To Avoid: acid chlorides
 phosphorus halides
 strong acids
 alkali metals
 strong oxidizing agents
 strong reducing agents
10.6 Hazardous Decomposition Or Byproducts: carbon monoxide
 carbon dioxide
 sulfur oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.
 DMSO - Toxicity Data: Oral LD50 (rat): 14,500 mg/kg; Inhalation LC50 (rat): 40,250 ppm (4h);
 Dermal LD50 (rabbit): > 5,000 mg/kg; Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit):
 500 mg (24h) mild;

Chronic Toxicological Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
 See actual entry in RTECS for complete information.
 DMSO RTECS Number: PV6210000

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
76421-73-3	Monochlorobimane	n.a.	n.a.	n.a.	n.a.
67-68-5	Dimethyl sulfoxide, anhydrous	n.a.	n.a.	n.a.	n.a.

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.
 Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and Degradability: No data available.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):
DOT Proper Shipping Name: Not dangerous goods.
DOT Hazard Class:
UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):
ADR/RID Shipping Name: Not dangerous goods.
UN Number:
Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):
ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.



SAFETY DATA SHEET

Cell-Based Assay Monochlorobimane

Revision: 03/23/2015
Supersedes Revision: 02/03/2011

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
76421-73-3	Monochlorobimane	No	No	No
67-68-5	Dimethyl sulfoxide, anhydrous	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
76421-73-3	Monochlorobimane	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
67-68-5	Dimethyl sulfoxide, anhydrous	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

Section 16. Other Information

Revision Date: 03/23/2015

Additional Information About No data available.

This Product:

Company Policy or Disclaimer: DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.