

SAFETY DATA SHEET:

Stemolecule™ SB431542 in Solution



1. IDENTIFICATION

- 1.1. Product Name Stemolecule™ SB431542 in Solution
- 1.2. Catalog Number 04-0010-05
- 1.3. Uses and restrictions For research use only. Not for use in therapeutic or diagnostic applications
- 1.4. Manufacturer/Supplier REPROCELL USA, Inc.
9000 Virginia Manor Road, Suite 207
Beltsville, MD 20705
USA
- 1.5. In Case of Emergency
- For medical emergencies, contact your local emergency center.
 - For transportation emergencies, contact your local transportation authorities.
 - For other non-medical or environmental emergencies please call (617) 245-0030, 8:00 am-4:00 pm EST, Monday – Friday.

2. HAZARDS IDENTIFICATION

- 2.1. GHS Classification according to Annex II Flammable liquids (Category 4), H227
- 2.2. Signal Word Warning
- 2.3. Symbol None
- 2.4. Hazard Statement(s)
- H227: Combustible Liquid
 - P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking
 - P280: Wear protective gloves/protective clothing/eye protection/face protection
 - P370+P378: In case of fire: Use dry-sand, dry chemical, or alcohol-resistant foam for extinction
 - P403+P235: Store in a well-ventilated area. Keep cool.
 - P501: Dispose of contents/container to and approved waste disposal plan.
- 2.5. Precautionary Statement(s)
- 2.6. Hazards not otherwise classified (HNOC) or not covered by GHS None

3. COMPOSITION/INFORMATION OR INGREDIENTS

3.1 Chemical Name	3.2 Synonyms	3.3 Chemical Formula	3.4 Molecular Weight	CAS Number
Stemolecule™ SB431542	4-(5-Benzol[1,3]dioxol-5-yl-4-pyridin-2-yl-1H-imidazol-2-yl)-benzamide	$C_{22}H_{16}N_4O_3$	384.39 g/mol	301836-41-9
Dimethyl Sulfoxide	DMSO	C_2H_6OS	78.13 g/mol	67-68-5



4. FIRST AID MEASURES

4.1 First Aid Instructions

- General Advice
Move out of exposure area. Consult a physician.
- Eyes
Check for and remove contact lenses immediately and flush thoroughly with water for at least 15 minutes. Call a physician.
- Skin
Immediately flush skin with copious amounts of water. Remove contaminated clothing and shoes and wash before use. Contact a physician.
- Ingestion
If swallowed, wash mouth out with water provided person is conscious. Do not induce vomiting. Loosen tight clothing. Contact a physician.
- Inhalation
If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, call a physician.
- Puncture Wounds
Wash thoroughly with soap and water. Allow wound to bleed freely. Contact a physician.

4.2 Most important

Symptoms/Effects, acute and immediate

Described in Section 2

4.3 Indication of any immediate medical attention and special treatment needed

No Data Available

5. FIRE FIGHTING MEASURES

5.1. Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

Carbon oxides, sulfur oxides, nitrogen oxides.

5.3 Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Avoid breathing vapours, mist or gas. Remove all sources of ignition. Beware of vapours accumulating from explosive concentration. Vapours can accumulate in low areas. Ensure adequate ventilation.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.2 Methods and materials for containment and clean up.

Remove ignition points. Ventilate area and contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. In case of mist formation use a respirator or self-contained breathing apparatus (SCBA).

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

- Avoid inhalation, contact with eyes, skin, and clothing.
- Keep in well-ventilated area
- Keep away from sources of ignition – No smoking.
- Take measures to prevent the buildup of electrostatic charge.



7.2. Conditions for safe storage, including any incompatibilities

- For other precautions see section 2.5.

Store at 4 °C protected from light. Following reconstitution store aliquots at -20 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Dimethyl Sulfoxide, CAS-No. 67-68-5

Dimethyl Sulfoxide Exposure Levels

- **TWA:** 250ppm – USA. Workplace Environmental Exposure Levels (WEEL)

8.2 Appropriate engineering controls

Safety shower and eye bath. Mechanical exhaust required.

8.3 Protection measures and Personal Protective Equipment

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling.

- **Respiratory Protection:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
- **Eye Protection:** Chemical safety goggles
- **Skin protection:** Protective gloves and lab coat. Use nitrile rubber gloves with a minimum thickness of 0.2 mm

9. PHYSICAL/CHEMICAL PROPERTIES

9.1 Appearance:

Colorless solution

9.2 Odor:

No data available.

9.3 Odor threshold

No data available.

9.4 pH

No data available.

9.5 Melting point/freezing point

No data available.

9.6 Initial boiling point and boiling range

No data available.

9.7 Flashpoint

89 °C (192 F)

9.8 Evaporation rate

No data available.

9.9 Flammability (solid, gas)

No data available.

9.10 Upper/lower flammability or explosive limit

No data available.

9.11 Vapor pressure

No data available.

9.12 Vapor density

No data available.

9.13 Relative density

No data available.

9.14 Solubility

No data available.

9.15: Partition coefficient, n-octanol/water

No data available.



9.16 Autoignition temperature	No data available.
9.17 Decomposition temperature	No data available.
9.18 Viscosity	No data available.
9.19 Explosive properties	No data available.
9.20 Oxidizing properties	No data available.

10. STABILITY/REACTIVITY

10.1 Reactivity	No data available.
10.2 Chemical stability	This product is stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to avoid	Prolonged heating above 150 °C (302 °F) can cause rapid, exothermic decomposition.
10.5 Incompatible materials	Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents, Strong bases.
10.6 Hazardous decomposition products	Sulfur dioxide, formaldehyde, methyl mercaptan, dimethyl sulfide, dimethyl disulfide, and bis (methylthio) methane).

11. TOXICOLOGICAL INFORMATION

11.1 Toxicological effects:

Acute Toxicity	• Oral LD-50 (male rat): 14,500 – 28,300 mg/kg • Inhalation LD-50 (rat): 4 hrs – 40250 ppm • Dermal LD-50 (rat): 40,000 mg/kg
Skin corrosion/irritation	• Skin irritation (human): Mild • Repeated skin application (human): Slight irritation • Skin sensitization (human): None by EC protocols • Eye irritation (human): None by EC protocols
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	Mouse • Lymphocyte • Cytogenetic analysis • Mutation in mammalian somatic cells • DNA damage Rat • Cytogenetic analysis
Carcinogenicity	• Rat-oral-tumorigenic: Equivocal tumorigenic agent by RTECS criteria, skin and appendages: Other: Tumors • Mouse-oral-tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin and Appendages: Other: Tumors. • IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen. • ACGIH: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. • NTP: No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.



Reproductive Toxicity	• OSHA: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen Reproductive toxicity – Rat – intraperitoneal • Effects on Fertility: Abortion. • Effects on Fertility: Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants). Reproductive toxicity – Rat – Subcutaneous • Effects on Fertility: Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants). • Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth) Reproductive – Mouse – Oral • Effects on Fertility: Pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea). • Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus). • Specific developmental abnormalities: Musculoskeletal system. Developmental Toxicity – Mouse – intraperitoneal • Effects on Embryo or Fetus: Fetotoxicity (except death, e.g. stunted fetus). • Specific developmental abnormalities: Musculoskeletal system .
Specific target organ toxicity – single exposure	No data available
Specific target organ toxicity – repeated exposure	No data available
Aspiration hazard	No data available
11.2 Symptoms related to the physical, chemical, and toxicological characteristics	Effects due to ingestion may include Nausea, Fatigue, Headache.
11.3 Effects of short-term exposure	No data available.
11.4 Effects of long-term exposure	• Oral study (13 weeks, rat): LOEL = 8800 mg/kg/day (minor target organ effects: liver) (reduced weight gain): NOEL = 1100 mg/kg/day • Inhalation study (6 weeks, rat): NOEL = 60 ppm
11.5 Numerical measures of toxicity	No data available.
11.6 Other information	Eyes – Eye disease – Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity	• LC50 – Pimephales pmelas (fathead minnow) – 34,000 mg/l – 96h • LC50 – Oncorhynchus mykiss (rainbow trout) – 35,000 mg/l – 96h • EC50 – Daphnia magna (Water flea) – 24,600 mg/l – 48h • EC50 – Pseudokirchneriella subcapitata (green algae) – 17,000 mg/l – 72h
12.2 Persistence and degradability	Result: 31% - According to the results of tests of biodegradability this product is not readily biodegradable.
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.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal method Waste must be disposed of in accordance with federal, state, and local environmental control regulations

13.2 Personal safety Refer to section 8.

14. TRANSPORT INFORMATION

DOT (US) UN-Number: 1993, Class: NONE, Packing group: III
Proper shipping name: Combustible liquid, n.o.s (Dimethyl sulfoxide)

IMDG Not dangerous good

IATA Not dangerous good

15. REGULATORY INFORMATION

U.S. Federal Regulations

- SARA 313 components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels.
- SARA 302 components Does not contain any components subject to reporting.
- SARA 311/312 Hazards Fire hazard
- Clean Air Act, Section 112 Does not contain any components subject to reporting.
Hazardous Air Pollutants (HAPs)
(see CFR 61)

U.S. State Regulations

- California Proposition 65 Does not contain any components subject to reporting.
- Massachusetts Right To Know Components Does not contain any components subject to reporting.
- Pennsylvania Right To Know Components Does not contain any components subject to reporting.
- New Jersey Right To Know Components Dimethyl sulfoxide, CAS NO. 67-68-5

WHMIS Hazard Class

Not controlled under WHMIS (Canada).

Regulation (EC) No 1907/2006)

Directive 67/548/EC & Directive
1999/45/EC

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.

16. OTHER INFORMATION

Notice

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. REPROCELL, Inc. shall not be held liable for any damage resulting from handling or from



contact with the product. See REPROCELL, Inc. website for terms and conditions of sale.

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Prepared By

Quality Control

END OF SAFETY DATA SHEET

