

SAFETY DATA SHEET

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200, the EU Directive, 91/155/EEC and other regulatory requirements.

1. Company and Product Identification

Product: Semios CM Plus

Company: SemiosBio Technologies, Inc.
204A-3430 Brighton Avenue
Burnaby BC V5A 3H4
Canada

For General Information:
(604) 229-2044

2. Ingredients

<u>Ingredient Name</u>	<u>% by weight</u>	<u>Exposure Limits</u>
<u>Active Ingredients:</u> E,E-8,10-Dodecadien-1-ol	18.05%	None established
<u>Inert Ingredients:</u> Solvent and propellant	to 100%	None established

3. Hazards Identification

Emergency Overview: Contents under pressure. Can decompose at high temperatures forming toxic gases.

WHMIS Classification

B3	Combustible Liquid
GHS Classification	Flammable liquids (Category 3)
Skin irritation	(Category 3)
Eye irritation	(Category 2B)

Potential Health Effects:

Inhalation: This product may be mildly irritating to the nose, throat and respiratory tract and may cause coughing and sneezing.

Skin Contact: No evidence of adverse effects from available information.

Eye Contact: Eye irritant. Liquid and vapors may irritate eyes. Eye damage from contact with liquid is reversible and proper treatment will result in healing within a few days. Damage is usually mild to moderate conjunctivitis, seen mainly as redness of the conjunctiva.

Ingestion: Product is an aerosol. Ingestion is not a likely route of exposure.

Other Health Effects:

Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor

and language deficiencies, behavioural disorders and small size head.

4. First Aid Measures

FIRST AID PROCEDURES

Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Oxygen may be given if necessary. Seek medical attention immediately.

Skin Contact: Flush contaminated area with water for at least 20 minutes. Remove contaminated clothing under running water. Completely decontaminate clothing before re-use, or discard. If irritation occurs seek medical attention.

Eye Contact: Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Obtain medical attention IMMEDIATELY.

Ingestion: Have victim drink about 250ml (8fl. oz.) of water to dilute material in stomach. Do not induce vomiting. Seek medical attention immediately.

5. Fire Fighting Measures

<i>Flashpoint (°C)</i>	<i>Autoignition Temperature (°C)</i>	<i>Flammability Limits in Air (%):</i>	
		<i>LEL</i>	<i>UEL</i>
59.5°C	422°C	3.3	19

Flammability Class (WHMIS): B3: Combustible liquid.

Hazardous Combustion Products: Thermal decomposition products are toxic and may include oxides of carbon.

Unusual Fire or Explosion Hazards: Vapours from this product are heavier than air, and may "travel" to a source of ignition (eg. pilot lights, heaters, electric motors) some distance away, and then "flash back" to the point of product discharge causing an explosion and fire. Expansion of liquid and change of state from liquid to vapour will allow combustible mixture to encompass a large area.

Sensitivity to Mechanical Impact: Not expected to be sensitive to mechanical impact.

Sensitivity to Static Discharge: Expected to be sensitive to static discharge when vapours are present between the lower and upper explosive limits.

Fire Extinguishing Media: Do not extinguish flame unless leak can be stopped immediately. Use carbon dioxide or dry chemical media for small fires. If only water is available, use it in the form of a fog.

6. Accidental Release Measures

Personal precautions: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions: Prevent leakage or spillage. Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage, and collect liquid with adsorbent material, and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition. Take measures to prevent electrostatic discharge.

Conditions for safe storage: Keep aerosol canister in a dry and well-ventilated place. Ideal storage temperature is 10 - 27°C. Do not expose sealed containers to temperatures above 40° C. Protect against physical damage.

8. Exposure Control / Personal Protection

Personal protective equipment

Engineering Controls: Local exhaust ventilation required. Ventilate low lying areas such as sumps or pits where dense vapours may collect.

Respiratory protection: Up to 1000 ppm, an approved organic vapour cartridge respirator can be used. For concentrations above 1000 ppm, an air-supplying respirator is recommended.

Hand protection: Handle with gloves. Wash and dry hands.

Eye protection: Safety glasses with side-shields should be used.

Skin and body protection: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Exposure Guidelines (Propellant):

SUBSTANCE	ACGIH TLV (STEL)	OSHA PEL		NIOSH REL	
		(TWA)	(STEL)	(TWA)	(STEL)
Propane	---	1000 ppm	---	1000 ppm	---
n-Butane	---	---	---	800 ppm	---
Isobutane	---	---	---	800 ppm	---

9. Physical and Chemical Properties

Appearance

Physical State:	liquid
Colour:	clear pale yellow
Odor:	waxy
Odor Threshold	no data available
pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	59.5°C
Ignition temperature	no data available

Auto-ignition	422°C
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor pressure	no data available
Density	0.819 g/mL at 20°C (68 °F) excluding propellant
Water solubility	no data available
Partition coefficient:	no data available n-octanol/water
Relative vapor density	no data available
Evaporation rate	no data available

10. Stability and Reactivity

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: no data available

Conditions to avoid: Sources of ignition.

Materials to avoid: Oxidizing agents.

Hazardous decomposition products: Burning can produce carbon monoxide and/or carbon dioxide.

Other decomposition products: no data available

11. Toxicological Information

Acute Toxicity

Oral LD50: no data available

Inhalation LC50: no data available

Dermal LD50: no data available

Skin corrosion/irritation: Skin - rabbit - Mild skin irritation

Eyes: - rat - Moderate eye irritation

Respiratory or skin sensitization: no data available

Carcinogenicity: Not carcinogenic

Reproductive toxicity and Teratogenicity: no data available

12. Environmental Information

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13. Disposal

The aerosol container is not refillable. When container is empty, recycle if available. If recycling is not possible, wrap the container and dispose in landfill.

14. Transportation Information

Proper Shipping Name: UN1950 Aerosols flammable

DOT Hazard Class: 2.1

Ground: UN1950 Aerosols, flammable, Class 2.1

Air: UN1950 Aerosols, flammable, Class 2.1

Marine: UN1950 Aerosols, flammable, Class 2.1

15. Regulatory Information

NFPA Ratings: Health - 1 Fire - 2 Reactivity - 0 Special - none

TSCA: All ingredients in this product are either listed or excluded from the TSCA Inventory.

SARA Title III: This product does not contain any ingredients subject to Section 313 (40 CFR 372) reporting requirements.

WHMIS Classification

B-3 Combustible Liquid

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. 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. The information in this document is based on the present state of manufacturer's knowledge and is applicable to the product with regard to appropriate safety precautions. SemiosBIO Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the above product