MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product name: **Silicone Bath Oil (1 cSt)**
Alternate description/ brand: Cannon Silicone Bath Oil (Dow Corning 200® Fluids)
Product description: Colorless silicone fluid
Product code: 9726-L42
Intended use: Constant temperature bath oil

COMPANY IDENTIFICATION

Supplier: **Cannon Instrument Company**
2139 High Tech Road
State College, Pennsylvania 16803
Product Technical Information: (814) 353-8000
Product MSDS Information: (814) 353-8000

EMERGENCY TELEPHONE NUMBER:

24-Hour Transportation Emergency: (800) 255-3924 Domestic CHEM-TEL Inc.
24-Hour Health Emergency: +1 (813) 248-0585 Overseas CHEM-TEL Inc. (please call collect)

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

- **OSHA Hazardous Substance(s) or Complex Substance(s)**

Component Name	CAS#	EINECS#	Concentration	Hazard/Basis
Octamethyltrisiloxane	107-51-7	203-497-4	> 60%	Flammable Liquid

SECTION 3 HAZARD IDENTIFICATION

EFFECTS OF OVEREXPOSURE:

Acute effects

Eye: Direct contact may cause temporary redness and discomfort.

Skin: No significant irritation expected from a single short-term exposure.

Inhalation: Vapor overexposure may cause drowsiness.

Oral: Swallowing large amounts may cause drowsiness.

Prolonged/ repeated exposure effects

Skin: Repeated or prolonged contact may cause defatting and drying of skin which may result in skin irritation and dermatitis.

Inhalation: No known applicable information

Oral: No known applicable information

Signs and symptoms of overexposure:

No known applicable information

Medical conditions aggravated by exposure

No known applicable information

NFPA HAZARD ID: Health: 1 Flammability: 3 Reactivity: 0
(National Fire Protection Association)

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION Remove to fresh air. Get medical attention if ill effects persist.
SKIN CONTACT Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.
EYE CONTACT Immediately flush with water.
INGESTION Get medical attention.

NOTE TO PHYSICIAN Treat symptomatically

SECTION 5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate extinguishing media: On large fires, use AFFF alcohol compatible foam or water spray (fog). On small fires, use AFFF alcohol compatible foam, carbon dioxide (CO2), or water spray (fog). Water can be used to cool fire exposed containers

FIRE FIGHTING

Fire fighting instructions: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep the exposed containers cool.

Unusual fire hazards: Vapors are heavier than air and may travel to a source of ignition and flash back. Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by binding and grounding or inert gas purge. Fire burns more vigorously than would be expected.

Hazardous combustion products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

FLAMMABILITY PROPERTIES

Flash point °C (°F) [method]: 30 °C (86 °F) [Tag Closed Cup]
Flammable limits (approx. Volume % in air): not determined
Autoignition temperature °C (°F): not determined

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT/ CLEANUP

Remove possible ignition sources. Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in sections 5 and 6 (below). For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in an appropriate container. Clean up remaining materials from spill with suitable absorbent. Clean area as appropriate, since some silicone materials, even in small quantities, may present a slip hazard. Final cleaning may require the use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items used in the cleanup of releases. You will need to determine which federal, state and local regulations are applicable. See sections 13 and 15 of this MSDS.

PRSONAL PROTECTIVE EQUIPMENT FOR SPILLS

Eyes: Use full face respirator.

Skin: Wash at mealtime and end-of-shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation: Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may note provide adequate protection.

Precautionary measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Use reasonable care

Comments: When heated to temperatures above 150 degrees centigrade in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin and digestive system. Safe handling conditions can be maintained by

keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

SECTION 7 HANDLING AND STORAGE

HANDLING

Use with adequate ventilation. Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed.

STORAGE

Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Keep container closed and away from heat, sparks, and flame.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Component Name	CAS#	Exposure Limits
Octamethyltrisiloxane	107-51-7	TWA 200 ppm

ENGINEERING CONTROLS

General ventilation is recommended. Local exhaust ventilation is recommended.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection:

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator:

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Hand Protection:

Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Eye Protection:

Use proper protection ï safety glasses as a minimum.

Skin and Body Protection:
Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Specific Hygiene Measures:
Wash at mealtime and end-of-shift.

Note: These precautions are for room temperature handling. Use at elevated temperatures or aerosol/ spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry (www.SEHSC.com).
http://www.sehsc.com/PDFs/Guidance%20for%20Aerosol%20Applications-Sep%2001.pdf

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Cannon Instrument Company as indicated in Section 1 for additional data.

GENERAL INFORMATION

Physical state:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	odorless to characteristic odor
Odor threshold:	not available

IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

Specific Gravity @ 25°C: 0.816
Bulk density g/cc: not available
Density, kg/m^3 (lbs./gal.): not available
Flash point °C (°F) [method]: 30 °C (86 °F) [Tag Closed Cup]
Flammable limits (approx. Volume % in air) - not available
Ignition temperature (polymers) °C (°F): not available
Autoignition temperature °C (°F): not available
Boiling point/range °C (°F): 152 °C (306 °F)
Vapor density @ 101 kPa (air =1): not available
Vapor pressure @ 20°C, kPa (mm Hg): not available
Evaporation rate (n-butyl acetate =1): not available
pH: not available
Log Pow (n-Octanol/water partition coefficient): not available
Solubility in water (20 °C): not available

Viscosity: 1 cSt

OTHER INFORMATION

Freezing point °C (°F): not available
Melting Point °C (°F): not available

Pour point °C (°F): not available
Molecular weight: not available
Hygroscopic: not available
Coefficient of thermal expansion: not available

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None

MATERIALS TO AVOID: Oxidizing materials can cause a reaction.

HAZARDOUS DECOMPOSITION PRODUCTS: Formaldehyde may be formed at elevated temperatures. See section 6.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Component toxicology information

This material contains octamethyltrisiloxane (L3). L3 was evaluated in a combined repeated-dose toxicity study that included reproductive/developmental toxicity screening in Sprague-Dawley rats by whole-body vapor inhalation. The test article was administered six hours a day, seven days a week to 10 rats/sex/group at target concentrations of 0, 800, 1600 and 3200 ppm for up to 42 days. An increase in protoporphyrin in the liver was observed only in males and only at the high doses: 1600 ppm (6/10) and 3200 ppm (9/10). This condition, known as hepatic porphyria, is characterized by an abnormal increase of pigments (porphyrins) in the body. Porphyrins are the main precursor of heme, which is a major constituent of hemoglobin. Without knowledge of the specific mechanism leading to the protoporphyrinosis following exposure to L3 the relevance of this finding to humans is unknown.

Special hazard information on components

No known applicable information

SECTION 12 ECOLOGICAL INFORMATION

Environmental fate and distribution

Air: Low molecular weight volatile siloxanes in air are degraded by reaction with hydroxyl radicals, which is the dominant degradation process for most chemicals in the atmosphere.

Water: Low molecular weight volatile siloxanes have very low water solubility and evaporate to air.

Soil: Low molecular weight volatile siloxanes in soil are removed by several simultaneously occurring processes including volatilization, hydrolysis, and clay-catalyzed

degradation.

Environmental effects

Toxicity to water organisms: This product is volatile and has a very short half life in the aquatic environment and therefore does not present a risk to aquatic organisms.

Toxicity to soil organisms: Due to its volatility, this product is unlikely to be found in the terrestrial compartment.

Bioaccumulation: Low molecular weight volatile siloxanes bioconcentrate in fish exposed under controlled laboratory conditions that are not representative of conditions found in the environment.

Fate and effects in water treatment plants

Low molecular weight volatile siloxanes are efficiently removed (>90%) during wastewater treatment with approximately equal amounts going to the atmosphere and the sludge. Low molecular weight volatile siloxanes in treated wastewater effluent will be bound to particulate matter because of very low water solubility.

SECTION 13 DISPOSAL CONSIDERATIONS

When a decision is made to discard this material as received, it is classified as a hazardous waste (RCRA Hazard Class (40 CFR 261).

Characteristic Waste: Ignitable: D001

State or local laws may impose additional regulatory requirements regarding disposal.

SECTION 14 TRANSPORT INFORMATION

Note: The information provided below may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations for additional requirements and mode-specific, material-specific, or quantity-specific shipping requirements.

United States Department of Transportation (US DOT):

UN/ID#	Proper Shipping Name	Class/Division	Hazard Label(s)	Packing Group
UN1993	Flammable Liquids, n.o.s.	3	Flammable Liquid	III

International Air Transport Association (IATA):

UN/ID#	Proper Shipping Name	Class/Division	Hazard Label(s)	Packing Group
UN1993	Flammable Liquids, n.o.s.	3	Flammable Liquid	III

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: This product, and/or its constituents, is listed on the US EPA/ TSCA (Toxic Substances Control Act) Inventory

COMMUNITY RTK:

Chemical Name	CAS Number	Typical Value	Component TPQ	Product TPQ
Octamethyltrisiloxane	107-51-7	>60%	Not applicable	Not applicable

California Proposition 65: California Proposition 65 requires that the following listed substances bear the warning*: This product contains the following chemical(s) listed by the state of California under the Safe Drinking Water and toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.*

This product contains no chemicals listed under California Proposition 65

Section 304 CERCLA HAZARDOUS SUBSTANCES:

This product contains no chemicals that are classified as hazardous under CERCLA

SARA (311/312) REPORTABLE HAZARD CATEGORIES:

Acute:	Yes
Chronic:	No
Fire:	Yes
Pressure:	No
Reactive:	No

SARA (313) TOXIC RELEASE INVENTORY:

This product contains no chemicals that are regulated under SARA 313

International chemical inventories and hazard classifications

This product and/ or its components are on the Canadian Domestic Substance List/ NDSL, or are otherwise in compliance with related regulations.

WHMIS Classifications (Canada):

B2 - Flammable and combustible material - Flammable liquid

WHMIS Health Effects Criteria Met by this Chemical:

None.

WHMIS Ingredient Disclosure List:

All chemical substances in this material are included on or exempted.

This product and/ or its components are on EINECS (European Inventory of Existing Chemical Substances) and/ or ELINCS (European Library of Notified Chemical Substances), or is otherwise in conformance with related EU directives/ regulations.

EU Hazard Classification, risk and safety phrases (Europe):

R10: Flammable
R53: May cause long-term adverse effects in the aquatic environment.
S23(V): Do not breathe vapour.
S51: Use only in well-ventilated areas.
S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

SECTION 16 OTHER INFORMATION

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Summary:

- **March 3, 2009 -- This MSDS is new and has been developed for the Silicone Bath Oil (1 cSt)**

NOTES: