



## Material Safety Data Sheet

### MIRASIL CM5

Date Prepared: 3/01/06

Supersedes Date: 4/11/03

## 1. PRODUCT AND COMPANY DESCRIPTION

Bluestar Silicones  
911 E. White Street  
Rock Hill SC 29730

#### Emergency Phone Numbers:

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC (800-424-9300 within the United States or 703-527-3887 for international collect calls) or CAERS (Communication and Emergency Response System) at 800-916-3232.

#### For Product Information:

(803) 329-5260

#### Chemical Name or Synonym:

POLYDIMETHYL CYCLOSILOXANE

#### Molecular Formula:

$C_{10}H_{30}O_5Si_5$

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	Percentage
DECAMETHYLCYCLOPENTASILOXANE (CTFA DESIGNATION CYCLOMETHICONE)	541-02-6 69430-24-6	N Y	60 - 100 **

## 3. HAZARDS IDENTIFICATION

### A. EMERGENCY OVERVIEW:

#### Physical Appearance and Odor:

colorless mobile liquid, odorless.

#### Warning Statements:

CAUTION! COMBUSTIBLE LIQUID.

### B. POTENTIAL HEALTH EFFECTS:

**Acute Eye:**

Slightly irritating. May cause redness, irritation.

**Acute Skin:**

Non-irritating.

**Acute Inhalation:**

Inhalation not likely.

**Acute Ingestion:**

Practically non-toxic.

**Chronic Effects:**

This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens. Based on available data, the carcinogenic potential of decamethylcyclopentasiloxane (D5) in animals can not be defined at this time. (See Section 11-Chronic for a discussion of animal studies.)

## 4. FIRST AID MEASURES

**FIRST AID MEASURES FOR ACCIDENTAL:****Eye Exposure:**

In case of contact, immediately absorb excess with clean absorbent cloth or cotton. Then, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.

**Skin Exposure:**

Immediately wipe excess material off skin with a dry cloth; then wash skin with plenty of soap and water. Seek medical attention if irritation develops or persists.

**Inhalation:**

Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

**Ingestion:**

If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention. Do not leave victim unattended.

**MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:**

No specific information found.

**NOTES TO PHYSICIAN:**

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Treat symptomatically. No specific antidote available.

## 5. FIRE FIGHTING MEASURES

**FIRE HAZARD DATA:****Flash Point:**

80 C (176 F). Flammability Class: COMBUSTIBLE.

**Method Used:**

AFNOR T 60103 (EEC closed cup)

**Flammability Limits (vol/vol%):****Lower:**

No Data

**Upper:**

No Data

**Extinguishing Media:**

Recommended: dry chemical, foam, carbon dioxide, Not recommended: water jet (frothing possible).

**Special Fire Fighting Procedures:**

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water.

**Unusual Fire and Explosion Hazards:**

Product will burn under fire conditions.

**Hazardous Decomposition Materials (Under Fire Conditions):**

formaldehyde

oxides of carbon

silica

## 6. ACCIDENTAL RELEASE MEASURES

**Evacuation Procedures and Safety:**

Wear appropriate protective gear for the situation. See Personal Protection information in Section 8. CAUTION: Spilled material may make the floor slippery. Do not leave traces of product on floors, ladders, etc., as this may present a slipping hazard.

**Containment of Spill:**

Follow procedure described below under Cleanup and Disposal of Spill.

**Cleanup and Disposal of Spill:**

Absorb with an inert absorbent. Scrape up and place in appropriate closed container (see Section 7: Handling and Storage). Clean up residual material with an appropriate solvent like paint thinner or mineral spirits, provided that there is good ventilation and no sources of ignition.

**Environmental and Regulatory Reporting:**

Do not flush to drain.

## 7. HANDLING AND STORAGE

**Minimum/Maximum Storage Temperatures:**

Not Available

**Handling:**

Avoid breathing vapors and mists. Avoid direct or prolonged contact with skin and eyes. Use nonsparking tools

and grounded/bonded equipment and containers when transferring.

**Storage:**

Store in tightly closed containers. Recommended container material: epoxy-coated steel, plastic, polyethylene. Store in an area that is clean, dry, well-ventilated, away from ignition sources, away from incompatible materials (see Section 10. Stability and Reactivity).

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Introductory Remarks:**

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air. 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 may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

**Exposure Guidelines:**

No exposure limits were found for this product or any of its ingredients.

**Engineering Controls:**

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

**Respiratory Protection:**

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

For reasonably foreseeable industrial end uses of this material, respiratory protection should not be necessary.

**Eye/Face Protection:**

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

**Skin Protection:**

Skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance.

**Work Practice Controls:**

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- (1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

- (2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- (3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

**Physical Appearance:**

colorless mobile liquid.

**Odor:**

odorless.

**pH:**

Not Applicable

**Specific Gravity:**

0.96 at 20 C (68 F).

**Water Solubility:**

practically insoluble

**Melting Point Range:**

Not Available

**Freezing Point Range:**

~ -44 C (-47 F)

**Boiling Point Range:**

210 C (410 F) at 760 mmHg

**Vapor Pressure:**

< 0.18 mmHg at 20 C (68 F)

**Vapor Density:**

12.8

**Viscosity:**

viscosity (centistokes) : ~ 4 cs at 25 C (77 F).

**Molecular Weight:**

370

## 10. STABILITY AND REACTIVITY

**Chemical Stability:**

This material is stable under normal handling and storage conditions described in Section 7.

**Conditions To Be Avoided:**

heat  
open flame  
spark  
static electricity

**Materials/Chemicals To Be Avoided:**  
strong oxidizing agents

**Decomposition Temperature Range:**  
> 250 C (482 F)

**The Following Hazardous Decomposition Products Might Be Expected:**

**Decomposition Type: oxidative/thermal**  
formaldehyde

**Hazardous Polymerization Will Not Occur.**

**Avoid The Following To Inhibit Hazardous Polymerization:**  
not applicable

## 11. TOXICOLOGICAL INFORMATION

### Acute Eye Irritation:

#### Toxicological Information and Interpretation:

eye - eye irritation, rabbit. Slightly irritating. Data for a similar product.

### Acute Skin Irritation:

#### Toxicological Information and Interpretation:

skin - skin irritation, rabbit. Non-irritating.

### Acute Dermal Toxicity:

#### Toxicological Information and Interpretation:

LD50 - lethal dose 50% of test species, > 2000 ml/kg, rabbit.

### Acute Respiratory Irritation:

No test data found for product.

### Acute Inhalation Toxicity:

No test data found for product.

### Acute Oral Toxicity:

#### Toxicological Information and Interpretation:

LD50 - lethal dose 50% of test species, > 5000 ml/kg, rat.

### Chronic Toxicity:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

Toxicological Information and Interpretation - CHRONIC EXPOSURE, 160 ppm/2 years, rat. In a two year combined chronic toxicity and carcinogenicity inhalation study with decamethylcyclopentasiloxane (D5) in rats, an increased trend in uterine endometrial tumors was observed in the highest exposure level of 160 ppm in female rats. The same effects were not seen at the other dose levels of 10 and 40 ppm. Whether or not this increase in

incidence is truly related to the exposure to D5 is questionable and yet to be determined. Based on our present knowledge, it is unlikely that industrial, commercial or consumer uses of products containing D5 would result in a significant risk to humans.

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicological Information:**

No data found for product.

### **Chemical Fate Information:**

Expected behavior of the Product: Not readily biodegradable.

## 13. DISPOSAL CONSIDERATIONS

### **Waste Disposal Method:**

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

### **Container Handling and Disposal:**

Any containers or equipment used should be decontaminated immediately after use.

**EPA Hazardous Waste - NO**

## 14. TRANSPORTATION INFORMATION

**Transportation Status: IMPORTANT! Statements below provide additional data on listed DOT classification.**

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

### **US Department of Transportation**

Hazard Class..... COMBUSTIBLE LIQUID

Shipping Name:

COMBUSTIBLE LIQUID, N.O.S. (NOT REG'D IN CONTAINERS < 119 GALS)

Technical Shipping Name:

(DECAMETHYLCYCLOPENTASILOXANE)

ID Number..... NA1993

Packing Group.... III

Labels..... NONE

Emergency Guide #.... 128

## 15. REGULATORY INFORMATION

### **Inventory Status**

<b>Inventory</b>	<b>Status</b>
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	P
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

## **FEDERAL REGULATIONS**

### **Inventory Issues:**

All functional components of this product are listed on the TSCA Inventory.

### **SARA Title III Hazard Classes:**

Fire Hazard	- YES
Reactive Hazard	- NO
Release of Pressure	- NO
Acute Health Hazard	- NO
Chronic Health Hazard	- NO

### **STATE REGULATIONS:**

This product does not contain any components that are regulated under California Proposition 65.

## **16. OTHER INFORMATION**

### **National Fire Protection Association Hazard Ratings--NFPA(R):**

- 1 Health Hazard Rating--Slight
- 2 Flammability Rating--Moderate
- 0 Instability Rating--Minimal

### **National Paint & Coating Hazardous Materials Identification System--HMIS(R):**

- 1 Health Hazard Rating--Slight
- 2 Flammability Rating--Moderate
- 0 Reactivity Rating--Minimal

### **Reason for Revisions:**

Change and/or addition made to Section 3, Warning Statements in Section 3, Section 5, Section 9, Section 10, Section 11, Section 12.

### **Key Legend Information:**

ACGIH - American Conference of Governmental Industrial Hygienists  
 OSHA - Occupational Safety and Health Administration  
 TLV - Threshold Limit Value  
 PEL - Permissible Exposure Limit  
 TWA - Time Weighted Average  
 STEL - Short Term Exposure Limit

NTP - National Toxicology Program  
IARC - International Agency for Research on Cancer  
ND - Not determined  
Bluestar - Bluestar Silicones Established Exposure Limits

**Disclaimer:**  
The information herein is given in good faith but no warranty, expressed or implied, is made.

**\*\* End of MSDS Document \*\***