



Material Safety Data Sheet

TETRAMER D4

Date Prepared: 1/25/08

Supersedes Date: 3/11/05

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).

For Product Information:

(803) 329-5260

Chemical Name or Synonym:

POLYDIMETHYL CYCLOSILOXANE

Molecular Formula:

$C_8H_{24}O_4Si_4$

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	Percentage
CYCLOTETRASILOXANE, OCTAMETHYL-	556-67-2	Y	~ 100

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:

colorless mobile liquid, slight odor.

Warning Statements:

WARNING!! FLAMMABLE LIQUID. BASED UPON SEVERAL ANIMAL STUDIES, THIS

PRODUCT MAY CAUSE REPRODUCTIVE AND DEVELOPMENTAL ABNORMALITIES.

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. There is no evidence of birth defects or reproductive effects in humans. (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:

56 C (132 F). Flammability Class: FLAMMABLE.

Method Used:

AFNOR T 60103 (EEC closed cup)

Flammability Limits (vol/vol%): Lower: 0.4 Upper: 11.7

Extinguishing Media:

Recommended: dry chemical, foam, carbon dioxide.

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. Containers may explode (due to the build-up of pressure) when exposed to extreme heat.

Hazardous Decomposition Materials (Under Fire Conditions):

formaldehyde
oxides of carbon
silica

Autoignition Temperature:

420 C (788 F)

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:

Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

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:**

> 20 C (68 F)

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. 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:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

CYCLOTETRAILOXANE, OCTAMETHYL-

	Notes	TWA	STEL
RHODIA		2.5 ppm	

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:

slight odor.

pH:

Not Applicable

Specific Gravity:

0.95 at 20 C (68 F).

Water Solubility:

sparingly soluble

Melting Point Range:

Not Available

Freezing Point Range:

17 C (63 F)

Boiling Point Range:

> 175 C (347 F) at 760 mmHg

Vapor Pressure:

< 1.2 mmHg at 20 C (68 F)

Vapor Density:

10.2

Viscosity:

viscosity (centistokes) : 2 to 3 cs at 25 C (77 F).

Octanol/Water Partition Coefficient:

4.45

Molecular Weight:

296

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 bases
strong acids
strong oxidizing agents

Decomposition Temperature Range:

> 250 C (482 F)

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

dimethylcyclosiloxanes
methylphenylcyclosiloxanes

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.

Acute Skin Irritation:**Toxicological Information and Interpretation:**

skin - skin irritation, rabbit. Non-irritating.

Acute Dermal Toxicity:

No test data found for product.

Toxicological Information and Interpretation:

LD50 - lethal dose 50% of test species, 16 ml/kg, mouse.

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, 64 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 - TERATOGENICITY, 700 ppm, rat. Maximum attainable vapor concentration. No functional or morphological changes were found. - TERATOGENICITY, =< 500 ppm, rabbit. No functional or morphological changes were found on inhalation of vapor. - REPRODUCTIVE TOXICITY, rat. Reproductive effects (decrease in implantation sites, live litter size and pup viability) were observed at the maximum attainable vapor concentration, 700 ppm, while maternal liver effects were reported at doses of 300 ppm and greater. - CHRONIC EXPOSURE, <= 700 ppm/2 years, rat. After 2 years, 4 of 35 female rats receiving the highest exposure concentration (700 ppm) via inhalation had benign uterine tumors called adenomas. No dose-related increase in tumors of any type were reported for females in lower exposure concentration groups or in males in any group. An increase in severity of kidney disease (nephropathy) that is extremely common in these rats, but is not relevant to humans, was also reported.

12. ECOLOGICAL INFORMATION**Ecotoxicological Information:**

May cause adverse environmental impact if material reaches waterways.

Chemical Fate Information:

No data found for product.

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 - YES**EPA RCRA HAZARDOUS WASTE CODES:**

"I" Ignitable.

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..... 3

Shipping Name:

FLAMMABLE LIQUID, N.O.S.

Technical Shipping Name:

(OCTAMETHYLCYCLOTETRASILOXANE)

ID Number..... UN1993

Packing Group.... III

Labels..... FLAMMABLE LIQUID

Emergency Guide #.... 128

15. REGULATORY INFORMATION

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
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 2, International Inventory Status, Section 15.

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 ****