Material Safety Data Sheet
Octamethylcyclotetrasiloxane, 98%

ACC# 98914

Section 1 - Chemical Product and Company Identification

MSDS Name: Octamethylcyclotetrasiloxane, 98%
Catalog Numbers: AC216470000, AC216470250, AC216471000
Synonyms: Cyclic dimethylsiloxane tetramer.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
556-67-2	Octamethylcyclotetrasiloxane	98	209-136-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: oily, colorless clear liquid. Flash Point: 56 deg C.
Warning! Adverse liver and reproductive effects reported in animals. **Flammable liquid and vapor.** Harmful if absorbed through the skin. Causes mild eye irritation. Causes mild skin irritation. May be harmful if inhaled. May be harmful if swallowed. May generate formaldehyde at temperatures greater than 150°C.
Target Organs: Liver, reproductive system.

Potential Health Effects

Eye: Causes mild eye irritation.
Skin: Causes mild skin irritation. Harmful if absorbed through the skin. Not expected to cause an allergic skin reaction.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed. Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg/day, 14 days) developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appeared normal) as well as hypertrophy (increased cell size).
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled. Inhalation exposures typical of industrial usage (5 - 10 ppm) showed no toxic effects in rodents. This product contains methylpolysiloxanes which can generate formaldehyde at 150°C and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard.
Chronic: Chronic exposure may cause liver damage. Adverse reproductive effects have been reported in animals.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.
Extinguishing Media: Use water spray to cool fire-exposed containers. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. Use water spray, dry chemical, carbon dioxide, or chemical foam. Do NOT get water inside containers. Do NOT use straight streams of water.
Flash Point: 56 deg C (132.80 deg F)
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 2; Flammability: 2; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Do not get water inside containers. A vapor suppressing foam may be used to reduce vapors. Wash walking surfaces with detergent and water to reduce slipping hazard.

Section 7 - Handling and Storage

Handling: Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not allow contact with water. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist.
Storage: Keep away from heat, sparks, and flame. Store in a tightly closed container. Flammables-area. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Octamethylcyclotetrasiloxane	none listed	none listed	none listed

OSHA Vacated PELs: Octamethylcyclotetrasiloxane: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Appearance: oily, colorless
Odor: None reported.
pH: Not available.
Vapor Pressure: 1 mm Hg @ 21.7 deg C
Vapor Density: 10.23
Evaporation Rate: Not available.
Viscosity: 2.4 cSt @ 25 deg C
Boiling Point: 175-176 deg C @ 760 mm Hg
Freezing/Melting Point:17 - 18 deg C
Decomposition Temperature: Not available.
Solubility: Insoluble.
Specific Gravity/Density:.9500 g/cm3
Molecular Formula:C8H24O4Si4
Molecular Weight:296.61

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. May decompose on exposure to moist air or water.
Conditions to Avoid: Ignition sources, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, formaldehyde, oxides of silicon.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 556-67-2: GZ4397000
LD50/LC50:
CAS# 556-67-2:
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, rat: LC50 = 36 gm/m3/4H;
Oral, rat: LD50 = 1540 mg/kg;
Skin, rabbit: LD50 = 794 uL/kg;
Skin, rat: LD50 = 1770 mg/kg;
.

Carcinogenicity:
CAS# 556-67-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: Reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) with octamethylcyclotetrasiloxane. Rats were exposed to 70& 700 ppm. In the 700 ppm group, there was a statistically significantreduction in mean litter size and in implantation sites. No product related clinical signs were observed in the pups & no exposure related pathological findings were found. Interim results from a 2 generation reproductive study in rats exposed to 500 &700 ppm octamethylcyclotetrasiloxane resulted in a significant decrease in live mean litter size as well as extended periods of off-spring delivery (abnormal or difficult labor). These results were not observed at the 70 & 300 ppm dosing levels.
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	FLAMMABLE LIQUIDS, N.O.S.	No information available.
Hazard Class:	3	
UN Number:	UN1993	
Packing Group:	III	

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 556-67-2 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 556-67-2: Effective 12/28/84, Sunset 12/29/94
Chemical Test Rules
CAS# 556-67-2: Test for Chemical Fate; Test for Environmental Effects
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 556-67-2: immediate, delayed, fire.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 556-67-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
XN

Risk Phrases:

R 53 May cause long-term adverse effects in the aquatic environment.
R 62 Possible risk of impaired fertility.

Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.
S 46 If swallowed, seek medical advice immediately and show this container or label.
S 51 Use only in well-ventilated areas.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 556-67-2: 1

Canada - DSL/NDSL

CAS# 556-67-2 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B3, D2A, D2B.

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

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #7 Date: 10/03/2005