

**SF1202 55G-Drum (420.0LBS-190.68KG)  
Decamethylcyclopentasiloxane****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Manufacturer Name:** Momentive Performance Materials LLC  
260 Hudson River Road  
Waterford NY 12188

**Revised:** 12/06/2013  
**Prepared by** Product Safety Team  
**CHEMTREC** 1-800-424-9300  
**MSDS Contact** 1-888-443-9466  
**Information** 4information@momentive.com

**Chemical Family/Use:** Siloxane

**Formula:** Cyclic siloxane(s).

**HMIS**

Health: 1 Flammability: 2 Reactivity: 0

**NFPA**

Health: 1 Flammability: 2 Reactivity: 0

**2. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

CAUTION! Combustible liquid and vapor.

**Form:** Liquid

**Color:** Colorless

**Odor:** Faint

**POTENTIAL HEALTH EFFECTS****INGESTION**

Not an anticipated route of exposure.

**SKIN**

No adverse effects are expected under normal conditions of use.

**INHALATION**

No adverse effects are expected under normal conditions of use.

**EYES**

No adverse effects are expected under normal conditions of use.

**MEDICAL CONDITIONS AGGRAVATED**

- liver disorders (such as jaundice, liver enlargement)

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Decamethylcyclopentasiloxane****SUBCHRONIC (TARGET ORGAN )**

Liver

**CHRONIC EFFECTS / CARCINOGENICITY**

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

**ROUTES OF EXPOSURE**

None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>PRODUCT COMPOSITION</u>	<u>CAS-No.</u>	<u>WGT. %</u>
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**A. HAZARDOUS**

Decamethylcyclopentasiloxane	541-02-6	60 - 100 %
Octamethylcyclotetrasiloxane	556-67-2	0.1 - 1 %

**B. NON-HAZARDOUS****4. FIRST AID MEASURES****INGESTION**

Do NOT induce vomiting. Do not give victim anything to drink if he is unconscious. Get medical attention.

**SKIN**

Wash area with soap and water. Get medical attention if symptoms occur.

**INHALATION**

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

**EYES**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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Treatment is symptomatic and supportive.

**5. FIRE-FIGHTING MEASURES**

<b>FLASH POINT:</b>	76.6 °C; 170 °F
<b>METHOD</b>	Closed Cup
<b>IGNITION TEMPERATURE:</b>	392 °C; 738 °F
<b>FLAMMABLE LIMITS LEL:</b>	No data available.
<b>FLAMMABLE LIMITS UEL:</b>	No data available.

**SENSITIVITY TO MECHANICAL IMPACT:** No

**SENSITIVITY TO STATIC DISCHARGE**

Sensitivity to static discharge is expected; material has a flash point below 200 F.

**EXTINGUISHING MEDIA**

All standard extinguishing agents are suitable.

**SPECIAL FIRE FIGHTING PROCEDURES**

Combustible, Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

**6. ACCIDENTAL RELEASE MEASURES****ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.

**7. HANDLING AND STORAGE****PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Avoid contact with skin and eyes. Keep out of reach of children. Attention: Not for injection into humans.

**STORAGE**

Keep away from heat, sparks and open flame. Keep container tightly closed.

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Safety shower.; Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

**RESPIRATORY PROTECTION**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

**PROTECTIVE GLOVES**

Chemical resistant gloves

**EYE AND FACE PROTECTION**

Safety glasses with side shields

**OTHER PROTECTIVE EQUIPMENT**

Wear suitable protective clothing and eye/face protection.

**Exposure Guidelines**

<u>Component</u>	<u>CAS-No.</u>	<u>Source</u>	<u>Value</u>
Decamethylcyclpentasiloxane	541-02-6	Z_INTL_OEL, REL	10 ppm

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>BOILING POINT (°C):</b>	210.00 °C; 410 °F
<b>VAPOR PRESSURE (20 C) (MM HG):</b>	0.12
<b>VAPOR DENSITY (AIR=1):</b>	No data available.
<b>FREEZING POINT:</b>	< -40 °C; -40 °F
<b>PHYSICAL STATE:</b>	Liquid
<b>ODOR:</b>	Faint
<b>Color:</b>	Colorless

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<b>EVAPORATION RATE (BUTYL ACETATE=1):</b>	< 1
<b>SPECIFIC GRAVITY:</b>	0.95
<b>DENSITY:</b>	0.95 g/cm <sup>3</sup>
<b>ACID / ALKALINITY (MEQ/G):</b>	< 0
<b>pH:</b>	No data available.
<b>SOLUBILITY IN WATER (20 C):</b>	Insoluble
<b>SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):</b>	Soluble in toluene
<b>VOC EXCL. H<sub>2</sub>O &amp; EXEMPTS (G/L):</b>	0 g/l

**10. STABILITY AND REACTIVITY****STABILITY**

Stable

**HAZARDOUS POLYMERIZATION.**

Hazardous polymerisation does not occur.

**HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS**

Carbon dioxide; Formaldehyde.; Silicon dioxide.; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and has been classified by the National Toxicology Program as a known human carcinogen. An (M)SDS for formaldehyde is available from Momentive.

**INCOMPATIBLE MATERIALS**

None known.

**CONDITIONS TO AVOID**

Keep away from sources of ignition - No smoking.

**11. TOXICOLOGICAL INFORMATION****ACUTE ORAL**LD<sub>50</sub>; Species: Rat; > 5,000 mg/kg;**REPEATED DOSE TOXICITY**

Species: Rabbit; Exposure time: 21 d

NOAEL - No Observable Adverse Effect Level: 1,000 mg/kg.

**ACUTE DERMAL**LD<sub>50</sub>; Species: Rabbit; > 2,000 mg/kg; Method: OECD-Guideline 402 (Acute Dermal Toxicity)Remarks:

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Information refers to the main component.

**ACUTE INHALATION**

LC50; Species: Rat; 8.67 mg/l; Method: OECD Test Guideline 403Remarks: Aerosols, Information refers to the main component.

**OTHER**

Decamethylcyclopentasiloxane

Rodents repeatedly exposed to decamethylcyclopentasiloxane (D5) via inhalation or ingestion developed increased liver weights relative to unexposed control animals. When the exposure was stopped, livers returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Liver enlargement was due to an increase in metabolizing enzymes, and a temporary increase in the number and size of normal cells (hyperplasia and hypertrophy). These biochemical pathways are more sensitive in rodents than in humans. Inhalation exposures that are typical in industrial use (5-10 ppm) showed no toxic effects in rodents.

A two-year combined chronic toxicity and carcinogenicity inhalation study was conducted with decamethylcyclopentasiloxane (D5) in Fisher-344 rats by whole body inhalation. A statistically significant increase in the trend for uterine endometrial tumors was observed in female rats exposed for 24 months at the highest dose level of 160 ppm. The same effects were not seen at the other dose levels of 10 and 40 ppm. No adverse effects were seen at male rats at any level. 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. Momentive's Recommended Exposure Guideline for D5 is 10 ppm.

**SENSITIZATION**

Test type: Bühler-Patch-Test skin sensitisation on guinea pigs; Result: negative

**SKIN IRRITATION.**

Species: Rabbit; Result: No skin irritation

**EYE IRRITATION**

Species: Rabbit ; Result: Non irritating. Method: OECD Test Guideline 405.

**MUTAGENICITY**

Salmonella/Microsome-test: No indication of mutagenic effects.

**OTHER EFFECTS OF OVEREXPOSURE**

Octamethylcyclotetrasiloxane

Ingestion: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed 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: In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days/week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic

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examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents.

Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found.

Interim results from a two generation reproductive study in rats exposed to 500 and 700 ppm D4 (whole body inhalation, 70 days prior to mating through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended period of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels.

Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150 or 700 ppm D4 showed test-article related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased uterine weight, increased incidence of endometrial cell hyperplasia, and an increased incidence of endometrial adenomas. All of these effects were limited to the 700 ppm exposure group.

The relevance of this data to humans is unclear. Further studies are ongoing.

In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm, respectively. No teratogenic effects (birth defects) were observed in either study.

,Decamethylcyclopentasiloxane

Ingestion: Rodents given doses via oral gavage of decamethylpentasiloxane (100 mg/kg/day for females, 400 mg/kg/day for males, 14 days) developed increased liver weights relative to unexposed control animals.

Inhalation: In inhalation studies, laboratory rodents exposed to decamethylpentasiloxane (120 ppm five days/week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents.

**12. ECOLOGICAL INFORMATION****ECOTOXICITY**

This product is a small, lipophilic, low molecular weight volatile compound. Due to its high volatility, product has a short half-life in the aquatic compartment, and is unlikely to be found in the terrestrial

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compartment. As a low molecular weight lipophilic compound it has the potential to bioaccumulate.

**DISTRIBUTION**

No data available.

**CHEMICAL FATE**

No data available.

**13. DISPOSAL CONSIDERATIONS****DISPOSAL METHODS**

Disposal should be made in accordance with federal, state and local regulations.

**14. TRANSPORT INFORMATION**

**DOT SHIPPING NAME:** Combustible liquid, n.o.s.(Decamethylcyclopentasiloxane)  
**DOT HAZARD CLASS:** CBL  
**DOT LABEL (S):** NON  
**UN/NA NUMBER:** NA 1993  
**PACKING GROUP:** III

**Further Information:** This product is Combustible as defined by the US Department of Transportation (DOT). It is regulated for transport in the US in container > 119 gallons. The product is not regulated for transport by the IATA, ADR/RID, ADNR or the IMDG regulations.

**15. REGULATORY INFORMATION****Inventories**

Australia Inventory of Chemical Substances (AICS)	y (positive listing)
EU list of existing chemical substances	y (positive listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	y (positive listing)
China Inventory of Existing Chemical Substances	y (positive listing)
Korea Existing Chemicals Inventory (KECI)	y (positive listing)
Canada DSL Inventory	y (positive listing)
Canada NDSL Inventory	n (Negative listing)
New Zealand Inventory of	y (positive listing)



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## Chemicals

Philippines Inventory of Chemicals y (positive listing)  
and Chemical Substances

(PICCS)

TSCA list y (positive listing)

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

**US Regulatory Information****SARA (311,312) HAZARD CLASS**

Acute Health Hazard; Chronic Health Hazard; Fire Hazard

**CALIFORNIA PROPOSITION 65**This product does not contain any chemicals known to State of California to cause cancer, birth defects,  
or any other reproductive harm.**Canadian Regulatory Information****WHMIS CLASSIFICATION**

D2A - Very Toxic Material Causing Other Toxic Effects

B3 - Combustible liquid.

**Other****SCHDLE B/HTSUS:** 2931.00 Organo Silicon Compounds**ECCN:** EAR99**16. OTHER INFORMATION****OTHER**

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

,C = ceiling limit      NEGL = negligible  
EST = estimated      NF = none found  
NA = not applicable      UNKN = unknown  
NE = none established      REC = recommended  
ND = none determined      V = recommended by vendor  
SKN = skin      TS = trade secret  
R = recommended      MST = mist  
NT = not tested      STEL = short term exposure limit  
ppm = parts per million      ppb = parts per billion



**MATERIAL SAFETY DATA  
SHEET**

Version: 1.17  
12/06/2013

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By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2).