

M90058C 12C

SAFETY DATA SHEET

1. Identification

Product identifier: M90058C 12C

Other means of identification

Synonyms: Silicone Rubber Sealant

Recommended use and restriction on use

Recommended use: Silicone Elastomer

Restrictions on use: For industrial use only.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer/Importer/Distributor Information : Momentive Performance Materials LLC
260 Hudson River Road
Waterford NY 12188

Contact person : MomentiveEMEA.productsteward@momentive.com
Telephone : General information
00800.4321.1000 (Customer Service Centre)

1.4 Emergency telephone number : Europe, Israel & All other: +44 (0) 1235239670; Middle East:+44 (0) 1235239671

2. Hazard(s) identification

Hazard Classification

Health Hazards

| | |
|-----------------------------------|-------------|
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Skin sensitizer | Category 1 |
| Toxic to reproduction | Category 1B |

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May damage fertility or the unborn child.

Precautionary Statements

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- Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.
- Response:** IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see this label). Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF exposed or concerned: Get medical advice/attention.
- Storage:** Store locked up.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Unknown toxicity - Health

| | |
|--|-----|
| Acute toxicity, oral | 0 % |
| Acute toxicity, dermal | 0 % |
| Acute toxicity, inhalation, vapor | 0 % |
| Acute toxicity, inhalation, dust or mist | 0 % |

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

| Chemical Identity | CAS number | Content in percent (%)* |
|---------------------------------|------------|-------------------------|
| Hexamethyldisilazane | 999-97-3 | 1.8395% |
| Octamethylcyclotetrasiloxane | 556-67-2 | 1.099% |
| DIBUTYL TIN BIS ACETYLACETONATE | 22673-19-4 | 0.4581% |

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- Ingestion:** If swallowed, do NOT induce vomiting. Give a glass of water. Do not give victim anything to drink if he is unconscious. Get medical attention if any discomfort continues.
- 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.
- Skin Contact:** To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water.

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

Most important symptoms/effects, acute and delayed

Symptoms: Treatment is symptomatic and supportive.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: No data available.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid contact with skin and eyes. Use only in well-ventilated areas. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the finger and hands. Keep out of reach of children. See Section 8 of the SDS for Personal Protective Equipment.

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

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected.

Conditions for safe storage, including any incompatibilities: Keep container closed.

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8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

| Chemical Identity | Type | Exposure Limit Values | Source |
|---|------------|-----------------------|---|
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | TWA | 0.1 mg/m3 | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009) |
| | STEL | 0.2 mg/m3 | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009) |
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | STEL | 0.2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| | TWA | 0.1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | TWA | 0.1 mg/m3 | Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2015) |
| | STEL | 0.2 mg/m3 | Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2015) |
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | TWA | 0.1 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | 8 HR ACL | 0.1 mg/m3 | Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009) |
| | 15 MIN ACL | 0.2 mg/m3 | Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009) |
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | TWA | 0.1 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011) |
| | STEL | 0.2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011) |
| DIBUTYL TIN BIS ACETYLACETONATE - as Sn | STEL | 0.2 mg/m3 | US. ACGIH Threshold Limit Values (03 2015) |
| | TWA | 0.1 mg/m3 | US. ACGIH Threshold Limit Values (03 2015) |

Appropriate Engineering Controls

Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information: No data available.

Eye/face protection: Safety glasses with side shields

Skin Protection

Hand Protection: Cloth gloves.

Skin protection: Wear suitable protective clothing and eye/face protection.

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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).

Hygiene measures: No data available.

9. Physical and chemical properties

Appearance

Physical state: solid
Form: Paste
Color: Colorless
Odor: Ammonia.
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: not applicable
Initial boiling point and boiling range: not applicable
Flash Point: ca. 110 °C (Closed Cup)
Evaporation rate: No data available.
Flammability (solid, gas): No data available.
Upper/lower limit on flammability or explosive limits
Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.
Vapor pressure: < 1 hPa
Vapor density: No data available.
Relative density: ca. 1.035
Solubility(ies)
Solubility in water: Insoluble
Solubility (other): Insoluble
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity, dynamic: No data available.
Viscosity, kinematic: > 20.5 mm²/s (40 °C)

10. Stability and reactivity

Reactivity: No dangerous reaction if used as recommended.
Chemical Stability: Material is stable under normal conditions.

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| | |
|--|--|
| Possibility of hazardous reactions: | Under normal conditions of storage and use, hazardous polymerization will not occur. |
| Conditions to avoid: | Moisture. |
| Incompatible Materials: | Moisture. The catalysis of strong acids or bases cause polymerization or decomposition. |
| Hazardous Decomposition Products: | Carbon dioxide, Formaldehyde, Silicon dioxide, Nitrogen Oxides, Ammonia. 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 potential cancer hazard. A MSDS for formaldehyde is available from Momentive. |

11. Toxicological information

Information on likely routes of exposure

| | |
|----------------------|--------------------|
| Ingestion: | No data available. |
| Inhalation: | No data available. |
| Skin Contact: | No data available. |
| Eye contact: | No data available. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------------------|--------------------|
| Ingestion: | No data available. |
| Inhalation: | No data available. |
| Skin Contact: | No data available. |
| Eye contact: | No data available. |

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

| | |
|--------------------------------|--|
| Oral | |
| Product: | ATEmix: 21,127.5 mg/kg |
| Dermal | |
| Product: | ATEmix: 16,308.78 mg/kg |
| Inhalation | |
| Product: | ATEmix: 597.99 mg/l |
| Specified substance(s): | |
| Octamethylcyclotetrasiloxane | LC50 (Rat): 12.1 mg/l LC50 (Rat): 36 mg/l |

Repeated dose toxicity

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Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Hexamethyldisilazane No data available. (Rabbit): Corrosive

Octamethylcyclotetrasiloxane OECD-Guideline 404 (Acute Dermal Irritation/Corrosion) (Rat): No skin irritation

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: Bühler-Patch-Test skin sensitisation on guinea pigs, OECD Test Guideline 406 (Guinea Pig): negative Test results are based on analogy with a similar material.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

ACGIH Carcinogen List:

No carcinogenic components identified

ACGIH Carcinogens:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic)
Mouse Lymphoma Assay (OECD Guideline 476): negative (not mutagenic)

In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane Chromosomal aberration (OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test)) Inhalation (Rat, male and female): negative

Reproductive toxicity

Product: No data available.

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Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects:

Octamethylcyclotetrasiloxane

Ingestion: Rodents given large doses via oral gavages 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 appear 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 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 periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300ppm 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 are limited to the 700 ppm exposure group.

These results have been shown to be rat-specific. Further studies are ongoing.

In developmental toxicity studies, rats and rabbits were exposed to Octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500

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ppm respectively. No teratogenic effects (birth defects) were observed in either study.

Contains dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane 3.7 % (29 d, 310 Ready Biodegradability - CO₂ in Sealed Vessels (Headspace Test)) Not readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane Fathead Minnow, Bioconcentration Factor (BCF): 12.40

Partition Coefficient n-octanol / water (log K_{ow})

Product: No data available.

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Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

| | |
|---------------------------------|--------------------|
| Hexamethyldisilazane | No data available. |
| Octamethylcyclotetrasiloxane | No data available. |
| DIBUTYL TIN BIS ACETYLACETONATE | No data available. |

Other adverse effects: No data available.

13. Disposal considerations

General information: The generation of waste should be avoided or minimized wherever possible. Do not discharge into drains, water courses or onto the ground. See Section 8 for information on appropriate personal protective equipment.

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

Contaminated Packaging: No data available.

14. Transport information

DOT

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

Special precautions for user: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. Regulatory information

**Canada Federal Regulations
List of Toxic Substances (CEPA, Schedule 1)**

Chemical Identity

Octamethylcyclotetrasiloxane

Export Control List (CEPA 1999, Schedule 3)
Not Regulated

National Pollutant Release Inventory (NPRI)

Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5 Methanol

Canada. Canadian Environmental Protection Act (CEPA). National Pollutant Release Inventory (NPRI) (Parts 1-4)

NPRI Not Regulated

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Greenhouse Gases

Not Regulated

Controlled Drugs and Substances Act

| | |
|------------|---------------|
| CA CDSI | Not Regulated |
| CA CDSII | Not Regulated |
| CA CDSIII | Not Regulated |
| CA CDSIV | Not Regulated |
| CA CDSV | Not Regulated |
| CA CDSVII | Not Regulated |
| CA CDSVIII | Not Regulated |

Precursor Control Regulations

Not Regulated

Inventory Status:

| | | |
|--|----------------------|----------------------------|
| Australia AICS: | y (positive listing) | Remarks: None. |
| EU EINECS List: | y (positive listing) | Remarks: None. |
| Japan (ENCS) List: | n (Negative listing) | Remarks: None. |
| China Inventory of Existing Chemical Substances: | y (positive listing) | Remarks: None. |
| Korea Existing Chemicals Inv. (KECI): | y (positive listing) | Remarks: None. |
| Canada DSL Inventory List: | y (positive listing) | Remarks: None. |
| Canada NDSL Inventory: | n (Negative listing) | Remarks: None. |
| Philippines PICCS: | y (positive listing) | Remarks: None. |
| US TSCA Inventory: | y (positive listing) | Remarks: On TSCA Inventory |
| Taiwan. Taiwan inventory (CSNN): | y (positive listing) | Remarks: None. |

16. Other information, including date of preparation or last revision

| | |
|-----------------------------|--------------------|
| Issue Date: | 03/02/2017 |
| Revision Date: | No data available. |
| Version #: | 1.1 |
| Further Information: | No data available. |

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Disclaimer:

Notice to reader

Unless otherwise specified in section 1.2, Momentive Products are intended for industrial application only.

They are not intended for specific medical applications, neither for long-lasting (> 30 days) implantation into the human body, injected or directly ingested, nor for the manufacture of multiple usable contraceptives.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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