

ECC3011

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** ECC3011

**Other means of identification** Not available.

**Recommended use and restriction on use**

**Recommended use:** Coating of electronic parts

**Restrictions on use:** For industrial use only.

**Manufacturer/Importer/Distributor Information** : Momentive Performance Materials - Japan LLC  
133 Nishishin-machi, Ohta-shi  
Ohta-shi 10 3738505

**Contact person** : commercial.services@momentive.com

**Telephone** : General information  
+1-800-295-2392

**Emergency telephone number**  
**Supplier** : CHEMTREC  
1-800-424-9300

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids Category 3

#### Health Hazards

Toxic to reproduction Category 2

### Label Elements

**Hazard Symbol:**



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<b>Signal Word:</b>	Warning
<b>Hazard Statement:</b>	H226; Flammable liquid and vapor. H361; Suspected of damaging fertility or the unborn child.
<b>Precautionary Statements</b>	
<b>Prevention:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
<b>Response:</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If exposed or concerned: Get medical advice/attention. In case of fire: Use ... to extinguish.
<b>Storage:</b>	Store in well-ventilated place. Keep cool. Store locked up.
<b>Disposal:</b>	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.
<b>Other hazards which do not result in GHS classification:</b>	None.

**3. Composition/information on ingredients**

**Mixtures**

Chemical Identity	CAS number	Content in percent (%)*	Notes
Siloxanes and Silicones, di-Me, [(trimethoxysilyl) oxy] - terminated	142982-20-5	>=70 - <=80%	No data available.
Alkylalkoxysiloxane	Trade secret	>=1 - <=10%	No data available.
Polydimethylsiloxane	63148-62-9	>=1 - <=10%	No data available.
Curing catalyst	Trade secret	1 - <5%	No data available.
Octamethylcyclotetrasiloxane	556-67-2	0.1 - <1%	No data available.

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

**Trade secret information:** \*\* A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

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**4. First-aid measures**

<b>Ingestion:</b>	Seek immediate medical attention. Do not induce vomiting.
<b>Inhalation:</b>	If inhaled, move victim to fresh air and seek medical attention. Get medical attention if symptoms occur.
<b>Skin Contact:</b>	Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact:</b>	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Most important symptoms/effects, acute and delayed**

<b>Symptoms:</b>	Treatment is symptomatic and supportive.
<b>Hazards:</b>	No data available.

**Indication of immediate medical attention and special treatment needed**

<b>Treatment:</b>	Product may hydrolyze upon contact with body fluids in the gastrointestinal tract to produce additional methanol. The potential for toxic effects due to methanol formation (eye damage and blindness, metabolic acidosis, dizziness and drowsiness, fetal toxicity, and liver, kidney, and heart muscle damage) should be recognized.
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**5. Fire-fighting measures**

<b>General Fire Hazards:</b>	This material may produce a floating fire hazard. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Do not use water jet as an extinguisher, as this will spread the fire. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.
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**Suitable (and unsuitable) extinguishing media**

<b>Suitable extinguishing media:</b>	Extinguish with foam, carbon dioxide or dry powder.
<b>Unsuitable extinguishing media:</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical:</b>	In case of fire, carbon monoxide and carbon dioxide may be formed.

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**Special protective equipment and precautions for firefighters**

- Special fire fighting procedures:** Static discharge: material can accumulate static charges which may cause an incendiary electrical discharge. Storage tank headspace may contain flammable atmosphere.
- 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:** Keep unprotected persons away. Remove sources of ignition. Use personal protective equipment. Keep upwind.
- Methods and material for containment and cleaning up:** Remove sources of ignition. Take up with an absorbent for chemicals or, otherwise use dry sand. Sweep up and place in a clearly labeled container for chemical waste.
- Environmental Precautions:** Do not allow runoff to sewer, waterway or ground.

**7. Handling and storage**

- Precautions for safe handling:** Product may charge electrostatically during pouring or filling.
- Conditions for safe storage, including any incompatibilities:** Store in a cool, dry place out of direct sunlight.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
Octamethylcyclotetrasiloxane	TWA	5 ppm	

- Appropriate Engineering Controls** Explosion-proof general and local exhaust ventilation. Provide eyewash station.

**Individual protection measures, such as personal protective equipment**

- General information:** No data available.
- Eye/face protection:** Safety glasses with side shields

**Skin Protection**

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<b>Hand Protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear rubber boots. Chemical resistant clothing
<b>Respiratory Protection:</b>	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).
<b>Hygiene measures:</b>	Wash promptly with soap and water if skin becomes contaminated. Keep away from food, drink and animal feeding stuffs. When using do not eat or drink. Wash contaminated clothing before reuse. Use skin protection.

<b>9. Physical and chemical properties</b>
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**Appearance**

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Translucent
<b>Odor:</b>	Faint
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	estimated 102 °C estimated
<b>Flash Point:</b>	27 °C
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Heat of combustion:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Density:</b>	0.94 g/cm <sup>3</sup> (23 °C)
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	immiscible

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<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water) Log Pow:</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>SADT:</b>	No data available.
<b>Viscosity, dynamic:</b>	100 mPa·s (23 °C)
<b>Viscosity, kinematic:</b>	No data available.
<b>VOC:</b>	No data available.

**10. Stability and reactivity**

<b>Reactivity:</b>	No dangerous reaction if used as recommended.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerisation does not occur.
<b>Conditions to avoid:</b>	Keep away from sources of ignition - No smoking.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Bases. Acids. Reacts with water or moisture to form: Methanol
<b>Hazardous Decomposition Products:</b>	carbon oxides

**11. Toxicological information**

**Information on likely routes of exposure**

<b>Ingestion:</b>	No data available.
<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Ingestion:</b>	No data available.
<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.

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**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s):**

Alkylalkoxysiloxane LD 50 (Rat): 11,685 mg/kg

Polydimethylsiloxane LD 50 (Rat, No data available.): > 5,000 mg/kg

Octamethylcyclotetrasiloxane  
LD 50 (Rat): 4,800 mg/kg  
LD 50 (Mouse): 1,700 mg/kg

**Dermal**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s):**

Alkylalkoxysiloxane LD 50 (Rat): > 9,500 mg/kg

Octamethylcyclotetrasiloxane  
LD 50 (Rat): 2,400 mg/kg

**Inhalation**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s):**

Alkylalkoxysiloxane LC 50 (Rat): 42.1 mg/l

Octamethylcyclotetrasiloxane  
LC50 (Rat): 36 mg/l

**Repeated dose toxicity**

**Product:** No data available.

**Specified substance(s):**

Alkylalkoxysiloxane NOAEL : 50 mg/kg

**Skin Corrosion/Irritation**

**Product:** No data available.

**Specified substance(s):**

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Alkylalkoxysiloxane      OECD Test Guideline 404 (Rabbit): No skin irritation

**Specified substance(s):**  
Polydimethylsiloxane      (Rabbit): Non irritating

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

**Serious Eye Damage/Eye Irritation**

**Product:**      No data available.

**Specified substance(s):**  
Alkylalkoxysiloxane      OECD Test Guideline 405 (Rabbit): No eye irritation

**Specified substance(s):**  
Polydimethylsiloxane      No data available. (Rabbit): Non irritating

**Respiratory or Skin Sensitization**

**Product:**      No data available.

**Specified substance(s):**  
Octamethylcyclotetrasiloxane      , OECD-Guideline 406 (Skin Sensitisation) (Guinea Pig)Not sensitizing

**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

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**  
No carcinogenic components identified



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**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 Guidline 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.

**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:** No data available.

**Specified substance(s):**

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Octamethylcyclotetrasiloxane

Octamethylcyclotetrasiloxane (D4) Ingestion: Rodents given large doses via oral gavage of Octamethylcyclotetrasiloxane (1600mg/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. This response in rats, which does not affect the animal's health, is well-documented and widely recognized. It is related to an increase of liver enzymes that metabolize and eliminate a material from the body. The increased liver weight reverses even while the D4 exposure continues. The finding is not adverse, but is considered a natural adaptive change in rats, and does not represent a hazard to humans. 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 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. A two-year, combined chronic/carcinogenicity study, during which rats were exposed to D4 by inhalation, data showed a statistically significant increase in a benign uterine tumor in female rats exposed at the highest level--a level much higher than the low levels that consumers or workers may encounter. An expert panel of independent scientists who have reviewed the results of this research concur that the finding seen in the two-year study occurred through a biological pathway that is specific to the rat and is not relevant to humans. Therefore, this observed effect does not indicate a potential health hazard to humans. In developmental toxicity studies, rats and rabbits were exposed to D4 at concentrations up to 700 ppm and 500 ppm, respectively. No teratogenic effects (birth defects) were observed in either study.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

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**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

Polydimethylsiloxane LC0 (Leuciscus idus, 4 d): 200 mg/l

**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 - CO<sub>2</sub> 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 Kow)**

**Product:** No data available.

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**

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Siloxanes and Silicones, di-Me, [(trimethoxysilyl) oxy] - terminated	No data available.
Alkylalkoxysiloxane	No data available.
Polydimethylsiloxane	No data available.
Curing catalyst	No data available.
Octamethylcyclotetrasiloxane	No data available.

**Other adverse effects:** No data available.

**13. Disposal considerations**

**Disposal instructions:** Dispose of according to all federal, state and local applicable regulations.

**Contaminated Packaging:** Dispose of as unused product.

**14. Transport information**

**DOT**

UN Number:	UN 1993
UN Proper Shipping Name:	Flammable liquids, n.o.s.(METHYLTRIMETHOXYSILANE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No

**IMDG**

UN Number:	UN 1993
UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.(METHYLTRIMETHOXYSILANE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
Packing Group:	III
Marine Pollutant:	No
Limited quantity	5.00L
Excepted quantity	E1

**IATA**

UN Number:	UN 1993
Proper Shipping Name:	Flammable liquid, n.o.s.(METHYLTRIMETHOXYSILANE)
Transport Hazard Class(es):	
Class:	3
Label(s):	3

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Packing Group:	III
Cargo aircraft only Packing	366
Instructions:	
Passenger and cargo aircraft	366
Packing Instructions:	
Limited quantity:	10.00L
Packing Instructions:	Y344
Excepted quantity	E1
Environmental Hazards:	Not regulated.
Marine Pollutant:	No

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Fire Hazard  
 Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

None present or none present in regulated quantities.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Curing catalyst	10000 lbs
Octamethylcyclotetrasiloxane	10000 lbs

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

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**US State Regulations**

**US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Methanol	Maximum Allowable Dose Level (MADL): 47000 µg/day. Developmental toxin.
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**US. New Jersey Worker and Community Right-to-Know Act**

**Chemical Identity**

Siloxanes and Silicones, di-Me, [(trimethoxysilyl) oxy] -terminated

Alkylalkoxysiloxane

Polydimethylsiloxane

Polydimethylsiloxane

Curing catalyst

Octamethylcyclotetrasiloxane

**US. Massachusetts RTK - Substance List**

No ingredient regulated by MA Right-to-Know Law present.

**US. Pennsylvania RTK - Hazardous Substances**

No ingredient regulated by PA Right-to-Know Law present.

**US. Rhode Island RTK**

No ingredient regulated by RI Right-to-Know Law present.

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**Inventory Status:**

Australia AICS:	n (Negative listing)	Remarks: None.
Canada DSL Inventory List:	n (Negative listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	y (positive 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 NDSL Inventory:	n (Negative listing)	Remarks: None.
Philippines PICCS:	y (positive listing)	Remarks: None.
US TSCA Inventory:	y (positive listing)	Remarks: None.
New Zealand Inventory of Chemicals:	y (positive listing)	Remarks: None.
Taiwan Chemical Substance Inventory:	y (positive listing)	Remarks: None.

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

**HMIS Hazard ID**

<b>Health</b>	*	0
<b>Flammability</b>		2
<b>Physical Hazards</b>		1
<b>PERSONAL PROTECTION</b>		

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**Issue Date:** 04/19/2017  
**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, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

**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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