

ECC3010

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** ECC3010

**Other means of identification**

**Synonyms:** Conformal Coating

**Recommended use and restriction on use**

**Recommended use:** Coating of electronic parts

**Restrictions on use:** Not known.

**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:**

ECC3010



**Signal Word:** Warning

**Hazard Statement:** H226; Flammable liquid and vapor.  
H361f; Suspected of damaging fertility.

**Precautionary Statements**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof [electrical/ventilating/lighting/] equipment. Use non-sparking tools. Take action to prevent static discharges. Keep container tightly closed.

**Response:** IF exposed or concerned: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

**Storage:** Store locked up. Store in a well-ventilated place. Keep cool.

**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.

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

**3. Composition/information on ingredients**

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**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.
Methyltrimethoxysilane	1185-55-3	>=1 - <=10%	No data available.
Polydimethylsiloxane	63148-62-9	>=1 - <=10%	No data available.
Trisiloxane, octamethyl-	107-51-7	>=1 - <=10%	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.

**4. First-aid measures**

- Ingestion:** DO NOT induce vomiting. Get medical attention immediately. Do not give victim anything to drink if he is unconscious. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation:** Move into fresh air and keep at rest. Get medical attention if symptoms occur.
- Skin Contact:** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.
- Eye contact:** Get medical attention if symptoms occur. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

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

- Symptoms:** No data available.
- Hazards:** No data available.

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

- Treatment:** There is no specific antidote. Treatment is symptomatic and supportive.

**5. Fire-fighting measures**

- General Fire Hazards:** Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.

**Suitable (and unsuitable) extinguishing media**

- Suitable extinguishing media:** All standard extinguishing agents are suitable.

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**Unsuitable extinguishing media:** No data available.

**Specific hazards arising from the chemical:** Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Ground container and transfer equipment to eliminate static electric sparks.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Product may charge electrostatically during pouring or filling. All equipment used when handling the product must be grounded.

**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 eyes, skin, and clothing. Keep out of reach of children. Attention: Not for injection into humans.

**Methods and material for containment and cleaning up:** Warn other workers of spill. 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.

**Notification Procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

**Environmental Precautions:** Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling:** Sensitivity to static discharge is expected; material has a flash point below 200 F.

**Conditions for safe storage, including any incompatibilities:** Keep away from heat, sparks and open flame. Keep container closed. Store in original container.

**8. Exposure controls/personal protection**

**Control Parameters**  
**Occupational Exposure Limits**

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Chemical Identity	Type	Exposure Limit Values	Source
Octamethylcyclotetrasiloxane	TWA	5 ppm	

**Appropriate Engineering Controls**

Eye wash facilities and emergency shower must be available when handling this product. Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

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

**General information:** General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

**Eye/face protection:** Safety glasses with side shields

**Skin Protection**

**Hand Protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing and eye/face protection.

**Respiratory Protection:** Use only in well-ventilated areas. 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:** Observe good industrial hygiene practices. Wash hands after handling. When using do not eat, drink or smoke. Provide adequate ventilation.

**9. Physical and chemical properties**

**Appearance**

**Physical state:** liquid  
**Form:** liquid  
**Color:** Colorless  
**Odor:** Faint  
**Odor threshold:** No data available.  
**pH:** No data available.  
**Melting point/freezing point:** Not determined.  
**Initial boiling point and boiling range:** 102 °C (1,013 hPa)  
**Flash Point:** 27 °C  
**Evaporation rate:** No data available.  
**Flammability (solid, gas):** No data available.

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**Upper/lower limit on flammability or explosive limits**

<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>	Insoluble
<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>	110 mPa-s (23 °C)
<b>Viscosity, kinematic:</b>	No data available.
<b>VOC:</b>	No data available.

<b>10. Stability and reactivity</b>
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<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>	Product generates flammable gas on contact with acids, bases or oxidizing substances.
<b>Conditions to avoid:</b>	Avoid contact with acids and oxidizing substances.
<b>Incompatible Materials:</b>	None known. Strong Acids, Strong Bases
<b>Hazardous Decomposition Products:</b>	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 potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

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**11. Toxicological information**

**General information:** This product is not tested.

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

**Specified substance(s):**

Methyltrimethoxysilane 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):**

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

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

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**Inhalation**

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

**Specified substance(s):**

Methyltrimethoxysilane LC 50 (Rat): 42.1 mg/l

Octamethylcyclotetrasiloxane LC50 (Rat): 36 mg/l

**Repeated dose toxicity**

**Product:** No data available.

**Specified substance(s):**

Methyltrimethoxysilane NOAEL : 50 mg/kg

**Skin Corrosion/Irritation**

**Product:** No data available.

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Respiratory or Skin Sensitization**

**Product:** No data available.

**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.
Methyltrimethoxysilane	No data available.
Polydimethylsiloxane	No data available.
Trisiloxane, octamethyl-	No data available.
Octamethylcyclotetrasiloxane	No data available.

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

**13. Disposal considerations**

**Disposal instructions:** Disposal should be made in accordance with federal, state and local 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>
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**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

**Chemical Identity**

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

Methyltrimethoxysilane

Polydimethylsiloxane

Trisiloxane, octamethyl-

Titanium, Bis(ethyl acetoacetato)-diisopropoxy

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. Taiwan inventory (CSNN):	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>		3
<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:** 04/20/2017  
**Revision Date:** No data available.  
**Version #:** 1.3  
**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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