

TSE399-C

# SAFETY DATA SHEET

## 1. Identification of the hazardous chemical and of the supplier

**Product identifier:** TSE399-C

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Silicone Elastomer

**Recommended restrictions:** For industrial use only.

**Details of principal suppliers**

**Manufacturer/Importer/Distributor Information** : Momentive Performance Materials (Thailand) Limited  
1/2 Moo 4, Asia Industrial Estate, Rayong, 21130  
Thailand

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

**Telephone** : +66-3899 7899

**Telefax** : +66-3899 7888

**Emergency telephone number** : 001 800 120 666 751 / +65 3158 1074

**Responsible Department** : Product Stewardship & Compliance

## 2. Hazard(s) identification

**GHS classification of substance or mixture, and national or regional information :**

**Health Hazards**

Skin Corrosion/Irritation Category 2

Serious Eye Damage/Eye Irritation Category 2

**Unknown toxicity- Environment**

Acute hazards to the aquatic environment 0 %

Chronic hazards to the aquatic environment 0 %

**GHS label elements**

**Hazard symbol(s):**



**Signal Word:** Warning

**Hazard Statement(s):** Causes skin irritation.  
Causes serious eye irritation.

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**Precautionary statement(s):**

**Prevention:** Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing. Specific treatment (see supplemental first aid instructions on this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Other hazards which do not result in GHS classification:** Generates methanol during cure.

**3. Composition and information of the ingredients of the hazardous chemical**

**Chemical nature:** Mixture of polydimethylsiloxanes, fillers and cross-linkers.

**Mixtures**

Chemical Identity	CAS number	Content in percent (%)*
Silica	7631-86-9	5 - <10%
CYCLOPENTYLSILAZANE-AMINOSILOXANE COPOLYMER, METHOXY TERMINATED	134759-20-9	1 - <3%
gamma-Aminopropyltriethoxysilane	919-30-2	<1%
Dibutyltin Dilaurate	77-58-7	<1%

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

(1) The respirable particle(s) listed above are inextricably bound within the polymer matrix, and therefore does not present an inhalation hazard during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

**4. First-aid measures**

**Description of necessary first-aid measures**

**Inhalation:** If inhaled, move victim to fresh air and seek medical attention.

**Skin Contact:** Wash with soap and water.

**Eye contact:** Flush thoroughly with water for at least 15 minutes. Get medical assistance.

**Ingestion** Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. 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.

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

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**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:** Remove sources of combustibles. Extinguish the fire using fire-fighting media listed above. Cool surrounding tanks, buildings and so on by spraying with water to prevent the fire extension.  
 The fire fighting should be done from the windward side, with suitable respiratory protective device, if necessary.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Extinguish with foam, carbon dioxide or dry powder.

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** No data available.

**Special protective action for fire fighters**

**Special fire fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** No data available.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep upwind. Keep unprotected persons away.

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

**Methods and material for containment and cleaning up:** Put in an empty container for recovery after preventing spill by sand or sandbags, if the amount of spill is large. Put in an empty container for recovery after wiping or soaking up in an inert material, if the amount of spill is small.

**Notification Procedures:** Remove sources of ignition.

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**7. Handling and storage**

**Precautions to ensure safe handling:**

"Wear eye, hand and respiratory protection when in handling." See Section 8 of the SDS for Personal Protective Equipment. Keep away from sources of ignition - No smoking. Ground container and transfer equipment to eliminate static electric sparks. Protect from moisture. Seal opened containers and use up as soon as possible. Alcohol released during curing. Use only in well-ventilated areas.

**Conditions for safe storage, including any incompatibilities:**

Store in a dark, cool place indoors, with container tightly closed.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
Silicalnhalable particulate.	Time Weighted Average (TWA):	10 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations), as amended03 2000
SilicaRespirable particles.	Time Weighted Average (TWA):	3 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations), as amended03 2000
Dibutyltin Dilaurate	Time Weighted Average (TWA):	0.1 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations), as amended03 2000
(1) Silica - Respirable particles.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
(1) Silica - Inhalable particles.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Dibutyltin Dilaurate - as Sn	STEL	0.2 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2015)
	TWA	0.1 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2015)

This product contains one or more substances with an occupational exposure limit. However, the respirable particle(s) of this/these substance(s) are inextricably bound within the polymer matrix. Therefore, we do not expect an exposure to this/these substance(s) during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

**Biological Limit Values**

None of the components have assigned exposure limits.

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**Appropriate Engineering Controls:** Provide adequate general and local exhaust ventilation. Eyewash bottle with clean water.

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

**General information:** Use only in well-ventilated areas. Wear suitable gloves and eye/face protection.

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

**Skin Protection**

**Hand Protection:** Chemical resistant gloves Rubber or plastics gloves

**Other:** Chemical resistant clothing Safety shoes

**Respiratory Protection:** Gas mask with organic vapor canister and dust and mist filter.

**Hygiene measures:** Avoid contact with eyes, skin, and clothing. Wash hands after handling. When using do not eat or drink.

**9. Physical and chemical properties**

**Appearance**

**Physical state:** liquid  
**Form:** Paste  
**Color:** Colorless

**Odor:** Faint  
**Odor threshold:** No data available.

**pH:** No data available.

**Melting point/freezing point:** Not applied

**Initial boiling point and boiling range:** Not applied

**Flash Point:** 198 °C

**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:** Not applied

**Vapor density:** No data available.

**Density:** 1.04 g/cm<sup>3</sup> (25 °C)

**Relative density:** No data available.

**Solubility(ies)**

**Solubility in water:** Insoluble

**Solubility (other):** No data available.

**Partition coefficient (n-octanol/water) Log Pow:** No data available.

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<b>Auto-ignition temperature:</b>	450 °C
<b>Decomposition temperature:</b>	No data available.
<b>SADT:</b>	No data available.
<b>Viscosity, dynamic:</b>	No data available.
<b>Viscosity, kinematic:</b>	> 20.5 mm <sup>2</sup> /s (40 °C)

**Other information**

<b>Minimum ignition temperature:</b>	450 °C
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**10. Stability and reactivity**

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	No data available.
<b>Conditions to avoid:</b>	Keep away from heat, sparks and open flame.
<b>Incompatible Materials:</b>	Moisture. The catalysis of strong acids or bases cause polymerization or decomposition.
<b>Hazardous Decomposition Products:</b>	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 SDS for formaldehyde is available from Momentive.

**11. Toxicological information**

<b>General information:</b>	In serious cases absorption of methanol in the body may lead to damage to the eyesight.
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**Information on likely routes of exposure**

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

**Symptoms**

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

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**Information on toxicological effects**

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

**Oral**

**Product:** No data available.

**Specified substance(s):**

Silica LD 50 (Rat): > 15,000 mg/kg

CYCLOPENTYLSILAZA LD 50 (Rat): 4,666 mg/kg  
 NE-AMINOSILOXANE  
 COPOLYMER,  
 METHOXY  
 TERMINATED

gamma-Aminopropyltriethoxysilane LD50 (Rat): 1,490 mg/kg

Dibutyltin Dilaurate LD 50 (Rat): 2,071 mg/kg

**Dermal**

**Product:** No data available.

**Specified substance(s):**

gamma-Aminopropyltriethoxysilane LD50 (Rabbit): > 6 ml/kg bw (male)

Dibutyltin Dilaurate LD 50 (Rat): 750 mg/kg  
 LD 50 (Rat): 1,000 mg/kg  
 LD 50 (Rat): > 2,000 mg/kg

**Inhalation**

**Product:** No data available.

**Specified substance(s):**

gamma-Aminopropyltriethoxysilane LD50 (Rat, 6 h): > 16 ppm

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** No data available.

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Respiratory or Skin Sensitization**

**Product:** No data available.

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**ACGIH Sensitization**

**Carcinogenicity**

**Product:** No data available.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No data available.

**In vivo**

**Product:** No data available.

**Specified substance(s):**

gamma-Aminopropyltriethoxysilane  
 Micronucleus test (mouse) (Similar to OECD 474): negative (not mutagenic)

**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:**

Contains dibutyl tin dilaurate which may cause birth defects and reproductive effects based on animal data.

**12. Ecological information**

**Ecotoxicity**

**Acute hazards to the aquatic environment**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

gamma-Aminopropyltriethoxysilane  
 EC50 (Daphnia, 48 h): > 100 mg/l  
 Dibutyltin Dilaurate  
 EC50 (Daphnia magna, 48 h): < 0.463 mg/l Fresh water

**Chronic hazards to the aquatic environment**



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**Fish**

**Product:** No data available.

**Specified substance(s):**

Silica LC0 (Brachydanio rerio, 4 d): 5,000 mg/l

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility**

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

**Known or predicted distribution to environmental compartments**

Silica No data available.

CYCLOPENTYLSILAZANE No data available.

-AMINOSILOXANE

COPOLYMER, METHOXY

TERMINATED

gamma- No data available.

Aminopropyltriethoxysilane

Dibutyltin Dilaurate No data available.

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

**13. Disposal information**

**General information:** Do not discharge into drains, water courses or onto the ground. See Section 8 for information on appropriate personal protective equipment.

**Disposal methods**

**Disposal instructions:** Can be incinerated when in compliance with local regulations. This material is developed and manufactured for industrial applications only.

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

**14. Transport information**

**ADR**

Not regulated.

**IATA**

Not regulated.

**IMDG**

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. Protect from moisture. Keep away from food, foodstuff, acids and bases. keep away from odour sensitive materials

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

Not applicable

**15. Regulatory information**

**Malaysia. Medical Surveillance Chemicals, Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health): Schedule 2**

Silica

Ethanol

**Malaysia. Prohibited Use of Substances [Occupational Safety and Health (Prohibition of Use of Substance) Order]**

Not Regulated

**Malaysia. Controlled Precursors Subject to Conditional Exports (Customs (Prohibition of Exports) Order 2017, Second Schedule, as amended)**

Not Regulated

**Malaysia. Controlled Precursors Subject to Conditional Imports (Customs (Prohibition of Imports) Order, Part I of Second Schedule)**

Not Regulated

**Malaysia. CWC. Chemical Weapons Convention Act 2005, (Schedules 1-3)**

Not Regulated

**Malaysia. Ozone Depleting Substances (ODS) (Environmental Quality (Prohibition on the Use of CFC and Other Gases as Propellants and Blowing Agents) Order 1993)**

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Not Regulated

**Malaysia. Lists of Halon Management (Environmental Quality (Halon Management) Regulation 1999)**  
 Not Regulated

**Malaysia. Refrigerant Hazardous Substance (Environmental Quality (Refrigerant Management) Regulation), as amended**  
 Not Regulated

**Malaysia. Active Ingredients of Pesticide Product (Pesticide Act 1974, First Schedule), as amended**  
 Not Regulated

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**Inventory Status:**

Australia AICS:	y (positive listing)	Remarks: None.
Canada DSL Inventory List:	q (quantity restricted)	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: On TSCA Inventory
New Zealand Inventory of Chemicals:	q (quantity restricted)	Remarks: None.
Taiwan Chemical Substance Inventory:	y (positive listing)	Remarks: None.
REACH:	If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants.	Remarks: None.

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

**Issue Date:** 2021/09/06  
**Revision Date:** No data available.  
**Version #:** 2.0  
**Source of information:** No data available.  
**Further Information:** No data available.  
**Disclaimer:**

**Notice to reader**

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**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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