

TSE397-W

SAFETY DATA SHEET

(In accordance with Article 41, Paragraph 1, of Industrial Safety and Health Act)

1. PRODUCT AND COMPANY IDENTIFICATION

A. Product name: TSE397-W

B. Recommended use and restriction on use

Recommended use: Silicone Elastomer

Restrictions on use: For industrial use only.

C. Manufacturer/Importer/Distributor Information

Manufacturer/Importer/Distributor Information : Momentive Performance Materials Korea Co., Ltd.
42, Samsung 1-ro, 3-gil, Hwaseong-si, Gyeonggi-do 18449 Korea

Contact person : commercial.services@momentive.com

Telephone : +82-2-6201-4600

Telefax : +82-2-6201-4601

Emergency telephone number : +65-3158-1074 / +82-2-6201-4600

Responsible Department : Product Stewardship & Compliance

2. HAZARDS IDENTIFICATION

A. Hazard Classification

Health Hazards

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

Environmental Hazards

Chronic hazards to the aquatic environment	Category 3
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B. Warning label items including precautionary statement

Pictograms



Signal Word: Danger

Hazard Statement(s): H315: Causes skin irritation.
H318: Causes serious eye damage.
H360: May damage fertility or the unborn child.
H412: Harmful to aquatic life with long lasting effects.

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Precautionary Statements

- Prevention:** P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P264: Wash hands thoroughly after handling. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.
- Response:** P332+P313: If skin irritation occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER/doctor. P308+P313: IF exposed or concerned: Get medical advice/attention.
- Storage:** P405: Store locked up.
- Disposal:** P501: 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.

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard) No data available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical nature: Silicone sealant

Mixtures

Hazardous ingredients:

Chemical Identity	CAS number	Concentration*
Silica	7631-86-9	1 - 10%
Polyalkoxyaminosilane	Trade secret	1 - 5%
TITANIUM DIOXIDE	13463-67-7	0.1 - 1%
Dibutyltin Dilaurate	77-58-7	0.1 - 1%

* 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.

(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

- A. In case of eye contact:** Flush thoroughly with water for at least 15 minutes. Get medical assistance.
- B. In case of skin contact:** Wash with plenty of water/...
- C. In case of inhalation:** If inhaled, move victim to fresh air and seek medical attention.

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D. In case of swallowing: 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.

E. Notes to the physician

Hazards No data available.

Symptoms: Treatment is symptomatic and supportive.

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.

A. Extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

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

B. Special hazards arising from the substance or mixture: In case of fire, carbon monoxide and carbon dioxide may be formed.

C. Special fire fighting procedures: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

Special protective equipment for fire-fighters: Use standard firefighting procedures and consider the hazards of other involved materials. Self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

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

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

C. 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

- A. Precautions for safe handling:** "Wear eye, hand and respiratory protection when in handling." 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.
- B. Conditions for safe storage, including any incompatibilities:** Store in a dark, cool place indoors, with container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

A. Exposure limit values, biological values, etc.

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Silica	TWA	10 mg/m ³	Korea. OELs (ISHL Article 42; MOL No. 1986-45), as amended (03 2011)
	TWA	10 mg/m ³	Korea. OELs (ISHL Article 42; MOL No. 1986-45), as amended (08 2012)
TITANIUM DIOXIDE	TWA	10 mg/m ³	Korea. OELs (ISHL Article 42; MOL No. 1986-45), as amended (08 2012)
Dibutyltin Dilaurate - as Sn	TWA	0.1 mg/m ³	Korea. OELs (ISHL Article 42; MOL No. 1986-45), as amended (08 2012)

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.

- B. Appropriate engineering controls:** Eyewash bottle with clean water.

C. Personal protective equipment (ppe)

Eye Protection Safety glasses with side shields

Hand Protection: 730 Camatril This recommendation is valid only for our Product as delivered. If this product will be mixed with other substances you need to contact a supplier of CE approved protective gloves (e.g. KCL GmbH, D-36124 Eichenzell, Tel. 0049 (0) 6659 87300, Fax. 0049 (0) 6659 87155, email: vertrieb@kcl.de). Rubber gloves are recommended.

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

Body protection Chemical resistant clothing Safety shoes

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

A. Appearance

Physical state: liquid
Form: Paste
Color: White

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B. Odor:	Faint
C. Odor Threshold:	No data available.
D. pH:	No data available.
E. Melting point/freezing point	Not applied
F. Boiling point, initial boiling point, and boiling range	Not applied
G. Flash Point:	198 °C
H. Evaporation Rate:	No data available.
I. Flammability (solid, gas):	Not applicable
J. Upper/lower limit on flammability or explosive limits	
Flammability Limit - Upper (%)	No data available.
Flammability Limit - Lower (%):	No data available.
Dust Explosion Limit, Upper:	No data available.
Dust Explosion Limit, Lower:	No data available.
K. Vapor pressure:	Not applied
L. Vapor density (air=1):	No data available.
M. Density:	1.04 g/cm ³ (25 °C)
N. Specific Gravity:	No data available.
O. Solubility(ies)	
Solubility in Water:	Insoluble
Solubility (other):	Insoluble
P. Partition coefficient (n-octanol/water)	No data available.
Log Pow:	
Q. Autoignition Temperature:	450 °C
R. Decomposition Temperature:	No data available.
S. SADT:	No data available.
T. Viscosity, dynamic:	50,000 mPa·s (23 °C)
Viscosity, kinematic:	> 20.5 mm ² /s (40 °C)
U. Molecular weight:	No data available.

10. STABILITY AND REACTIVITY

A. Stability and hazardous reaction potential:

Stability	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.

B. Conditions to avoid: Keep away from heat, sparks and open flame.

C. Incompatible Materials: Moisture. The catalysis of strong acids or bases cause polymerization or decomposition.

D. Hazardous Decomposition Products: 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: In serious cases absorption of methanol in the body may lead to damage to the eyesight.

A. Information on likely routes of exposure

Respiratory organs: No data available.

Oral: No data available.

Skin: No data available.

eye: No data available.

B. Information on health hazards

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix (): 213,488.29 mg/kg
Not classified for acute toxicity based on available data.

Specified substance(s)

Silica LD 50 (Rat): > 15,000 mg/kg
Polyalkoxyaminosilane LD 50 (Rat, male and female): ca. 4,666 mg/kg (OECD-Guideline 401 (Acute Oral Toxicity))
TITANIUM DIOXIDE LD 50 (Rat): > 10,000 mg/kg
Dibutyltin Dilaurate LD 50 (Rat, male and female): 2,071 mg/kg (OECD-Guideline 401 (Acute Oral Toxicity)) Not classified Slightly toxic

Dermal

Product: Not classified for acute toxicity based on available data.
ATEmix (): 247,198.42 mg/kg

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE LD 50 (Rabbit): > 10,000 mg/kg
Dibutyltin Dilaurate LD 50 (Rat): ca. 750 mg/kg (No data available.)
LD 50 (Rat, males): > 1,000 mg/kg (No data available.)
LD 50 (Rat): > > 2,000 mg/kg (OECD-Guideline 402 (Acute Dermal Toxicity))
Corrosion Semi-occlusive

Inhalation

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

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE LC50 (Rat, 4 h): > 6.8 mg/l
Dibutyltin Dilaurate LC50 (Rat, 2.00 h): ca. 10 mg/l (No data available.)

Repeated dose toxicity

Product: No data available.

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE No data available.

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Dibutyltin Dilaurate No data available.

Corrosivity or irritation to the skin:

Product: No data available.

Serious Eye Damage/Eye Irritation:

Product: No data available.

Respiratory or Skin Sensitization:

Product: No data available.

Mutagenesis

In vitro

Product: No data available.

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE No data available.
Dibutyltin Dilaurate No data available.

In vivo

Product: No data available.

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE No data available.
Dibutyltin Dilaurate No data available.

Carcinogenicity

Product: No data available.

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE No data available.
Dibutyltin Dilaurate No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE No data available.
Dibutyltin Dilaurate No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specified substance(s)

Silica No data available.
Polyalkoxyaminosilane No data available.
TITANIUM DIOXIDE No data available.
Dibutyltin Dilaurate No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s)

Silica No data available.

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Polyalkoxyaminosilane	No data available.
TITANIUM DIOXIDE	No data available.
Dibutyltin Dilaurate	No data available.

Aspiration Hazard

Product: No data available.

Specified substance(s)

Silica	No data available.
Polyalkoxyaminosilane	No data available.
TITANIUM DIOXIDE	No data available.
Dibutyltin Dilaurate	No data available.

Other effects: No data available.

12. ECOLOGICAL INFORMATION

General information: Not applicable

A. Ecotoxicity

Acute hazards to the aquatic environment

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Silica	No data available.
Polyalkoxyaminosilane	No data available.
TITANIUM DIOXIDE	No data available.
Dibutyltin Dilaurate	EC50 (Daphnia magna, 48 h): < 0.463 mg/l Fresh water

Chronic hazards to the aquatic environment

Fish

Product: No data available.

Specified substance(s)

Silica	LC0 (Brachydanio rerio, 4 d): 5,000 mg/l
Polyalkoxyaminosilane	No data available.
TITANIUM DIOXIDE	No data available.
Dibutyltin Dilaurate	No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Silica	No data available.
Polyalkoxyaminosilane	No data available.
TITANIUM DIOXIDE	No data available.
Dibutyltin Dilaurate	No data available.

Toxicity to Aquatic Plants

Product: No data available.

B. Persistence and Degradability

Biodegradation

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Product: No data available.

BOD/COD Ratio

Product No data available.

Specified substance(s)

Silica No data available.

Polyalkoxyaminosilane No data available.

TITANIUM DIOXIDE No data available.

Dibutyltin Dilaurate No data available.

C. Bioaccumulative potential

Product: No data available.

D. Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

Silica No data available.

Polyalkoxyaminosilane No data available.

TITANIUM DIOXIDE No data available.

Dibutyltin Dilaurate No data available.

E. Other adverse effects:

No data available.

13. Disposal considerations

General information:

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

A. Disposal methods:

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**B. Disposal considerations
(including disposal of
contaminated containers or
packaging)**

The generation of waste should be avoided or minimized wherever possible. The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

14. TRANSPORT INFORMATION

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

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15. REGULATORY INFORMATION

A. Restriction under the Industrial Safety and Health Law

Controlled Hazardous Substances

None present or none present in regulated quantities.

Harmful Substances Prohibited from Manufacturing

None present or none present in regulated quantities.

Harmful Substances Requiring Permission for Manufacture or Use

None present or none present in regulated quantities.

Harmful Substances Requiring Special Medical Examination

Chemical name

TITANIUM DIOXIDE	Listed
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Harmful Substances Requiring Workplace Environment Monitoring

None present or none present in regulated quantities.

B. Restrictions under the Chemicals Control Law

Accidental Release Prevention Substances

None present or none present in regulated quantities.

Banned Toxic Chemicals

None present or none present in regulated quantities.

Restricted Chemical Substances

None present or none present in regulated quantities.

Toxic Chemicals

None present or none present in regulated quantities.

Toxic release inventory

None present or none present in regulated quantities.

C. Restrictions under the Dangerous Substances Safety Management Act

Class 4, Group 3 oils Non-water soluble

D. Restrictions under the Wastes Control Act

Halogenated Materials in Waste Organic Solvents

Not Regulated

E. Restrictions under other foreign or domestic laws

Clean Air Conservation Act

Air Pollutants

Chemical name

TITANIUM DIOXIDE	Listed
Dibutyltin Dilaurate	Listed

Specific Air Pollutants

Not Regulated

Inventory Status

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Australia AICS:	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 DSL Inventory List:	n (Negative 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 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.

16. OTHER INFORMATION

A. Source of information:	No data available.
B. Issue Date	2019/11/11
C. Number of revisions and date of most recent revision:	ARGHS_KR;
D. Other:	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.

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 safehandling, 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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