TSE397-B

SAFETY DATA SHEET

1. Identification

Product identifier: TSE397-B

Other means of identification
Synonyms: Silicone Rubber

Recommended use and restriction on use
Recommended use: Silicone Elastomer
Restrictions on use: For industrial use only.

Manufacturer : Momentive Performance Materials - Japan LLC
133 Nishishin-machi, Ohta-shi
Ohta-shi 10 3738505

Distributor Information : DC Products Pty Limited
Unit 117/45 Gilby Road
Mount Waverley 3149
Australia

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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:
H315; Causes skin irritation.
H317; May cause an allergic skin reaction.
H318; Causes serious eye damage.
H360; May damage fertility or the unborn child.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.

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.

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

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
(1) Silica	7631-86-9	10 - <20%	# This substance has workplace exposure limit(s).
CYCLOPENTYLSILAZANE-AMINOSILOXANE COPOLYMER, METHOXY TERMINATED	134759-20-9	1 - <3%	No data available.
gamma-Aminopropyltriethoxysilane	919-30-2	0.1 - <1%	No data available.
(1) Carbon Black	1333-86-4	0.1 - <1%	# This substance has workplace exposure limit(s).
Dibutyltin Dilaurate	77-58-7	0.3 - <1%	# This substance has workplace exposure limit(s).
METHYLPOLYSILOXANE	68037-58-1	60 - <70%	No data available.
Polydimethylsiloxane	63148-62-9	10 - <20%	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.

(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

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: Wash with soap and water. Get medical attention if symptoms occur.

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: Product may hydrolyse upon contact with body fluids in the gastrointestinal tract to produce additional methanol; therefore, consider the signs/symptoms of methanol poisoning and also observe the known latency period of several days!

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

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: Reacts with water liberating small amounts of methanol. In case of fire, carbon monoxide and carbon dioxide may be formed. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move container from fire area if it can be done without risk. Use water spray to keep fire-exposed containers cool.

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 container closed. Avoid contact with skin and eyes. Keep out of reach of children. May generate formaldehyde at temperatures greater than 150 C(300 F). 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.
Notification Procedures:	In case of spills, beware of slippery floors and surfaces. Stop the flow of material, if this is without risk. Keep unprotected persons away. See Section 8 of the SDS for Personal Protective Equipment.
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 not expected. Methanol is formed during processing. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the finger and hands. Do not get in eyes, on skin, on clothing. Do not taste or swallow. See Section 8 of the SDS for Personal Protective Equipment. Use only with adequate ventilation.
Conditions for safe storage, including any incompatibilities:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
(1) Silica	REL	6 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	6 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
(1) Carbon Black - Inhalable fraction.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values (03 2015)
(1) Carbon Black	REL	0.1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	3.5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	3.5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	3.5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Dibutyltin Dilaurate - 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)
	REL	0.1 mg/m3	US. NIOSH: Pocket Guide to Chemical

			Hazards (2010)
	PEL	0.1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	0.1 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	0.1 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Dibutyltin Dilaurate	ST ESL	1 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	AN ESL	0.1 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
Dibutyltin Dilaurate - as Sn	TWA PEL	0.1 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)
	STEL	0.2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 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.

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: Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

Eye/face protection: Safety glasses with side-shields conforming to EN166

Skin Protection

Hand Protection: Chemical resistant gloves

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

Respiratory Protection: Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

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:	Black
Odor:	Faint
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	not applicable
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.
Heat of combustion:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	1.04 g/cm3 (25 °C)
Relative density:	1.04
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
SADT:	No data available.
Viscosity, dynamic:	50,000 mPa·s (23 °C)
Viscosity, kinematic:	> 20.5 mm2/s (40 °C)
VOC:	; No data available.

10. Stability and reactivity

Reactivity: No dangerous reaction if used as recommended.

Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerisation does not occur.
Conditions to avoid:	Avoid high temperatures and moisture.
Incompatible Materials:	Moisture. Strong Acids, Strong Bases
Hazardous Decomposition Products:	Generates methanol during cure. Carbon dioxide Silicon dioxide. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

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: 212,245.27 mg/kg

Specified substance(s):

(1) Silica	LD 50 (Rat): > 15,000 mg/kg
CYCLOPENTYLSILA ZANE-AMINOSILOXA NE COPOLYMER, METHOXY TERMINATED	LD 50 (Rat, male and female): 4,666 mg/kg
Dibutyltin Dilaurate	LD 50 (Rat, male and female): 2,071 mg/kg
Polydimethylsiloxane	LD 50 (Rat, No data available.): > 5,000 mg/kg

Dermal

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

Specified substance(s):

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

Inhalation

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

Specified substance(s):

Dibutyltin Dilaurate	LC50 (Rat,): 10 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane	NOAEL (Rat, Oral, 90 d): 200 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:

(1) Carbon Black

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

Germ Cell Mutagenicity

In vitro

Product:	No data available.
Specified substance(s):	
gamma-Aminopropyltriethoxysilane	Ames-Test: negative Chinese Hamster Ovary (CHO): negative

In vivo

Product:	No data available.
Specified substance(s):	
gamma-Aminopropyltriethoxysilane	Micronucleus test (mouse): 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):

gamma-Aminopropyltriethoxysilane	Not genotoxic in various in vitro or in vivo studies. No evidence for systemic toxicity by short-term recurrent (9-day) application to the skin of rabbits up to 84.0 mg/kg/day (6 hr/day, occlusive), although a cumulative local irritation occurs. Recurrent exposure of rats to an aerosol of a hydrolyzate of this material (150 mg/m3) produced inflammatory and irritant effects in the nasal, laryngeal and tracheal mucosae, and inflammatory reactions in the lungs. A separate laboratory study indicates that contact with a hydrolyzate of this organosilane ester does not result in skin sensitization. The International Agency for Research on Cancer (IARC) has determined that the consumption of alcoholic beverages is causally related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not been verified in studies with laboratory animals. Established uses of denatured ethanol and non-beverage uses of pure ethanol are not considered to pose any significant cancer hazard.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Specified substance(s):	
(1) Silica	LC0 (Brachydanio rerio, 96 h): 5,000 mg/l
gamma-Aminopropyltriethoxysilane	LC50 (Brachydanio rerio, 96 h): > 934 mg/l

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
gamma-Aminopropyltriethoxysilane	EC50 (Daphnia magna, 48 h): 331 mg/l
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):

(1) Silica	LC0 (Brachydanio rerio, 4 d): 5,000 mg/l
Polydimethylsiloxane	LC0 (Leuciscus idus, 4 d): 200 mg/l

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane	EC50 (Desmodesmus subspicatus (green algae), 72 h): > 1,000 mg/l NOEC (Desmodesmus subspicatus (green algae), 72 h): 1.3 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

gamma-Aminopropyltriethoxysilane	67 % (28 d) Not readily degradable. hydrolyses
Dibutyltin Dilaurate	23 % (39 d) The product is not readily biodegradable.

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 in soil: No data available.

Known or predicted distribution to environmental compartments

(1) Silica	No data available.
CYCLOPENTYLSILA ZANE -AMINOSILOXA NE COPOLYMER, METHOXY TERMINATED	No data available.
gamma-Aminopropyltriethoxysilane	No data available.
(1) Carbon Black	No data available.
Dibutyltin Dilaurate	No data available.
METHYLPOLYSILOXA NE	No data available.
Polydimethylsiloxane	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
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

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
Immediate (Acute) Health Hazards
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

Chemical Identity	Threshold Planning Quantity
METHYLPOLYSILOXA NE	10000 lbs
Polydimethylsiloxane	10000 lbs
(1) Silica	10000 lbs
CYCLOPENTYLSILA ZAN E-AMINOSILOXA NE COPOLYMER, METHOXY TERMINATED	10000 lbs
gamma-Aminopropyltriethoxysilane	10000 lbs
(1) Carbon Black	10000 lbs
Dibutyltin Dilaurate	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.

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.

(1) Carbon Black	Carcinogenic.

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

Chemical Identity
METHYLPOLYSILOXA NE
Polydimethylsiloxane

CYCLOPENTYLSILA ZANE-AMINOSILOXANE COPOLYMER, METHOXY TERMINATED
Methyltrimethoxysilane
gamma-Aminopropyltriethoxysilane
Dibutyltin Dilaurate
(1) Silica
(1) Carbon Black

US. Massachusetts RTK - Substance List

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

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

(1) Silica

US. Rhode Island RTK

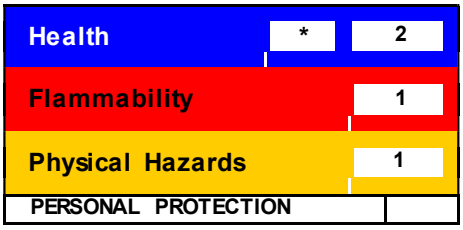
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

Australia AICS:	n (Negative listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: The monomers for this polymer have been notified.
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:	q (quantity restricted)	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.
Taiwan. Taiwan inventory (CSNN):	y (positive listing)	Remarks: None.

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

HMIS Hazard ID



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

Issue Date: 07/07/2017

Revision Date: No data available.

Version #: 3.1

Further Information: No data available.

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 ofour 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.