

SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

TSE3991-C

Section 1. Product and company identification

Product name : TSE3991-C
Chemical name : Ultra-low viscosity, one-component silicone coating

Manufacturer/Importer/ : Momentive Performance Materials - Japan LLC

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

Contact person : Viren Kumar

Telephone : +61 3 95588898

**Emergency telephone number
Supplier** : 61 418 529 118

Section 2. Hazards identification

**Classification of the substance or
mixture** : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
TOXIC TO REPRODUCTION - Category 1B
TOXIC TO REPRODUCTION - Category 1B

GHS label elements

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H360F May damage fertility.
H360 May damage the unborn child.

Precautionary statements

General :

Not applicable.

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 or face protection. Avoid breathing vapor.

Wash hands thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.

- Response** : IF exposed or concerned:
Get medical attention.
IF ON SKIN:
Wash with plenty of soap and water.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical attention.
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 attention.
- Storage** : Store locked up.
- Disposal** : P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Other hazards which do not result in classification** : Uncured product is irritating to eyes, skin, and respiratory system.
Generates methanol during cure.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
Chemical name : Not available

Hazardous ingredients	% by weight	CAS number
1-Propanamine,3-(tri-methoxysilyl)-,polymer with 1,1,1-trimethyl-N-(trimethylsilyl) silanamine	1-5	134759-20-9
3-aminopropyltriethoxysilane	0.1 - 1	919-30-2
Dibutyltin Dilaurate	0.1 - 1	77-58-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing

and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

- Ingestion** :
- Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** :
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** :
- No specific treatment.
- Protection of first aid personnel** :
- No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** :
- Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- Unsuitable extinguishing media** :
- water jet

Specific hazards arising from the chemical

- Hazardous thermal decomposition products** :
- In a fire or if heated, a pressure increase will occur and the container may burst.
 - Decomposition products may include the following materials:
 - sulfur oxides
 - halogenated compounds
 - metal oxide/oxides
 - 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 actions for fire-fighters

- :
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Section 7. Handling and storage**Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage,** : Store in accordance with local regulations. Store in original

including any incompatibilities

container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters**Occupational exposure limits**

Ingredient name	Exposure limits
Dibutyltin Dilaurate	<p>NIOSH REL (2005-09-30)</p> <p>OSHA PEL (1993-06-30) Calculated as Sn Time Weighted Average (TWA) 0.1 mg/m³</p> <p>OSHA PEL 1989 Vacated (1989-03-01) Calculated as Sn Time Weighted Average (TWA) 0.1 mg/m³ Form: Organic</p> <p>ACGIH TLV (1996-05-18) Calculated as Sn Time Weighted Average (TWA) 0.1 mg/m³</p> <p>ACGIH TLV (1994-09-01) Calculated as Sn Short Term Exposure Limit (STEL) 0.2 mg/m³</p>

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It

should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : 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). Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid
Color	: colorless.
Odor	: Faint odor.
Odor threshold	: Not available
pH	: Not available
Melting point	: Not applied
Boiling point	: Not applicable.
Flash point	: 198 °C (388.40 °F)
Burning time	: Not available
Burning rate	: Not available
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	: Lower: Not applicable. Upper: Not applicable.
Vapor pressure	: Not applied
Vapor density	: Not available
Relative density	: 1.03
Density	: 1.03 g/cm ³
Solubility	: Insoluble
Solubility in water	: Not available
Partition coefficient: n-octanol/water	: Not available
Auto-ignition temperature	: 450 °C (842.00 °F)
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Dynamic: Not available

Kinematic: > 20.5 mm²/s @ 40 °C (104.00 °F)

Other information

No additional information.

Section 10. Stability and reactivity

Reactivity	:	Stable under normal conditions.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Dibutyltin Dilaurate	LD50 Oral	Rat	2,071 mg/kg	-
	LC50 Inhalation	Rat	10 mg/l	2.00h
	LD50 Dermal	Rat	750 mg/kg	-

Conclusion/Summary : Not determined

Irritation/Corrosion

Conclusion/Summary

Skin	:	Not determined
eyes	:	Not determined
Respiratory	:	Not determined

Sensitization

Conclusion/Summary

Skin	:	Not determined
Respiratory	:	Not determined

Mutagenicity

Conclusion/Summary : Not determined

Carcinogenicity

Conclusion/Summary : Not determined

Reproductive toxicity

Conclusion/Summary : Not determined

Teratogenicity

Conclusion/Summary : Not determined

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
3-aminopropyltriethoxysilane	Category 3		Respiratory tract irritation
Dibutyltin Dilaurate	Category 1		thymus

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
3-aminopropyltriethoxysilane	Category 1		skin kidneys
Dibutyltin Dilaurate	Category 1		thymus

Aspiration hazard

Not available

Information on the likely routes of exposure : Not available

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Long term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Potential chronic health effects

Conclusion/Summary : Not determined

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available

Section 12. Ecological information

Ecotoxicity

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Bioaccumulative potential

Product/ingredient name	Species	Exposure	LogPow	BCF	Potential
3-aminopropyltriethoxysilane			1.7	-	low

Mobility in soil

Soil/water partition coefficient (KOC) : Not available

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

- Disposal methods** :
- The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. See Section 8 for information on appropriate personal protective equipment.

Section 14. Transport information

- 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

United States

- U.S. Federal regulations** :
- United States - TSCA 12(b) - Chemical export notification:** None required.
United States - TSCA 5(a)2 - Final significant new use rules: Not listed
United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed
United States - TSCA 5(e) - Substances consent order: Not listed

SARA 311/312

- Classification** :
- Immediate (acute) health hazard
 Delayed (chronic) health hazard

- California Prop. 65:** :
- None required.

Canada

- WHMIS (Canada)** :
- Not controlled under WHMIS (Canada).

International regulations

- International lists** :
- Australia inventory (AICS):** Not determined.
Taiwan inventory (CSNN): All components are listed or exempted.
Canada inventory: Not determined.
Japan inventory: All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.
Korea inventory: All components are listed or exempted. **New Zealand Inventory (NZIoC):** Not determined.
Philippines inventory (PICCS): All components are listed or exempted.
United States inventory (TSCA 8b): Not determined.

Section 16. Other information

Hazardous Material Information System III (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

Full text of abbreviated H statements : Not applicable.

History

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Version : 1.1
Prepared by : Product Safety Stewardship
Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 UN = United Nations
References : Not available

Notice to reader

Unless otherwise specified in section 1, Momentive Products are intended for industrial application only. They are not intended for specific medical applications, neither for long-lasting (> 30 days) implantation into the human body, injected or directly ingested, nor for the manufacture of multiple usable 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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