

Chemical Name	: PERESEAL [®] HB HYBRID BOND	MSDS No.	: P 009
Date of Preparation	: September 2019	Revision No.	: #1

Section 1. Chemical Product and Company Identification

Product Name	: PERESEAL [®] HB HYBRID BOND SEALANT / ADHESIVE	Emergency Telephone Number: +65 6558 6388
Supplier/Manufacturer Address	: PFE Technologies Pte Ltd 9 Gul Street 4 Singapore 629238	Telephone number for Information: +65 6558 6388
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Website	: www.pfe.tech	

Section 2. Hazards Identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412
Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Harmful to aquatic life with long lasting effects.

2.2 Label elements:

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP)	: -
Hazard statements (CLP)	: H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (CLP)	: P102 - Keep out of reach of children P273 - Avoid release to the environment P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
EUH-statements	: EUH208 - Contains Stannane, dibutylbis[(1-oxododecyl)oxy]-. May produce an allergic reaction
Child-resistant fastening	: Not applicable
Tactile warning	: Not applicable

GHS label elements

Pictograms or hazard symbols



2.3 Other hazards

No additional information available.

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Section 3. Composition / Information on Ingredients

3.1 Substance

Not applicable

3.2 Mixture

Description: Mixture of substances listed below with nonhazardous additions.

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Silane, ethenyltrimethoxy-	CAS No) 2768-02-7 (REACH-no) ZL250418-16	< 1.5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332
1-Propanamine, 3-(trimethoxysilyl)-	(CAS No) 13822-56-5	< 1	Skin Irrit. 2, H315 Eye Dam. 1, H318
Stannane, dibutylbis[(1-oxododecyl)oxy]-	(CAS No) 77-58-7 (REACH-no) 01-2119496068-27	< 0.3	Acute Tox. 3 (Oral), H301 Skin Corr. 1C, H314 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16.

Section 4. First Aid Measures

4.1 Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
 First-aid measures after skin contact : Wash skin with plenty of water.
 First-aid measures after eye contact : Rinse eyes with water as a precaution.
 First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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Section 5. Firefighting Measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.
Self-contained breathing apparatus. Complete protective clothing.

Section 6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Recover mechanically the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

Section 7. Handling and Storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

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Section 8. Exposure Controls / Personal Protection

8.1. Control parameters

Stannane, dibutylbis[(1-oxododecyl)oxy]- (77-58-7)

Japan	Exposure limits (ACGIH)	TWA 0.1 mg/m ³ , STEL 0.2 mg/m ³ (as Sn) (Skin)
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8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.
 Hand protection : Protective gloves
 Eye protection : Safety glasses
 Skin and body protection : Wear suitable protective clothing
 Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment
 Environmental exposure controls : Avoid release to the environment.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state : Solid
 Appearance : Paste.
 Colour : White. Grey. Black.
 Odour : Characteristic.
 Odour threshold : No data available
 pH : No data available
 Relative evaporation rate (butyl acetate=1) : No data available
 Melting point : No data available
 Freezing point : Not applicable
 Boiling point : No data available
 Flash point : Not applicable
 Auto-ignition temperature : Not applicable
 Decomposition temperature : No data available
 Flammability (solid, gas) : Non flammable
 Vapour pressure : No data available
 Relative vapour density at 20 °C : No data available
 Relative density : Not applicable
 Density : 1,60 ± 0,03 g / ml
 Solubility : No data available
 Log Pow : No data available
 Viscosity, kinematic : Not applicable
 Viscosity, dynamic : No data available
 Explosive properties : No data available
 Oxidising properties : No data available
 Explosive properties : Not applicable

9.2 Other Information

VOC content : < 27 g / l

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Section 10. Stability and Reactivity

- 10.1 Reactivity:** The product is non-reactive under normal conditions of use, storage and transport.
- 10.2. Chemical stability:** Stable under normal conditions.
- 10.3. Possibility of hazardous reactions:** No dangerous reactions known under normal conditions of use.
- 10.4. Conditions to avoid:** None under recommended storage and handling conditions (see section 7).
- 10.5. Incompatible materials:** No additional information available
- 10.6. Hazardous decomposition products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity : Not classified

Stannane, dibutylbis[(1-oxododecyl)oxy]- (77-58-7)	
LD50 oral	175 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	0.075 mg/l/4h

Skin corrosion/irritation : Not classified
 Serious eye damage/irritation : Not classified
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified
 Reproductive toxicity : Not classified
 Specific target organ toxicity (single exposure) : Not classified
 Specific target organ toxicity (repeated exposure) : Not classified
 Aspiration hazard : Not classified

Section 12. Ecological Information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

Stannane, dibutylbis[(1-oxododecyl)oxy]- (77-58-7)	
EC50 Daphnia 1	0.66 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

Section 13. Disposal Considerations

13.1 Waste treatment methods:

Dispose of contents/container in accordance with licensed collector's sorting instructions.

Section 14. Transport Information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

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14.4 Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5 Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6 Special precautions for user

- Overland transport	: Not applicable
- Transport by sea	: Not applicable
- Air transport	: Not applicable
- Inland waterway transport	: Not applicable
- Rail transport	: Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Section 15. Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

VOC content: < 27 g/l

15.1.2. National regulations

Germany

VwVwS Annex reference: Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen: None of the components are listed
SZW-lijst van mutagene stoffen: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: None of the components are listed

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Denmark

Classification remarks: Emergency management guidelines for the storage of flammable liquids must be followed

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

Section 16. Other Information

Full text of H- and EUH- statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H226	Flammable liquid and vapour
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H360	May damage fertility or the unborn child
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
EUH208	Contains . May produce an allergic reaction

The information provided on this Material Safety Data Sheet (MSDS) is correct to the best of our knowledge and information at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

All information and instructions provided in this MSDS are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS. The company supplying entity shall not be held responsible for any defect in the product covered by this MSDS, should the existence of such defect not be detectable considering the current state of scientific and technical knowledge.

Department issuing MSDS: Product safety department.

Contact: Product safety department info@pfe.tech