SAFETY DATA SHEET

In accordance with OSHA 29 CFR 1910.1200

SM7713 MS WHITE
Revision Number 1

Revision date 08-Jan-2021
Supersedes Date: Not applicable

PERMATHANE SM7713 MS Silyl-Modified Adhesive Sealant

1. Identification

1.1. Product Identifier

Product Name SM7713 MS WHITE

Other means of identification
Other information Not applicable

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Adhesives and/or sealants
Restrictions on use No information available

1.3. Details of the supplier of the safety data sheet

Responsible Party

ITW Polymers Sealants North America
12055 Cutten Road, Houston, TX 77066
Tel: 972-438-9111

1.4. Emergency telephone number

Emergency Telephone CHEMTREC (US Transportation): (800) 424-9300

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin sensitization	Category 1
Reproductive toxicity	Category 1B

Hazards not otherwise classified (HNOC)
Not applicable

2.2. Label Elements

EMERGENCY OVERVIEW

Danger

Hazard statements
May cause an allergic skin reaction
May damage fertility or the unborn child

Appearance Paste **Physical state** Solid **Odor** Odorless

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/ container to an approved waste disposal plant

0 % of the mixture consists of ingredient(s) of unknown toxicity

2.3. Other Information

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

3. Composition/information on ingredients

3.1. Substances

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Limestone	1317-65-3	30 - 60
Carbonic acid, calcium salt (1:1)	471-34-1	1 - <5
Titanium dioxide	13463-67-7	1 - <5
Trimethoxyvinylsilane	2768-02-7	1 - <5
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	0.1 - <1
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-	22673-19-4	0.1 - <1

**The exact percentage (concentration) of composition has been withheld as a trade secret*

4. First-aid measures

4.1. Description of first aid measures

General advice If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If symptoms persist, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.

Skin contact Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Ingestion If swallowed, call a poison control center or physician immediately. Rinse mouth. Do not induce vomiting without medical advice. Small amounts of toxic methanol are released by hydrolysis.

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

Symptoms May cause allergic skin reaction. May cause sensitization by skin contact. Itching. Rashes. Hives.

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

Note to physicians Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Full water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO2).

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

5.3. Advice for firefighters

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not touch or walk through spilled material.

Other information Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not allow to enter into soil/subsoil. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Use personal protective equipment as required. Cover liquid spill with sand, earth or other noncombustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep/store only in original container. Keep away from food, drink and animal feeding stuffs. Protect from sunlight. Store in a well-ventilated place. Keep at temperatures between 41 and 95 °F. Protect from moisture.

7.3 References to other sections

Reference to other sections Section 10: STABILITY AND REACTIVITY
Section 13: DISPOSAL CONSIDERATIONS

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon

curing. The components of this product are inextricably bound in a polymer matrix and are not expected to be available as airborne hazards (dust, mist, or spray) under normal condition of use.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Limestone 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Carbonic acid, calcium salt (1:1) 471-34-1	-	-	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³ TWA: 2.4 mg/m³ CIB 63 fine TWA: 0.3 mg/m³ CIB 63 ultrafine, including engineered nanoscale
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- 22673-19-4	STEL: 0.2 mg/m³ Sn TWA: 0.1 mg/m³ Sn S*	TWA: 0.1 mg/m³ Sn (vacated) TWA: 0.1 mg/m³ Sn (vacated) S*	IDLH: 25 mg/m³ Sn TWA: 0.1 mg/m³ except Cyhexatin Sn

Chemical name	Argentina	Brazil	Chile	Colombia
Limestone 1317-65-3	TWA: 10 mg/m³	-	TWA: 7 mg/m³	-
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 10 mg/m³	-	TWA: 10mg/m³
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- 22673-19-4	TWA: 0.1 mg/m³ Skin STEL: 0.2 mg/m³	TWA: 0.1 mg/m³	TWA: 0.09 mg/m³ Skin	STEL: 0.2mg/m³ TWA: 0.1mg/m³

Chemical name	Costa Rica	Peru	Uruguay	Venezuela
Carbonic acid, calcium salt (1:1) 471-34-1	-	TWA: 10mg/m³	-	TWA: 10 mg/m³
Titanium dioxide 13463-67-7	TWA: 10mg/m³	TWA: 10mg/m³	10 mg/m³ TWA	TWA: 10 mg/m³
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- 22673-19-4	TWA: 0.1mg/m³ STEL: 0.2mg/m³	STEL: 0.2mg/m³ TWA: 0.1mg/m³	0.2 mg/m³ STEL (as Sn) 0.1 mg/m³ TWA (as Sn)	Skin STEL: 0.2 mg/m³ TWA: 0.1 mg/m³

8.2. Exposure controls

OTHER INFORMATION Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Methyl alcohol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m^3 (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m^3 (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m^3 (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m^3 STEL: 250 ppm STEL: 325 mg/m^3

Chemical name	Argentina	Brazil	Chile	Colombia
Methyl alcohol 67-56-1	TWA: 200 ppm Skin STEL: 250 ppm	TWA: 156 ppm TWA: 200 mg/m^3 Skin	TWA: 175 ppm TWA: 229 mg/m^3 Skin	STEL: 250ppm TWA: 200ppm

Chemical name	Costa Rica	Peru	Uruguay	Venezuela
Methyl alcohol 67-56-1	TWA: 200ppm STEL: 250ppm	STEL: 250ppm STEL: 328mg/m^3 TWA: 200ppm TWA: 262mg/m^3	250 ppm STEL 200 ppm TWA	Skin STEL: 250 ppm TWA: 200 ppm

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection Wear suitable chemical resistant gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.

Skin and body protection Wear suitable protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash hands before breaks and after work. Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Paste
Color	White
Odor	Odorless
Odor threshold	Not applicable

Property	**Values**	**Remarks • Method**
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	>= 140 °C / 284 °F	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

9.2. Other information

Explosive properties	No information available
Oxidizing properties	No information available
Solvent content (%)	No information available
Solid content (%)	>= 97
Softening Point	No information available
Molecular weight	No information available
VOC Content (%)	< 20 g/L / 2 %
Density	1.65 g/cm³
Bulk density	No information available

10. Stability and reactivity

10.1. Reactivity

Reactivity Product cures with moisture.

10.2. Chemical stability

Chemical stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Protect from moisture. Product cures with moisture.

10.5. Incompatible materials

Incompatible materials Water.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon monoxide Carbon dioxide (CO2) Nitrogen oxides (NOx) Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing

11. Toxicological information

11.1. Information on toxicological effects

Product Information .

Inhalation Based on available data, the classification criteria are not met.

Eye contact Based on available data, the classification criteria are not met.

Skin contact May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity
Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (dermal) 27,827.20 mg/kg
ATEmix (inhalation-vapor) 686.5406 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Limestone 1317-65-3	>5000 mg/kg (Rattus)	-	-
Carbonic acid, calcium salt (1:1) 471-34-1	LD50 > 2000 mg/kg (Rattus) OECD 420	LD50 >2000 mg/kg (Rattus) OECD 402	LC50 (4h) >3mg/ml (Rattus)
Titanium dioxide 13463-67-7	>10000 mg/kg (Rattus)	LD50 > 10000 mg/Kg	>5 mg/l

Trimethoxyvinylsilane 2768-02-7	LD50 = 7120 -7236 mg/kg (Rattus) OECD 401	= 3360 µL/kg (Oryctolagus cuniculus)	LC50 (4hr) 16.8 mg/l (Rattus) OECD TG 403
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	=2295 mg/kg (Rattus)	>2000 mg/Kg (Rattus)	LC50 4H (Aerosol)1.5 - 2.44 mg/L air
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- 22673-19-4	LD50 = 1864 mg/kg (Rattus) OECD 401	LD50 > 2000 mg/kg (Rattus) OECD 402	LC50 4hr: 16.8 mg/l (Rattus) (OECD TG 403)

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion					Non-irritant

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal	0.5 mL	24 hours	Non-irritant

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye		24 hours	Non-irritant

Respiratory or skin sensitization May cause sensitization by skin contact.

Titanium dioxide (13463-67-7)
Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitization	Guinea pig	Dermal	Not a skin sensitizer

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitization	Guinea pig	Dermal	sensitizing

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Not mutagenic

Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- (22673-19-4)

Method	Species	Results
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro	Mutagenic

Carcinogenicity Based on available data, the classification criteria are not met. As Titanium dioxide (13463-67-7) is inextricably bound in the polymer matrix, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal condition of uses.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Titanium dioxide (13463-67-7)

Method	Species	Results
Oral	Rat	Not Carcinogenic
Inhalation Xu et al (2010), carcinogenic activity of nanoscale TiO2 administered by an intrapulmonary spraying (IPS) - initiation-promotion protocol in rat lung	Rat	Carcinogenic

Reproductive toxicity Contains a known or suspected reproductive toxin. May cause harm to breast-fed children.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Not Classifiable

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 413: Subchronic Inhalation Toxicity: 90-day Study	Rat	Inhalation vapor		90 days	0.058 NOAEL

Target organ effects Eyes, Lungs, Respiratory system, Skin.

Aspiration hazard Based on available data, the classification criteria are not met.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

12.1. Toxicity

Ecotoxicity .

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Limestone 1317-65-3	CE50 (72h) >200mg/L Algae (Desmondesmus subspicatus)	CL50 (96h)>10000mg/L (Oncorhynchus mykiss)	-	CE50 (48h) >1000 mg/L Daphnia Magna
Carbonic acid, calcium	IC50 72H Algae >1000	CL50 96H >1000 mg/l	-	EC50 48H Daphnia

salt (1:1) 471-34-1	mg/l			>1000 mg/l
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-
Trimethoxyvinylsilane 2768-02-7	EC 50 (72h) > 957 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) = 191 mg/l (Oncorhynchus mykiss)	-	EC50(48hr) 168.7mg/l (Daphnia magna)
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-	LC50 (96H) =597 mg/L (Danio rerio)Semi-static	-	EC50 (48h) =81mg/L Daphnia magna Static
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)- 22673-19-4	>2.0 mg/l	>2.0 mg/l	-	EC50 0.0036 mg/l 48Hr (Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Limestone 1317-65-3	0.9
Trimethoxyvinylsilane 2768-02-7	1.1
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-0.3

12.4. Mobility in soil

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Uncured product should be disposed of as hazardous waste. Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Handle contaminated packages in the same way as the product itself.

14. Transport information

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. Regulatory information

International Inventories

TSCA	Listed
DSL	Listed

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL - Canadian Domestic Substances List
Listed - The components of this product are either listed or exempt from listing on inventory.
Not Listed - One or more components of this product are not listed on inventory.

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

Europe

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU
This product does not contain Lead, Cadmium, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-Ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) above the regulated limit mentioned in this regulation

SVHC: Substances of Very High Concern for Authorization:
This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol	25973-55-1	X
Tin, dibutylbis(2,4-pentanedionato-O,O')-, (OC-6-11)-	22673-19-4	X

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared By Product Safety & Regulatory Affairs.

Revision date 08-Jan-2021

Revision note No information available.

Disclaimer

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.

End of Safety Data Sheet