



Material Safety Data Sheet

Version: 1.0

Date of last alteration: 02/28/2011

Tower All Purpose Silicone - White

1 Product and company identification

1.1 Identification of the substance or preparation:

Product Name: Tower All Purpose Silicone - White
Use of substance: Sealant
Product Code(s): TS-00293

1.2 Company/undertaking identification:

Manufacturer/distributor: Tower Sealants
2095 Memorial Park Road
Gainesville, GA 30504
USA

Emergency Contact: Chemtrec
Chemtrec Phone: 1-800-424-9300

This MSDS was prepared by the Regulatory Affairs and Product Safety Department.
Contact: Robert S. Stannard, VP Technology, Tower Sealants.

2 Composition/information on ingredients

2.1 Chemical characterization (preparation)

Chemical characteristics

Polydimethylsiloxane and fillers and auxiliaries and acetoxysilane cross-linker

2.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	17689-77-9	Triacetoxo ethylsilane	1.0	5.0	
VERU		Oligomeric ethyl and methyl acetoxysilanes	1.0	5.0	
NEBE	64-19-7	Acetic acid	varies	varies	

Type: HYD - by-product upon hydrolysis, INHA - ingredient, NEBE - by-product, MONO - residual monomer, VERU - impurity, VUL - by-product upon vulcanization. *** **Note:** C1 - IARC carcinogen, C2 - NTP carcinogen, C3 - OSHA carcinogen, NH - non-hazardous, R - reproductive toxin.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

3 Hazards identification

3.1 Hazards classifications

HMIS® rating (product as packaged):

Health: 2

Fire: 1

Reactivity: 1

PPE: G



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Note: Respiratory protection is only recommended in the event that ventilation or engineering controls are unable to maintain exposures below recommended levels; or in the event of a spill or other emergency response situation. (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

Canadian WHMIS Classification: D2B

3.2 Emergency overview and potential hazards

Signal Word:

WARNING

Physical Hazards:

No known physical hazards.

Acute health effects

Route of entry or possible contact:

eyes , skin , inhalation (hydrolysis products)

Eye contact:

Causes eye irritation.

Skin contact:

May cause skin irritation.

Inhalation:

Not expected in industrial use due to high viscosity. See Sect. 3.2 "Additional information on acute health effects".

Ingestion:

Not expected in industrial use.

Additional information on acute health effects:

The toxicological evaluation is based on experience during manufacture and/or on analogy to a similar product which has been tested. This material releases acetic acid upon moisture curing. Upon completion of the curing process, acetic acid will no longer be released. Acetic acid is moderately toxic by ingestion and inhalation. Dilute acetic acid is however, approved for food use. Acetic acid is a severe skin, eye and mucous membrane irritant. Skin sensitization is rare but has been reported. Chronic exposure can cause bronchitis and pharyngeal edema. Acetic acid may cause burns upon prolonged or repeated contact.

3.3 Further information:

Chronic health effects:

No known or expected chronic health effects. This material contains Titanium dioxide. However, due to the physical nature of this material inhalation of TiO₂ dust is not possible.

Medical conditions which may be aggravated by exposure:

none known .

Target organs affected:

No known internal organ effects.

Signs and Symptoms of Exposure:

Refer to Acute Health Effects, listed above.

Carcinogens/Reproductive toxins:

This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels. This material does not contain any reportable carcinogenic ingredients. Exposure to carcinogens cannot occur under normal conditions of use or during foreseeable emergencies.

See Section 11 for Toxicological Information, if any.



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4 First-aid measures

- 4.1 **General information:**
Get medical attention if irritation occurs or if breathing becomes difficult.
- 4.2 **After inhalation**
If inhaled, remove to fresh air.
- 4.3 **After contact with the skin**
For skin contact, immediately wipe away excess material. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.
- 4.4 **After contact with the eyes**
If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.
- 4.5 **After swallowing**
For ingestion, if conscious, give several glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids.
- 4.6 **Advice for the physician**
Treat symptomatically.

5 Fire-fighting measures

- 5.1 **Flammable properties:** **Method**
Flash point.....: not applicable
Boiling point / boiling range.....: not applicable
Lower explosion limit (LEL).....: not applicable
Upper explosion limit (UEL).....: not applicable
Ignition temperature: approx. 400 °C (752 °F)
- 5.2 **Fire and explosion hazards:**
This material will burn with a lazy smoldering flame. Hydrolyzes on contact with moisture releasing ignitable, corrosive vapors. Consider possible formation of explosive mixtures with air, for example in uncleaned containers.
- 5.3 **Recommended extinguishing media:**
water-spray , carbon dioxide , dry chemical or alcohol-resistant foam .
- 5.4 **Unsuitable extinguishing media:**
sharp water jet
- 5.5 **Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**
Hazardous decomposition products: carbon dioxide , carbon monoxide , formaldehyde , silicon dioxide and incompletely burnt hydrocarbons .
- 5.6 **Fire fighting procedures:**
Cool endangered containers with water. Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

6 Accidental release measures

- 6.1 **Precautions:**
Wear personal protection equipment (see section 8). Avoid contact with eyes and skin. Avoid inhaling mists and vapours.
HAZWOPER PPE Level: D
- 6.2 **Containment:**
Prevent material from entering sewers or surface waters. Contain any fluid that runs out using suitable material (e.g. earth).
Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.
- 6.3 **Methods for cleaning up**
Do not flush away with water. Take up mechanically and dispose of according to local/state/federal regulations. Absorb with liquid, mainly acid binding material and dispose of according to local/state/federal regulation. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner.
- 6.4 **Further information:**
Eliminate all sources of ignition.



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7 Handling and storage

7.1 Handling

Precautions for safe handling:

Ensure adequate ventilation. Keep away from incompatible substances in accordance with section 10.2.

Precautions against fire and explosion:

Vapours may form in closed rooms with air mixtures, leading to explosion in the presence of sources of ignition, even in empty, uncleaned vessels. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

7.2 Storage

Conditions for storage rooms and vessels:

none known

Advice for storage of incompatible materials:

not applicable

Further information for storage:

Protect against moisture. Keep container tightly closed and store in a cool, well ventilated place. Do not store in open air.

8 Exposure controls and personal protection

8.1 Engineering controls

Ventilation:

Use only with adequate ventilation.

Local exhaust:

Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne contaminants at the point of use.

8.2 Associate substances with specific control parameters such as limit values

Maximum airborne concentrations at the workplace:

CAS No.	Material	Type	mg/m ³	ppm	Dust fract.
64-19-7	Acetic acid	OSHA PEL	25.0	10.0	
64-19-7	Acetic acid	ACGIH TWA		10.0	

Re Acetic acid (CAS-no. 64-19-7): STEL is 15 ppm (ACGIH).

8.3 Personal protection equipment (PPE)

Respiratory protection:

In case of long or strong exposure use a NIOSH approved respirator for: organic vapors , acidic vapors .

Hand protection:

protective gloves made of fluorinated rubber

Eye protection:

Safety glasses with side shields or chemical safety goggles.

Other protective clothing or equipment:

protective clothing to cover exposed areas of arms, legs and torso Provide eye bath and safety shower.

8.4 General hygiene and protection measures:

Avoid contact with eyes, skin and clothing. Do not breathe dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Wash thoroughly after handling.

9 Physical and chemical properties

9.1 Appearance

Physical state / form.....: paste

Color.....: white

Odor.....: pungent



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9.2 Safety parameters	Method
Melting point / melting range.....:	not applicable
Boiling point / boiling range.....:	not applicable
Flash point.....:	not applicable
Ignition temperature	approx. 400 °C (752 °F)
Lower explosion limit (LEL).....:	not applicable
Upper explosion limit (UEL).....:	not applicable
Vapour pressure.....:	not applicable
Density.....:	0.98 - 1.05 g/cm ³ at 25 °C (77 °F)
Water solubility / miscibility.....:	virtually insoluble
pH-Value.....:	not applicable
Viscosity (dynamic).....:	approx. 800000 mPa.s

9.3 Further information
 Re 9.2 solubility in water: Hydrolytic decomposition occurs. Re 9.2 pH Value:
 Product displays acidic reaction with water. Explosion limits for released acetic acid: 4 - 17%(V).

10 Stability and reactivity

- 10.0 General information:**
 If stored and handled in accordance with standard industrial practices no hazardous reactions are known.
- 10.1 Conditions to avoid:**
 moisture .
- 10.2 Materials to avoid:**
 Reacts with: water , basic substances and alcohols . Reaction causes the formation of: acetic acid .
- 10.3 Hazardous decomposition products:**
 By hydrolysis: acetic acid . Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.
- 10.4 Further information:**
 Hazardous polymerization cannot occur.

11 Toxicological information

- 11.1 General information:**
 Toxicological testing has not been conducted with this material.
- 11.2 Toxicological data:**
Experience with man:
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12 Ecological information

- 12.1 Information on elimination (persistence and degradability)**
Biodegradation / further information:
 Biologically not degradable.
Further information:
 Contact with water liberates: acetic acid .
- 12.2 Behavior in environmental compartments**
Mobility
 -
Further information:
 Bioaccumulation is not expected to occur.



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12.3 Ecotoxicological effects:

According to past experience toxicity to fish is improbable.

Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):

According to current knowledge adverse effects on water purification plants are not expected.

12.4 Additional information

Other harmful effects

-

General information:

In cross-linked state not soluble in water. Easily separable from water by filtration.

13 Disposal considerations

13.1 Product disposal

Recommendation:

Dispose of according to regulations by incineration in a special waste incinerator. Small quantities may be disposed of by incineration in an approved facility. Observe local/state/federal regulations.

13.2 Packaging disposal

Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14 Transport information

14.1 US DOT & CANADA TDG SURFACE

Valuation.....: Not regulated for transport

14.2 Transport by sea IMDG-Code

Valuation.....: Not regulated for transport

14.3 Air transport ICAO-TI/IATA-DGR

Valuation.....: Not regulated for transport

15 Regulatory information

15.1 U.S. Federal regulations

TSCA inventory status and TSCA information:

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

TSCA 12(b) Export Notification:

This material does not contain any TSCA 12(b) regulated chemicals.

CERCLA Regulated Chemicals:

This material does not contain any CERCLA regulated chemicals.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:

Immediate (acute) health hazard.

SARA 313 Chemicals:

This material does not contain any SARA 313 chemicals above de minimus levels.

HAPS (Hazardous Air Pollutants):

This material does not contain any hazardous air pollutants.

15.2 U.S. State regulations

California Proposition 65 Carcinogens:

This material does not contain any chemicals known to the state of California to cause cancer.



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California Proposition 65 Reproductive Toxins:

This material does not contain any chemicals known to the state of California to cause reproductive effects.

Massachusetts Substance List:

112945-52-5 Silica, amorphous, fumed

New Jersey Right-to-Know Hazardous Substance List:

112945-52-5 Silica, amorphous, fumed

Pennsylvania Right-to-Know Hazardous Substance List:

112945-52-5 Silica, amorphous, fumed

15.3 Canadian regulations

This product has been classified in accordance with the Hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Hazard Classes:

D2B

DSL Status:

This material or its components are listed on the Canadian Domestic Substances List.

Canadian Ingredient Disclosure List:

112945-52-5 Silica, amorphous, fumed

15.4 Other international regulations

EU Risk Phrases:

R-Phrase	Description
R-	-

EU Safety Phrases:

S-Phrase	Description
S-	-

Details of international registration status

Listed on or in accordance with the following inventories:

- AICS - Australia
- IECSC - China
- DSL - Canada
- ECL - Korea
- EINECS - Europe
- ENCS - Japan
- PICCS - Philippines
- TSCA - USA

16 Other information

16.1 Additional information:

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS provides



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selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

16.2 Glossary of Terms:

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
hPa - Hectopascals
mPa*s - Milli Pascal-Seconds
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit

ppm - Parts per Million
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
WHMIS - Canadian Workplace Hazardous Materials Identification System

Flash point determination methods

ASTM D56
ASTM D92, DIN 51376, ISO 2592
ASTM D93, DIN 51758, ISO 2719
ASTM D3278, DIN 55680, ISO 3679
DIN 51755

Common name

Tagliabue (Tag) closed cup
Cleveland open cup
Pensky-Martens closed cup
Setaflash or Rapid closed cup
Abel-Pensky closed cup

16.3 Conversion table:

Pressure: 1 hPa * 0.75 = 1 mm Hg = 1 torr; 1 bar = 1000 hPa
Viscosity: 1 mPa*s = 1 centipoise (cP)

Warning: Although there is no lead in this product: scraping, sanding, or removing old paint may release lead dust. **LEAD IS TOXIC.** Exposure to lead dust can cause serious illness. This can include brain damage, especially in children. Pregnant women are also particularly at risk, and should avoid exposure. Always use a NIOSH approved respirator to control lead exposure. Clean up area with a HEPA vacuum and a wet mop. Before starting any project that may expose individuals to paint dust, find out how to protect yourself, your co-workers, and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD.

The information contained herein relates only to the specific material identified. Tower Sealants believes that such information is accurate and reliable as of the date of this MSDS sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. Tower Sealants urges persons receiving this information to make their own determination as to the information's suitability and completeness to their particular application. It is the buyer's / users responsibility to ensure that all activities comply with the appropriate federal, state, and local laws.