

# SAFETY DATA SHEET

DOW SILICONES CORPORATION

# Product name: DOWSIL™ Q4-2805 Fluorosilicone Channel Sealant Reverse Plunger

Issue Date: 06/09/2023

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DOW SILICONES CORPORATION encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

# **1. IDENTIFICATION**

Product name: DOWSIL™ Q4-2805 Fluorosilicone Channel Sealant Reverse Plunger

Recommended use of the chemical and restrictions on use Identified uses: Sealant

#### COMPANY IDENTIFICATION DOW SILICONES CORPORATION 2200 WEST SALZBURG ROAD MIDLAND MI 48686-0994

Customer Information Number:

UNITED STATES

800-258-2436 SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1 800 424 9300 Local Emergency Contact: 800-424-9300

# 2. HAZARDS IDENTIFICATION

# Hazard classification

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) Not a hazardous substance or mixture.

# Label elements

Precautionary statements Response In case of fire: Avoid breathing fume.

Other hazards No data available

# **3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical nature:** Fluorosilicone This product is a mixture.

Component	CASRN	Concentration
Styrene	100-42-5	>= 0.3 - < 0.67 %
Trifluoropropylmethyl cyclotrisiloxane	2374-14-3	>= 0.029 - <= 0.038 %

# 4. FIRST AID MEASURES

#### Description of first aid measures General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing; consult a physician.

Skin contact: Wash off with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

Ingestion: Rinse mouth with water. No emergency medical treatment necessary.

#### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

# **5. FIREFIGHTING MEASURES**

#### Extinguishing media

**Suitable extinguishing media:** Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Water spray.

Unsuitable extinguishing media: None known..

#### Special hazards arising from the substance or mixture

**Hazardous combustion products:** Silicon oxides. Fluorine compounds. Formaldehyde. Carbon oxides.

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health.. Toxic vapours are evolved.. Fire burns more vigorously than would be expected..

#### Advice for firefighters

**Fire Fighting Procedures:** Use water spray to cool unopened containers.. Evacuate area.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment.. Wear neoprene gloves to prevent contact with hydrofluoric acid..

# 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.

See sections: 7, 8, 11, 12 and 13.

# 7. HANDLING AND STORAGE

**Precautions for safe handling:** Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents. Unsuitable materials for containers: None known.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control parameters**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Styrene	OSHA Z-2	TWA	100 ppm
	OSHA Z-2	CEIL	200 ppm
	OSHA Z-2	Peak	600 ppm
	ACGIH	TWA	10 ppm
	Further information: Ototoxicant; A3: Confirmed animal carcinogen with unknown relevance to humans		
	ACGIH STEL 20 pp		
	Further information: Ototoxicant; A3: Confirmed animal carcinogen with unknown relevance to humans		
Trifluoropropylmethyl	Dow IHG	TWA	5 Parts per billion
cyclotrisiloxane			
	Further information: SKIN: Absorbed via skin		

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Styrene	100-42-5	Mandelic acid plus phenylglyox ylic acid	Urine	End of shift (As soon as possible after exposure ceases)	150 mg/g creatinine	ACGIH BEI
		Styrene	Urine	End of shift (As soon as possible after exposure ceases)	20 mg/l	ACGIH BEI

# Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

#### **Skin protection**

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular

application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Wear clean, body-covering clothing.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	paste
Color	white
Odor	slight
Odor Threshold	No data available
рН	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup 100 °C (212 °F)
Evaporation Rate (Butyl Acetate	Not applicable
= 1)	
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.36
Water solubility	No data available
Partition coefficient: n-	No data available
octanol/water	
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

Molecular weight Particle size No data available No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

# **10. STABILITY AND REACTIVITY**

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. When heated to temperatures above 180 °C (356 °F) in the presence of air, trace quantities of formaldehyde may be released. Adequate ventilation is required.

Conditions to avoid: None known.

Incompatible materials: Avoid contact with oxidizing materials.

## Hazardous decomposition products:

Decomposition products can include and are not limited to: Benzene. Hexafluoroethane. Hydrogen Fluoride. 1,1,1,3,3,3-Hexafluoro-2-propanone. Carbonic difluoride. Carbon monoxide. Fluorinated hydrocarbons. Styrene. Divinylbenzene. Ethylvinylbenzene. Toluene. Xylene. Formaldehyde. Hydrofluoric acid. 3,3,3-Trifluoropropionaldehyde.

# 11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data are available.

#### Information on likely routes of exposure

Eye contact, Skin contact, Ingestion.

# Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

# Acute Toxicity Endpoints:

Not classified based on available information.

# Acute oral toxicity

#### Information for the Product:

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Based on information for component(s): LD50, Rat, > 2,000 mg/kg Estimated. As product: Single dose oral LD50 has not been determined.

#### Information for components:

#### **Styrene**

LD50, Rat, > 5,000 mg/kg

<u>Trifluoropropylmethyl cyclotrisiloxane</u> LD50, Rat, male and female, 4,650 mg/kg OECD 401 or equivalent

#### Acute dermal toxicity

#### Information for the Product:

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on information for component(s): LD50, Rabbit, > 2,000 mg/kg Estimated. As product: The dermal LD50 has not been determined.

#### Information for components:

#### <u>Styrene</u>

LD50, Rat, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

# Trifluoropropylmethyl cyclotrisiloxane

LD50, Rabbit, male and female, > 20,000 mg/kg OECD 402 or equivalent

#### Acute inhalation toxicity

#### Information for the Product:

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

#### Information for components:

#### <u>Styrene</u>

LC50, Rat, 4 Hour, vapour, 11.8 mg/l

#### Trifluoropropylmethyl cyclotrisiloxane

The LC50 has not been determined.

#### Skin corrosion/irritation

Not classified based on available information.

## Information for the Product:

Based on information for component(s): Brief contact is essentially nonirritating to skin.

#### Information for components:

#### <u>Styrene</u>

Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of the skin.

Trifluoropropylmethyl cyclotrisiloxane

Brief contact is essentially nonirritating to skin.

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Information for the Product:

Based on information for component(s): May cause slight eye irritation.

#### Information for components:

#### **Styrene**

May cause moderate eye irritation. May cause moderate corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. Vapor may cause lacrimation (tears).

#### Trifluoropropylmethyl cyclotrisiloxane

May cause slight eye irritation. Corneal injury is unlikely.

# Sensitization

For skin sensitization: Not classified based on available information.

For respiratory sensitization:

Not classified based on available information.

# Information for the Product:

For skin sensitization: Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization: No relevant data found.

#### Information for components:

<u>Styrene</u> For skin sensitization: No relevant data found.

For respiratory sensitization: No relevant data found.

#### Trifluoropropylmethyl cyclotrisiloxane

For skin sensitization: Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization: No relevant data found.

## Specific Target Organ Systemic Toxicity (Single Exposure)

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

#### <u>Styrene</u>

May cause respiratory irritation. Route of Exposure: Inhalation Target Organs: Respiratory Tract

#### Trifluoropropylmethyl cyclotrisiloxane

Available data are inadequate to determine single exposure specific target organ toxicity.

#### Aspiration Hazard

Not classified based on available information.

#### Information for the Product:

Based on physical properties, not likely to be an aspiration hazard.

## Information for components:

<u>Styrene</u> May be fatal if swallowed and enters airways.

<u>Trifluoropropylmethyl cyclotrisiloxane</u> Based on physical properties, not likely to be an aspiration hazard.

# Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

## Specific Target Organ Systemic Toxicity (Repeated Exposure)

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

#### Styrene

In animals, effects have been reported on the following organs: Central nervous system. Kidney. Liver. Respiratory tract. Lung effects have been observed in mice following repeated exposure to styrene. Styrene is reported to have caused hearing loss in laboratory animals. Chronic and intensive styrene exposure is reported to reduce the hearing thresholds in workers. Some studies in humans allege that repeated exposure to styrene may result in minor, subclinical decreases in the ability to discriminate between colors.

#### Trifluoropropylmethyl cyclotrisiloxane

In animals, effects have been reported on the following organs: Liver Heart Muscles.

## Carcinogenicity

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

#### Styrene

An increased incidence of lung tumors was observed in mice from an inhalation study on styrene. The relevance of this finding to humans is uncertain since data from mode of action investigations of mouse lung tumors coupled with other long-term animal studies and epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic.

#### Trifluoropropylmethyl cyclotrisiloxane

No relevant data found.

Carcinogenicity		
Component	List	Classification
Styrene	IARC	Group 2A: Probably carcinogenic to humans
	US NTP	Reasonably anticipated to be a human carcinogen
	ACGIH	A3: Confirmed animal carcinogen with

unknown relevance to humans.

## Teratogenicity

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

#### Styrene

Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

## Trifluoropropylmethyl cyclotrisiloxane

Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

#### Reproductive toxicity

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

#### **Styrene**

In animal studies, did not interfere with reproduction.

#### Trifluoropropylmethyl cyclotrisiloxane

In animal studies, has been shown to interfere with reproduction.

#### Mutagenicity

Not classified based on available information.

#### Information for the Product:

Product test data not available.

#### Information for components:

#### Styrene

In vitro genetic toxicity studies were inconclusive. Animal genetic toxicity studies were inconclusive

#### Trifluoropropylmethyl cyclotrisiloxane

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

# 12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data are available.

#### Toxicity

#### **Styrene**

#### Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 4.1 mg/l, OECD Test Guideline 203 or Equivalent

#### Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), static test, 48 Hour, 23 mg/l, OECD Test Guideline 202 or Equivalent EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 4.7 mg/l, OECD Test Guideline 202 or Equivalent

## Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 4.9 mg/l, OECD Test Guideline 201 or Equivalent EC10, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, 0.28 mg/l, OECD Test Guideline 201 or Equivalent

#### Toxicity to bacteria

NOEC, Pseudomonas putida, 16 Hour, 72 mg/l

#### Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, 1.01 mg/l

#### Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 14 d, 120 mg/kg

# Trifluoropropylmethyl cyclotrisiloxane

#### Acute toxicity to fish

Toxicity to aquatic species occurs at concentrations above material's water solubility.

#### Persistence and degradability

#### **Styrene**

#### **Biodegradability:**

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Material is expected to be readily biodegradable. Material has inherent, ultimate biodegradability according to OECD test (s) guidelines (reaches > 60 or 70% biodegradation in OECD test(s). 10-day Window: Pass **Biodegradation:** 87 % **Exposure time:** 28 d **Method:** OECD Test Guideline 301F or Equivalent

## Theoretical Oxygen Demand: 3.08 mg/mg

#### Chemical Oxygen Demand: 2.89 mg/mg Dichromate

## **Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	34 %
10 d	47 %
20 d	54 %

#### Photodegradation

Test Type: Half-life (indirect photolysis) Sensitization: OH radicals Atmospheric half-life: 3.5 Hour Method: Estimated.

#### Trifluoropropylmethyl cyclotrisiloxane

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.
10-day Window: Fail
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

#### **Bioaccumulative potential**

#### **Styrene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3). **Partition coefficient:** n-octanol/water(log Pow): 2.95 Measured **Bioconcentration factor (BCF):** 13.5 Fish Measured

#### Trifluoropropylmethyl cyclotrisiloxane

**Bioaccumulation:** Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

**Partition coefficient: n-octanol/water(log Pow):** 9 Estimated by Structure-Activity Relationship (SAR).

#### Mobility in soil

#### Styrene

Partition coefficient (Koc): 520 - 920 Estimated.

#### Trifluoropropylmethyl cyclotrisiloxane

No relevant data found.

# 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION 1: Identified Uses. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility of the waste generator. Do not re-use containers for any purpose.

# 14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport Consult IMO regulations before transporting ocean bulk

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transportation of the material.

# **15. REGULATORY INFORMATION**

# Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 No SARA Hazards

# Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

The following components are subject to reporting levels established by SARA Title III, Section 313:ComponentsCASRNStyrene100-42-5

#### Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Trifluoropropylmethyl siloxane, hydroxy-terminated	68607-77-2
Ethene, tetrafluoro-, homopolymer	9002-84-0
Benzene, diethenyl-, polymer with ethenylbenzene and	9052-95-3
ethenylethylbenzene	
Methylvinyl, trifluoropropylmethyl siloxane	68952-02-3
Hexamethyldisilazane reaction with Silica	68909-20-6

#### California Prop. 65

WARNING: This product can expose you to chemicals including Styrene, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

#### United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

# **16. OTHER INFORMATION**

#### Hazard Rating System

0/

NFPA

Hea	th	Flammability	Instability
0		1	0
HMIS			
Неа	th	Flammability	Physical Hazard

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#### Revision

Identification Number: 3131262 / A713 / Issue Date: 06/09/2023 / Version: 15.0 Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

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Legena	
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-2	USA. Occupational Exposure Limits (OSHA) - Table Z-2
Peak	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
STEL	Short-term exposure limit
TWA	Time weighted average

# Legend

# Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation: DOT - Department of Transportation: DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration: ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods: IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention: PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA -Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA -Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

## Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW SILICONES CORPORATION urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown

above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version. US