



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ 730 FS Solvent Resistant Sealant

Issue Date: 04/19/2021

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THE DOW CHEMICAL COMPANY 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™ 730 FS Solvent Resistant Sealant

Recommended use of the chemical and restrictions on use

Identified uses: Corrosion inhibitors Adhesive, binding agents Coatings

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2211 H.H. DOW WAY
MIDLAND MI 48674
UNITED STATES

Customer Information Number:

800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +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)

Skin irritation - Category 2

Eye irritation - Category 2A

Label elements

Hazard pictograms



Signal word: **WARNING!**

Hazards

Causes skin irritation.

Causes serious eye irritation.

Precautionary statements**Prevention**

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ eye protection/ face protection.

Response

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice and/or attention.

Take off contaminated clothing and wash before reuse.

In case of fire: Avoid breathing fume.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Fluorosilicone elastomer

This product is a mixture.

Component	CASRN	Concentration
Vinyltriacetoxysilane	4130-08-9	>= 1.6 - <= 1.8 %
Vinyl di-tert-butoxy acetoxysilane	64426-39-7	>= 0.69 - <= 1.02 %
Trifluoropropylmethyl cyclotrisiloxane	2374-14-3	0.0305%

4. FIRST AID MEASURES

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

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). 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. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: 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: Water spray. Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.

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.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. 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: In the event of fire, wear self-contained breathing apparatus.. 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. Use personal protective equipment. 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: Do not get on skin or clothing. Do not swallow. Do not get in eyes. 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
Trifluoropropylmethyl cyclotrisiloxane	Dow IHG	TWA	5 Parts per billion
	Further information: SKIN: Absorbed via skin		
Acetic acid	ACGIH	TWA	10 ppm
	ACGIH	STEL	15 ppm
	OSHA Z-1	TWA	25 mg/m3 10 ppm
Butanol	ACGIH	TWA	20 ppm
	OSHA Z-1	TWA	300 mg/m3 100 ppm

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing: Acetic acid, butanol

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.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). 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: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

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 discomfort is experienced, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor with acid gas filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	paste
Color	white
Odor	acetic acid
Odor Threshold	No data available
pH	Not applicable, substance/mixture is non-soluble (in water)
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Seta closed cup 95 °C (203 °F)
Evaporation Rate (Butyl Acetate = 1)	Not applicable
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)	1.41
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
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	No data available
Particle size	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. Vapours may form explosive mixture with air.

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. Formaldehyde. Acetic acid. Hydrofluoric acid. 3,3,3-Trifluoropropionaldehyde. Butanol.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is 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 oral toxicity

Low toxicity if swallowed. Swallowing may result in irritation of the mouth, throat, and gastrointestinal tract.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, > 2,000 mg/kg Estimated.

Information for components:

Vinyltriacetoxysilane

Oral LD50 has not been determined due to corrosivity.

Vinyl di-tert-butoxy acetoxysilane

For similar material(s): LD50, Rat, 3,310 mg/kg

Trifluoropropylmethyl cyclotrisiloxane

LD50, Rat, male and female, 4,650 mg/kg OECD 401 or equivalent

Acute dermal toxicity

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

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, > 2,000 mg/kg Estimated.

Information for components:

Vinyltriacetoxysilane

Absorption has not been determined due to corrosivity.

Vinyl di-tert-butoxy acetoxysilane

The dermal LD50 has not been determined.

Trifluoropropylmethyl cyclotrisiloxane

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

Acute inhalation toxicity

No adverse effects are anticipated from inhalation.

As product: The LC50 has not been determined.

Information for components:

Vinyltriacetoxysilane

Mist may cause severe irritation of the upper respiratory tract (nose and throat) and lungs.

LC50, Rat, 4 Hour, vapour, > 28.86 mg/l

Vinyl di-tert-butoxy acetoxysilane

The LC50 has not been determined.

Trifluoropropylmethyl cyclotrisiloxane

The LC50 has not been determined.

Skin corrosion/irritation

Based on information for component(s):
Brief contact may cause skin irritation with local redness.

Information for components:

Vinyltriacetoxysilane

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Vinyl di-tert-butoxy acetoxysilane

For similar material(s):
Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

Trifluoropropylmethyl cyclotrisiloxane

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Based on information for component(s):
May cause moderate eye irritation.
May cause moderate corneal injury.

Information for components:

Vinyltriacetoxysilane

Due to the effects of the material on the skin, it is assumed that exposure may cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.

Vinyl di-tert-butoxy acetoxysilane

For similar material(s):
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Trifluoropropylmethyl cyclotrisiloxane

May cause slight eye irritation.
Corneal injury is unlikely.

Sensitization

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:

Vinyltriacetoxysilane

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Vinyl di-tert-butoxy acetoxysilane

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)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Information for components:

Vinyltriacetoxysilane

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

Vinyl di-tert-butoxy acetoxysilane

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

Trifluoropropylmethyl cyclotrisiloxane

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

Aspiration Hazard

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

Information for components:

Vinyltriacetoxysilane

Aspiration into the respiratory system may occur during ingestion or vomiting. Due to corrosivity, tissue damage or lung injury may occur.

Vinyl di-tert-butoxy acetoxysilane

Based on available information, aspiration hazard could not be determined.

Trifluoropropylmethyl cyclotrisiloxane

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)

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

Information for components:

Vinyltriacetoxysilane

For similar material(s):

Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Vinyl di-tert-butoxy acetoxysilane

No relevant data found.

Trifluoropropylmethyl cyclotrisiloxane

In animals, effects have been reported on the following organs:

Liver

Heart

Muscles.

Carcinogenicity

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

Information for components:

Vinyltriacetoxysilane

No relevant data found.

Vinyl di-tert-butoxy acetoxysilane

No relevant data found.

Trifluoropropylmethyl cyclotrisiloxane

No relevant data found.

Teratogenicity

No relevant data found.

Information for components:

Vinyltriacetoxysilane

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Vinyl di-tert-butoxy acetoxysilane

No relevant data found.

Trifluoropropylmethyl cyclotrisiloxane

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

Reproductive toxicity

No relevant data found.

Information for components:

Vinyltriacetoxysilane

For similar material(s): In animal studies, did not interfere with reproduction.

Vinyl di-tert-butoxy acetoxysilane

No relevant data found.

Trifluoropropylmethyl cyclotrisiloxane

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

Mutagenicity

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Genetic toxicity studies in animals were negative for component(s) tested.

Information for components:

Vinyltriacetoxysilane

For similar material(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Vinyl di-tert-butoxy acetoxysilane

No relevant data found.

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 is available.

Toxicity

Vinyltriacetoxysilane

Acute toxicity to fish

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Rainbow trout (*Oncorhynchus mykiss*), 96 Hour, 191 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna*, 48 Hour, 168.7 mg/l, Directive 67/548/EEC, Annex V, C.2.

Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate, 24.4 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate, 18 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC10, activated sludge, 3 Hour, Respiration rates., > 100 mg/l, activated sludge test (OECD 209)

Vinyl di-tert-butoxy acetoxysilane

Acute toxicity to fish

No relevant data found.

Trifluoropropylmethyl cyclotrisiloxane

Acute toxicity to fish

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

Persistence and degradability**Vinyltriacetoxysilane**

Biodegradability: For similar material(s): Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: 79.5 %

Exposure time: 28 d

Vinyl di-tert-butoxy acetoxysilane

Biodegradability: No relevant data found.

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**Vinyltriacetoxysilane**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 0.6 estimated

Vinyl di-tert-butoxy acetoxysilane

Bioaccumulation: No relevant data found.

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**Vinyltriacetoxysilane**

Partition coefficient (Koc): 10 Estimated.

Vinyl di-tert-butoxy acetoxysilane

No relevant data found.

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 solely 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 MSDS SECTION: Composition Information. 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 solely 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):

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

Not regulated for transport
Consult IMO regulations before transporting ocean bulk

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 transporting organization to follow all applicable laws, regulations and rules relating to 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

Skin corrosion or irritation
Serious eye damage or eye irritation

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

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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
Hexamethyldisilazane reaction with Silica	68909-20-6
Titanium dioxide	13463-67-7
Trifluoropropyl methyl cyclotetrasiloxane	429-67-4

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

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**NFPA**

Health	Flammability	Instability
2	1	0

HMIS

Health	Flammability	Physical Hazard
2/	1	0

Revision

Identification Number: 4097353 / A001 / Issue Date: 04/19/2021 / Version: 11.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	Time weighted average

Full text of other abbreviations

AllC - 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; 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.

THE DOW CHEMICAL COMPANY 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