



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ 20 Release Coating

Issue Date: 02/17/2020

Print Date: 02/18/2020

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™ 20 Release Coating

Recommended use of the chemical and restrictions on use

Identified uses: Anti-set off and adhesive agents

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 29 CFR 1910.1200

Flammable liquids - Category 3

Skin irritation - Category 2

Eye irritation - Category 2A

Specific target organ toxicity - repeated exposure - Category 1 - Inhalation

Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

Aspiration hazard - Category 1

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Causes skin irritation.

Causes serious eye irritation.

Causes damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

May cause damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention

Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ ventilating/ lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Do not breathe spray.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ eye protection/ face protection.

Response

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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

Get medical advice/ attention if you feel unwell.

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Static-accumulating flammable liquid.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone resin solution

This product is a mixture.

Component	CASRN	Concentration
Mineral Spirits	8052-41-3	>= 30.0 - <= 46.0 %
Xylene	1330-20-7	>= 8.0 - <= 12.0 %
Ethylbenzene	100-41-4	>= 2.5 - <= 3.3 %
Cumene	98-82-8	>= 0.13 - <= 0.17 %

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. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

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: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

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: Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam. Dry sand. Dry chemical.

Unsuitable extinguishing media: High volume water jet. Do not use direct water stream..

Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon oxides. Nitrogen oxides (NOx). Chlorine compounds. Oxides of phosphorus. Silicon oxides.

Unusual Fire and Explosion Hazards: Flash back possible over considerable distance.. Exposure to combustion products may be a hazard to health.. Vapours may form explosive mixtures with air..

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.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Do not use a solid water stream as it may scatter and spread fire.. 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..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all sources of ignition. Use personal protective equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). 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: Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. 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. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice.

Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

Conditions for safe storage: Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases. 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
Mineral Spirits	ACGIH	TWA	100 ppm
	Further information: CNS impair: Central Nervous System impairment; nausea: Nausea; eye dam: Eye damage; kidney dam: Kidney damage; skin dam: Skin damage		
	OSHA Z-1	TWA	2,900 mg/m3 500 ppm
	Further information: (b): The value in mg/m3 is approximate.		
Xylene	OSHA Z-1	TWA	435 mg/m3 100 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	ACGIH	TWA	100 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	150 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen		
Ethylbenzene	ACGIH	TWA	20 ppm

	Further information: cochlear imp: Cochlear impair; kidney dam (nephropathy): Kidney damage (nephropathy); URT irr: Upper Respiratory Tract irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A3: Confirmed animal carcinogen with unknown relevance to humans		
	OSHA Z-1	TWA	435 mg/m3 100 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	OSHA P0	TWA	435 mg/m3 100 ppm
	OSHA P0	STEL	545 mg/m3 125 ppm
Cumene	ACGIH	TWA	50 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; skin irr: Skin irritation; (:): Adopted values or notations enclosed are those for which changes are proposed in the NIC; See Notice of Intended Changes (NIC)		
	OSHA Z-1	TWA	245 mg/m3 50 ppm
	Further information: X: Skin designation; (b): The value in mg/m3 is approximate.		
	OSHA P0	TWA	245 mg/m3 50 ppm
	Further information: X: Skin notation		

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Xylene	1330-20-7	Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ACGIH BEI

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. 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: When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, 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, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	liquid
Color	colourless
Odor	solvent-like
Odor Threshold	No data available
pH	No data available
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	> 140 °C (> 284 °F)
Flash point	Pensky-Martens closed cup 32.2 °C (90.0 °F)
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not applicable
Lower explosion limit	1.1 % vol
Upper explosion limit	7 % vol
Vapor Pressure	9.3 hPa
Relative Vapor Density (air = 1)	3.9
Relative Density (water = 1)	0.93
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	500 °C (932 °F)
Decomposition temperature	No data available
Kinematic Viscosity	11 mm ² /s at 25 °C (77 °F)
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	Not applicable

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. Vapours may form explosive mixture with air. Flammable liquid and vapour.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Oxidizing agents

Hazardous decomposition products:

Decomposition products can include and are not limited to: Formaldehyde.

11. TOXICOLOGICAL INFORMATION

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

Information on likely routes of exposure

Inhalation, 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

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

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

Based on information for component(s):

LD50, > 5,000 mg/kg Estimated.

Information for components:

Mineral Spirits

LD50, Rat, male and female, > 5,000 mg/kg OECD 401 or equivalent

Xylene

LD50, Rat, 4,300 mg/kg

Ethylbenzene

LD50, Rat, 3,500 mg/kg

Cumene

Contact with the tongue may produce a burning sensation and excess salivation.

LD50, Rat, 2,260 mg/kg

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:

Mineral Spirits

LD50, Rabbit, male and female, > 3,000 mg/kg OECD 402 or equivalent No deaths occurred at this concentration.

Xylene

LD50, Rabbit, > 2,000 mg/kg

Ethylbenzene

LD50, Rabbit, 15,500 mg/kg

Cumene

LD50, Rabbit, > 3,160 mg/kg

Acute inhalation toxicity

Prolonged excessive exposure may cause adverse effects. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. In humans, symptoms may include: Lethargy. Alcohol consumed before or after exposure may increase adverse effects.

As product: The LC50 has not been determined.

Information for components:

Mineral Spirits

LC50, Rat, male and female, 4 Hour, vapour, > 5.5 mg/l No deaths occurred at this concentration.

Xylene

LC50, Rat, 4 Hour, vapour, 27.5 mg/l

Ethylbenzene

LC50, Rat, 4 Hour, vapour, 17.2 mg/l

Cumene

LC50, Rat, 4 Hour, vapour, > 17.6 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation

Based on information for component(s):

Prolonged contact may cause slight 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.

Information for components:

Mineral Spirits

Brief contact may cause moderate skin irritation with local redness.
May cause drying and flaking of the skin.

Xylene

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.
Vapor may cause skin irritation.
May cause drying and flaking of the skin.

Ethylbenzene

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

Cumene

Prolonged contact may cause slight skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

Based on information for component(s):
May cause moderate eye irritation.
May cause slight temporary corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Information for components:

Mineral Spirits

Essentially nonirritating to eyes.

Xylene

May cause moderate eye irritation.
May cause slight temporary corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Ethylbenzene

May cause moderate eye irritation.
Vapor may cause lacrimation (tears).

Cumene

May cause slight eye irritation.
Corneal injury is unlikely.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Information for components:

Mineral Spirits

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

For respiratory sensitization:
No relevant data found.

Xylene

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Ethylbenzene

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:
No relevant data found.

Cumene

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)

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

Information for components:

Mineral Spirits

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

Xylene

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

Ethylbenzene

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

Cumene

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

Aspiration Hazard

May be fatal if swallowed and enters airways.

Information for components:

Mineral Spirits

May be fatal if swallowed and enters airways.

Xylene

May be fatal if swallowed and enters airways.

Ethylbenzene

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. May be fatal if swallowed and enters airways.

Cumene

May be fatal if swallowed and enters airways.

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)

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

Bone marrow.

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

central nervous system damage

Liver.

Blood.

Lung.

Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

May cause hearing loss based on animal data.

Information for components:

Mineral Spirits

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

Bone Marrow

Liver

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

central nervous system damage

Kidney.

Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Xylene

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

Liver

kidney

Blood

Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans.

Ethylbenzene

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

May cause hearing loss based on animal data.

Kidney.

Liver.

Lung.

Although one early inhalation study on ethylbenzene reported an adverse effect on the testes, recent, more comprehensive studies have not shown this effect.

Cumene

Cataracts were observed in rats exposed to cumene vapors.

Carcinogenicity

Ethylbenzene has been shown to cause cancer in laboratory animals. However, the relevance of this to humans is unknown.

Information for components:

Mineral Spirits

No relevant data found.

Xylene

Xylene was not found to be carcinogenic in a National Toxicology Program bioassay in rats and mice.

Ethylbenzene

Ethylbenzene has been shown to cause cancer in laboratory animals. There is no evidence that these findings are relevant to humans.

Cumene

Has caused cancer in laboratory animals. However, the relevance of this to humans is unknown.

Carcinogenicity

Component	List	Classification
Ethylbenzene	IARC	Group 2B: Possibly carcinogenic to humans
	ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans.
Cumene	IARC	Group 2B: Possibly carcinogenic to humans
	US NTP	Reasonably anticipated to be a human carcinogen

Teratogenicity

Contains component(s) which caused birth defects in laboratory animals only at doses toxic to the mother. Contains component(s) which, in laboratory animals, have been toxic to the fetus at doses nontoxic to the mother.

Information for components:

Mineral Spirits

Did not cause birth defects or any other fetal effects in laboratory animals.

Xylene

Exaggerated doses of xylene given orally to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. In animal inhalation studies, xylene caused toxicity to the fetus but did not cause birth defects. Available data are inadequate for evaluation of maternal toxicity.

Ethylbenzene

Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in lab animals at doses nontoxic to the mother.

Cumene

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies. Contains component(s) which did not interfere with fertility in animal studies.

Information for components:

Mineral Spirits

In animal studies, did not interfere with reproduction.

Xylene

In animal studies, did not interfere with reproduction.

Ethylbenzene

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

Cumene

In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative for component(s) tested.

Information for components:

Mineral Spirits

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

Xylene

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

Ethylbenzene

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

Cumene

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

Mineral Spirits

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).

For similar material(s):

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 2.5 mg/l

Acute toxicity to aquatic invertebrates

LC50, crustacean Chaetogammarus marinus, 96 Hour, 3.5 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 1.2 mg/l, OECD Test Guideline 201

NOEC, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 0.16 mg/l, OECD Test Guideline 201

Chronic toxicity to fish

For similar material(s):

NOEC, Oncorhynchus mykiss (rainbow trout), 112 d, <1.4 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 0.28 mg/l

Xylene

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), semi-static test, 96 Hour, 2.6 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

IC50, Daphnia magna (Water flea), 24 Hour, 1 - 4.7 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (algae), Static, 73 Hour, Growth rate, 4.36 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, Pseudokirchneriella subcapitata (green algae), 73 Hour, Growth rate, 0.44 mg/l, OECD Test Guideline 201 or Equivalent

Chronic toxicity to fish

NOEC, Oncorhynchus mykiss (rainbow trout), flow-through, 56 d, mortality, > 1.3 mg/l

Ethylbenzene

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), semi-static test, 96 Hour, 4.2 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), Static, 48 Hour, 1.8 - 2.4 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition (cell density reduction), 3.6 - 4.6 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC50, Bacteria, 16 Hour, > 12 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, 0.96 mg/l

Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 2 d, survival, 0.047 mg/cm²

Cumene

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), semi-static test, 96 Hour, 2.7 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, 4.0 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EbC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Biomass, 2.6 mg/l, OECD Test Guideline 201 or Equivalent

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 0.35 mg/l

Toxicity to Above Ground Organisms

oral LD50, redwing blackbird (Agelaius phoeniceus), > 98 mg/kg

Persistence and degradability

Mineral Spirits

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

10-day Window: Pass

Biodegradation: > 63 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

Theoretical Oxygen Demand: 3.49 mg/mg

Xylene

Biodegradability: Material is expected to be readily biodegradable.

10-day Window: Pass

Biodegradation: > 60 %

Exposure time: 10 d

Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 3.17 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	37.000 %
10 d	58.000 %
20 d	72.000 %

Photodegradation**Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 19.7 Hour**Method:** Estimated.**Ethylbenzene****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: 100 %**Exposure time:** 6 d**Method:** OECD Test Guideline 301E or Equivalent**Theoretical Oxygen Demand:** 3.17 mg/mg Estimated.**Chemical Oxygen Demand:** 2.62 mg/mg Dichromate**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	31.5 %
10 d	38.5 %
20 d	45.4 %

Photodegradation**Sensitization:** OH radicals**Atmospheric half-life:** 55 Hour**Method:** Estimated.**Cumene****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: 70 %**Exposure time:** 20 d**Method:** OECD Test Guideline 301D or Equivalent**Theoretical Oxygen Demand:** 3.20 mg/mg Estimated.**Biological oxygen demand (BOD)**

Incubation Time	BOD
-----------------	-----

5 d	40%
10 d	62%
20 d	70%

Photodegradation**Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 1.55 d**Method:** Estimated.**Bioaccumulative potential****Mineral Spirits****Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).**Partition coefficient: n-octanol/water(log Pow):** 5.25 Measured**Xylene****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 3.12 Measured**Bioconcentration factor (BCF):** 25.9 Rainbow trout (Salmo gairdneri) Measured**Ethylbenzene****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 3.15 Measured**Bioconcentration factor (BCF):** 15 Fish Measured**Cumene****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 3.4 - 3.7 Measured**Bioconcentration factor (BCF):** 35.5 Fish Measured**Mobility in soil****Mineral Spirits**

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient (Koc): 1451 Estimated.**Xylene**

Potential for mobility in soil is medium (Koc between 150 and 500).

Partition coefficient (Koc): 443 Estimated.**Ethylbenzene**

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient (Koc): 518 Estimated.**Cumene**

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient (Koc): 800 - 2800 Estimated.

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

Proper shipping name	Flammable liquids, n.o.s.(Ethylbenzene, Stoddard solvent)
UN number	UN 1993
Class	3
Packing group	III
Marine pollutant	Stoddard solvent
Reportable Quantity	Xylene, Ethylbenzene

Classification for SEA transport (IMO-IMDG):

Proper shipping name	FLAMMABLE LIQUID, N.O.S.(Ethylbenzene, Stoddard solvent)
UN number	UN 1993
Class	3
Packing group	III
Marine pollutant	Stoddard solvent
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Flammable liquid, n.o.s.(Ethylbenzene, Stoddard solvent)
UN number	UN 1993
Class	3
Packing group	III

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

Flammable (gases, aerosols, liquids, or solids)
 Hazard not otherwise classified (physical hazards)
 Specific target organ toxicity (single or repeated exposure)
 Aspiration hazard
 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

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

Components	CASRN
Xylene	1330-20-7
Ethylbenzene	100-41-4

Pennsylvania Right To Know

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

Components	CASRN
Mineral Spirits	8052-41-3
Silicic acid, sodium salt, reaction products with chlorotrimethylsilane and iso-Pr alc.	68988-56-7
Siloxanes and silicones, dimethyl	63148-62-9
Xylene	1330-20-7
Ethylbenzene	100-41-4

California Prop. 65

WARNING: This product can expose you to chemicals including Ethylbenzene, Cumene, Naphthalene, which is/are known to the State of California to cause cancer, and Toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. 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

NFPA

Health	Flammability	Instability
1	3	0

HMIS

Health	Flammability	Physical Hazard
3*	3	0

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 6018323 / A001 / Issue Date: 02/17/2020 / Version: 5.0

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)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
OSHA P0	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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