# SAFETY DATA SHEET

# DOW CORNING(R) 1-2620 DISPERSION

| Version | Revision Date: | SDS Number: | Date of last issue: 03/17/2017 |
|---|---|---|---|
| 6.0 | 09/13/2017 | 970811-00010 | Date of first issue: 01/12/2015 |

## SECTION 1. IDENTIFICATION

Product name : DOW CORNING(R) 1-2620 DISPERSION

Product code : 000000000001745638

**Manufacturer or supplier's details**

Company name of supplier : Dow Corning Corporation

Address : South Saginaw Road
Midland Michigan 48686

Telephone : (989) 496-6000

Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900
CHEMTREC : (800) 424-9300

**Recommended use of the chemical and restrictions on use**

Recommended use : Semiconductors

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with 29 CFR 1910.1200**

Flammable liquids : Category 2

Skin irritation : Category 2

Eye irritation : Category 2B

Skin sensitization : Category 1

Reproductive toxicity : Category 2

Specific target organ systemic toxicity - repeated exposure : Category 2 (Central nervous system, Liver, Kidney, Auditory system)

**GHS label elements**

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.
H315 + H320 Causes skin and eye irritation.
H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs (Central nervous system,

Liver, Kidney, Auditory system) through prolonged or repeated exposure.

Precautionary Statements :

**Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Static-accumulating flammable liquid.
Vapors may form explosive mixture with air.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone in solvent

**Hazardous ingredients**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| Toluene | 108-88-3 | >= 18 - <= 19 |
| Xylene | 1330-20-7 | >= 11 - <= 14 |
| Ethylbenzene | 100-41-4 | >= 3 - <= 4 |
| Methyltrimethoxysilane | 1185-55-3 | >= 3 - <= 4 |

## SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Causes skin and eye irritation.
May cause an allergic skin reaction.
Suspected of damaging the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

## SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Silicon oxides
Formaldehyde

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Ventilate the area.
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.
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/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
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.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Technical measures | : | Ensure all equipment is electrically grounded before beginning transfer operations.<br>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.<br>Restrict flow velocity in order to reduce the accumulation of static electricity. |
| Local/Total ventilation | : | Use with local exhaust ventilation.<br>Use only in an area equipped with explosion-proof exhaust ventilation if advised by assessment of the local exposure potential |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Do not breathe vapors or spray mist.<br>Do not swallow.<br>Do not get in eyes.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Non-sparking tools should be used.<br>Keep container tightly closed.<br>Keep away from water.<br>Protect from moisture.<br>Keep away from heat and sources of ignition.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to the environment. |
| Conditions for safe storage | : | Keep in properly labeled containers.<br>Store locked up.<br>Keep tightly closed.<br>Keep in a cool, well-ventilated place.<br>Store in accordance with the particular national regulations.<br>Keep away from heat and sources of ignition. |
| Materials to avoid | : | Do not store with the following product types:<br>Strong oxidizing agents<br>Organic peroxides<br>Flammable solids<br>Pyrophoric liquids<br>Pyrophoric solids<br>Self-heating substances and mixtures<br>Substances and mixtures which in contact with water emit flammable gases |

Explosives
Gases

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Ingredients | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Toluene | 108-88-3 | TWA | 20 ppm | ACGIH |
| | | TWA | 100 ppm<br>375 mg/m³ | NIOSH REL |
| | | ST | 150 ppm<br>560 mg/m³ | NIOSH REL |
| | | TWA | 200 ppm | OSHA Z-2 |
| | | CEIL | 300 ppm | OSHA Z-2 |
| | | Peak | 500 ppm<br>(10 minutes) | OSHA Z-2 |
| Xylene | 1330-20-7 | TWA | 100 ppm<br>435 mg/m³ | OSHA Z-1 |
| | | TWA | 100 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| Ethylbenzene | 100-41-4 | TWA | 20 ppm | ACGIH |
| | | TWA | 100 ppm<br>435 mg/m³ | OSHA Z-1 |
| | | TWA | 100 ppm<br>435 mg/m³ | NIOSH REL |
| | | ST | 125 ppm<br>545 mg/m³ | NIOSH REL |
| Methyltrimethoxysilane | 1185-55-3 | TWA | 7.5 ppm | DCC OEL |

**Occupational exposure limits of decomposition products**

| Ingredients | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| Methanol | 67-56-1 | TWA | 200 ppm | ACGIH |
| | | STEL | 250 ppm | ACGIH |
| | | TWA | 200 ppm<br>260 mg/m³ | NIOSH REL |
| | | ST | 250 ppm<br>325 mg/m³ | NIOSH REL |
| | | TWA | 200 ppm<br>260 mg/m³ | OSHA Z-1 |

**Biological occupational exposure limits**

| Ingredients | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | Toluene | In blood | Prior to last shift | 0.02 mg/l | ACGIH BEI |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | of work-week | | |
| | | Toluene | Urine | End of shift (As soon as possible after exposure ceases) | 0.03 mg/l | ACGIH BEI |
| | | o-Cresol | Urine | End of shift (As soon as possible after exposure ceases) | 0.3 mg/g Creatinine | ACGIH BEI |
| Xylene | 1330-20-7 | Methyl-hippuric acids | Urine | End of shift (As soon as possible after exposure ceases) | 1.5 g/g cre-atinine | ACGIH BEI |
| Ethylbenzene | 100-41-4 | Sum of mandelic acid and phenyl gly-oxylic acid | Urine | End of shift (As soon as possible after exposure ceases) | 0.15 g/g creatinine | ACGIH BEI |

**Engineering measures** : Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
Use only in an area equipped with explosion-proof exhaust ventilation if advised by assessment of the local exposure potential
Use with local exhaust ventilation.

**Personal protective equipment**

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

| | | |
|---|---|---|
| Material | : | Chemical-resistant gloves |
| Remarks | : | Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday. |
| Eye protection | : | Wear the following personal protective equipment:<br>Safety goggles |
| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.<br>Wear the following personal protective equipment:<br>Flame retardant antistatic protective clothing, unless assessment demonstrates that the risk of explosive atmospheres or flash fires is low<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Hygiene measures | : | Ensure that eye flushing systems and safety showers are located close to the working place.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.<br>These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.<br>For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Dow Corning customer service group. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | liquid |
| Color | : | yellow |
| Odor | : | strong |
| Odor Threshold | : | No data available |
| pH | : | No data available |
| Melting point/freezing point | : | No data available |

| | | |
|---|---|---|
| Initial boiling point and boiling range | : | 103 °C |
| Flash point | : | 13 °C<br>Method: Pensky-Martens closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Self-ignition | : | The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating. |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapor pressure | : | No data available |
| Relative vapor density | : | No data available |
| Relative density | : | 1.0 |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | 110 cSt (25 °C) |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight | : | No data available |
| Particle size | : | Not applicable |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Not classified as a reactivity hazard. |
| Chemical stability | : | Stable under normal conditions. |

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Highly flammable liquid and vapor.<br>Vapors may form explosive mixture with air.<br>Use at elevated temperatures may form highly hazardous compounds.<br>Can react with strong oxidizing agents.<br>Hazardous decomposition products will be formed upon contact with water or humid air.<br>Hazardous decomposition products will be formed at elevated temperatures. |
| Conditions to avoid | : | Exposure to moisture.<br>Handling operations that can promote accumulation of static charges.<br>Heat, flames and sparks. |
| Incompatible materials | : | Oxidizing agents<br>Water |

**Hazardous decomposition products**

| | | |
|---|---|---|
| Contact with water or humid air | : | Methanol |
| Thermal decomposition | : | Benzene<br>Formaldehyde |

## SECTION 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Acute toxicity estimate: > 5,000 mg/kg<br>Method: Calculation method |
| Acute inhalation toxicity | : | Acute toxicity estimate: 49.42 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: Calculation method |
| Acute dermal toxicity | : | Acute toxicity estimate: > 5,000 mg/kg<br>Method: Calculation method |

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg |

| | | |
|---|---|---|
| Acute inhalation toxicity | : | LC50 (Rat): 28.1 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: OECD Test Guideline 403 |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg |

**Xylene:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 4,300 mg/kg<br>Method: Directive 67/548/EEC, Annex V, B.1. |
| Acute inhalation toxicity | : | LC50 (Rat): 27.5 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br><br>Acute toxicity estimate: 11 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: Expert judgment<br>Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI |
| Acute dermal toxicity | : | Acute toxicity estimate: 1,100 mg/kg<br>Method: Expert judgment<br>Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI |

**Ethylbenzene:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 3,500 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): 17.2 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg |

**Methyltrimethoxysilane:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 12.3 ml/kg<br>Assessment: The substance or mixture has no acute oral toxicity<br>Remarks: Information taken from reference works and the literature. |
| Acute inhalation toxicity | : | LC50 (Rat): > 42.1 mg/l<br>Exposure time: 6 h<br>Test atmosphere: vapor<br>Assessment: The substance or mixture has no acute inhalation toxicity<br>Remarks: On basis of test data. |
| Acute dermal toxicity | : | LD50 (Rabbit): > 9,500 mg/kg<br>Assessment: The substance or mixture has no acute dermal toxicity |

Remarks: On basis of test data.

**Skin corrosion/irritation**

Causes skin irritation.

**Ingredients:**

**Toluene:**

Species: Rabbit
Method: Directive 67/548/EEC, Annex V, B.4.
Result: Skin irritation

**Xylene:**

Species: Rabbit
Result: Skin irritation

**Methyltrimethoxysilane:**

Species: Rabbit
Result: No skin irritation
Remarks: On basis of test data.

**Serious eye damage/eye irritation**

Causes eye irritation.

**Ingredients:**

**Toluene:**

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

**Xylene:**

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days

**Ethylbenzene:**

Species: Rabbit
Result: No eye irritation

**Methyltrimethoxysilane:**

Species: Rabbit
Result: No eye irritation
Remarks: On basis of test data.

**Respiratory or skin sensitization**

**Skin sensitization**

May cause an allergic skin reaction.

**Respiratory sensitization**

Not classified based on available information.

**Ingredients:**

**Toluene:**

Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

**Xylene:**

Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

**Ethylbenzene:**

Test Type: Human repeat insult patch test (HRIPT)
Routes of exposure: Skin contact
Result: negative

**Methyltrimethoxysilane:**

Assessment: Probability or evidence of low to moderate skin sensitization rate in humans

Test Type: Buehler Test
Species: Guinea pig
Result: positive
Remarks: On basis of test data.

**Germ cell mutagenicity**

Not classified based on available information.

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative<br><br>Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative |

**Xylene:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro |

| | | |
|---|---|---|
| | | Result: negative<br><br>Test Type: In vitro sister chromatid exchange assay in mammalian cells<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Rodent dominant lethal test (germ cell) (in vivo)<br>Species: Mouse<br>Application Route: Skin contact<br>Result: negative |

**Ethylbenzene:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro<br>Result: negative<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo<br>Species: Mouse<br>Application Route: Inhalation<br>Method: OECD Test Guideline 486<br>Result: negative |

**Methyltrimethoxysilane:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br>Remarks: On basis of test data.<br><br>Test Type: Mutagenicity (in vitro mammalian cytogenetic test)<br>Result: positive<br>Remarks: On basis of test data.<br><br>Test Type: Chromosome aberration test in vitro<br>Result: positive<br>Remarks: On basis of test data. |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative<br>Remarks: On basis of test data. |
| Germ cell mutagenicity - Assessment | : | Animal testing did not show any mutagenic effects. |

**Carcinogenicity**

Not classified based on available information.

**Ingredients:**

**Toluene:**

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 24 Months
Result: negative

**Xylene:**

Species: Rat
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

**Ethylbenzene:**

Species: Rat
Application Route: Inhalation
Exposure time: 104 weeks
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans.

| | |
|---|---|
| **IARC** | Group 2B: Possibly carcinogenic to humans |
| | Ethylbenzene 100-41-4 |
| **OSHA** | No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. |
| **NTP** | No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |

**Reproductive toxicity**

Suspected of damaging the unborn child.

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative |
| Effects on fetal development | : | Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: positive |
| Reproductive toxicity - Assessment | : | Some evidence of adverse effects on development, based on animal experiments. |

**Xylene:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative |
| Effects on fetal development | : | Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Result: negative |

**Ethylbenzene:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: inhalation (vapor)<br>Method: OECD Test Guideline 415<br>Result: negative |
| Effects on fetal development | : | Test Type: Embryo-fetal development<br>Species: Rat<br>Application Route: Inhalation<br>Method: OECD Test Guideline 414<br>Result: negative |

**Methyltrimethoxysilane:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat, male and female<br>Application Route: Ingestion<br>Symptoms: No effects on fertility.<br>Remarks: On basis of test data. |
| Effects on fetal development | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat, male and female<br>Application Route: Ingestion<br>Symptoms: No effects on fetal development.<br>Remarks: On basis of test data. |
| Reproductive toxicity - Assessment | : | No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. |

**STOT-single exposure**

Not classified based on available information.

**Ingredients:**

**Toluene:**

Assessment: May cause drowsiness or dizziness.

**Xylene:**

Assessment: May cause respiratory irritation.

**STOT-repeated exposure**

May cause damage to organs (Central nervous system, Liver, Kidney, Auditory system) through prolonged or repeated exposure.

**Ingredients:**

**Toluene:**

Target Organs: Central nervous system
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Xylene:**

Routes of exposure: inhalation (vapor)
Target Organs: Central nervous system, Liver, Kidney
Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

**Ethylbenzene:**

Routes of exposure: inhalation (vapor)
Target Organs: Auditory system
Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

**Methyltrimethoxysilane:**

Routes of exposure: inhalation (vapor)
Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Repeated dose toxicity**

**Ingredients:**

**Toluene:**

Species: Rat
LOAEL: 1.875 mg/l
Application Route: inhalation (vapor)
Exposure time: 6 Months

**Xylene:**

Species: Rat
NOAEL: 4.35 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 Days

**Ethylbenzene:**

Species: Rat, female
LOAEL: 75 ppm
Application Route: inhalation (vapor)

Exposure time: 104 Weeks

**Methyltrimethoxysilane:**

Species: Rat
Application Route: inhalation (vapor)
Remarks: On basis of test data.

Species: Rat
Application Route: Ingestion
Remarks: On basis of test data.

**Aspiration toxicity**

Not classified based on available information.

**Ingredients:**

**Toluene:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Xylene:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Ethylbenzene:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Experience with human exposure**

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Inhalation | : | Target Organs: Central nervous system<br>Symptoms: Neurological disorders, Fatigue, Vertigo |

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Ceriodaphnia dubia (water flea)): 3.78 mg/l<br>Exposure time: 48 h |
| Toxicity to algae | : | NOEC (Skeletonema costatum (marine diatom)): 10 mg/l<br>Exposure time: 72 h |

| | | |
|---|---|---|
| Toxicity to fish (Chronic toxicity) | : | NOEC (Oncorhynchus kisutch (coho salmon)): 1.39 mg/l<br>Exposure time: 40 d |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 1 mg/l<br>Exposure time: 21 d<br><br>NOEC (Ceriodaphnia dubia (water flea)): 0.74 mg/l<br>Exposure time: 7 d |
| Toxicity to microorganisms | : | EC50 (Nitrosomonas sp.): 84 mg/l<br>Exposure time: 24 h |

**Xylene:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | IC50 (Daphnia magna (Water flea)): 1 mg/l<br>Exposure time: 24 h<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials |
| Toxicity to algae | : | EC10 (Pseudokirchneriella subcapitata (green algae)): 1.9 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.36 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l<br>Exposure time: 56 d |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | EC10 (Daphnia magna (Water flea)): 1.91 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC50: > 157 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209<br>Remarks: Based on data from similar materials |

**Ethylbenzene:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l<br>Exposure time: 48 h |
| Toxicity to algae | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 5.4 mg/l<br>Exposure time: 72 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l<br>Exposure time: 7 d |
| Toxicity to microorganisms | : | EC50 (Nitrosomonas sp.): 96 mg/l<br>Exposure time: 24 h<br>Method: OECD Test Guideline 209 |

**Methyltrimethoxysilane:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 110 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia sp. (Water flea)): > 122 mg/l<br>Exposure time: 48 h |
| Toxicity to algae | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 120 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC50: > 100 mg/l<br>Method: OECD Test Guideline 209 |

**Persistence and degradability**

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 86 %<br>Exposure time: 20 d |

**Xylene:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 87.8 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>Remarks: Based on data from similar materials |

**Ethylbenzene:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 70 - 80 %<br>Exposure time: 28 d |

**Bioaccumulative potential**

**Ingredients:**

**Toluene:**

| | | |
|---|---|---|
| Bioaccumulation | : | Species: Leuciscus idus (Golden orfe)<br>Bioconcentration factor (BCF): 90 |
| Partition coefficient: n-octanol/water | : | log Pow: 2.73 |

**Xylene:**

| | | |
|---|---|---|
| Bioaccumulation | : | Species: Oncorhynchus mykiss (rainbow trout)<br>Bioconcentration factor (BCF): 5.4 - 25.9 |
| Partition coefficient: n-octanol/water | : | log Pow: 3.12 - 3.2 |

**Ethylbenzene:**

| | | |
|---|---|---|
| Bioaccumulation | : | Species: Fish<br>Bioconcentration factor (BCF): < 100<br>Remarks: Based on data from similar materials |
| Partition coefficient: n-octanol/water | : | log Pow: 3.6 |

**Methyltrimethoxysilane:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | log Pow: -2.36 |

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Resource Conservation and Recovery Act (RCRA) | : | When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste. |
| Waste Code | : | D001: Ignitability<br>D018 |
| Waste from residues | : | Dispose of in accordance with local regulations. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Empty containers retain residue and can be dangerous.<br>Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other |

sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

## SECTION 14. TRANSPORT INFORMATION

**International Regulations**

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 1993 |
| Proper shipping name | : | FLAMMABLE LIQUID, N.O.S. (Toluene, Ethylbenzene) |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 1993 |
| Proper shipping name | : | Flammable liquid, n.o.s. (Toluene, Ethylbenzene) |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | Flammable Liquids |
| Packing instruction (cargo aircraft) | : | 364 |
| Packing instruction (passenger aircraft) | : | 353 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 1993 |
| Proper shipping name | : | FLAMMABLE LIQUID, N.O.S. (Toluene, Ethylbenzene) |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |
| EmS Code | : | F-E, S-E |
| Marine pollutant | : | no |

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

Not applicable for product as supplied.

**Domestic regulation**

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | UN 1993 |
| Proper shipping name | : | Flammable liquids, n.o.s. (Toluene, Ethylbenzene) |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | FLAMMABLE LIQUID |
| ERG Code | : | 128 |
| Marine pollutant | : | no |

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know

### CERCLA Reportable Quantity

| Ingredients | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---|---|---|---|
| Xylene | 1330-20-7 | 100 | 788 |
| Toluene | 108-88-3 | 1000 | 5490 |
| Ethylbenzene | 100-41-4 | 1000 | 26205 |

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)
Hazard not otherwise classified (physical hazards)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

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

| | | |
|---|---|---|
| Toluene | 108-88-3 | >= 18 - <= 19 % |
| Xylene | 1330-20-7 | >= 11 - <= 14 % |
| Ethylbenzene | 100-41-4 | >= 3 - <= 4 % |

### US State Regulations

### Pennsylvania Right To Know

| | |
|---|---|
| Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes | 68952-93-2 |
| Toluene | 108-88-3 |
| Xylene | 1330-20-7 |
| Ethylbenzene | 100-41-4 |
| Methyltrimethoxysilane | 1185-55-3 |
| Methanol | 67-56-1 |

### California Prop. 65

WARNING: This product can expose you to chemicals including Ethylbenzene, Benzene, Cumene, which is/are known to the State of California to cause cancer, and Toluene, Methanol, Benzene, 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.

### California List of Hazardous Substances

| | |
|---|---|
| Toluene | 108-88-3 |
| Xylene | 1330-20-7 |

| | |
|---|---|
| Ethylbenzene | 100-41-4 |

**California Permissible Exposure Limits for Chemical Contaminants**

| | |
|---|---|
| Toluene | 108-88-3 |
| Xylene | 1330-20-7 |
| Ethylbenzene | 100-41-4 |

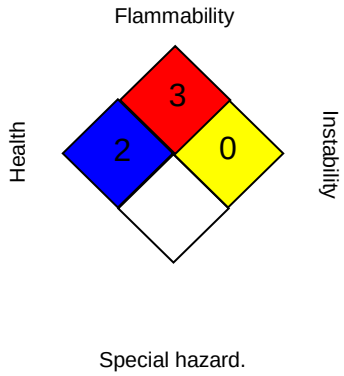
**The ingredients of this product are reported in the following inventories:**

| | | |
|---|---|---|
| NZIoC | : | All ingredients listed or exempt. |
| TSCA | : | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| AICS | : | All ingredients listed or exempt. |
| IECSC | : | All ingredients listed or exempt. |
| KECI | : | All ingredients listed, exempt or notified. |
| PICCS | : | All ingredients listed or exempt. |
| DSL | : | All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL). |
| REACH | : | For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office. |
| ENCS/ISHL | : | Consult your local Dow Corning office. |
| TCSI | : | All ingredients listed or exempt. |

## SECTION 16. OTHER INFORMATION

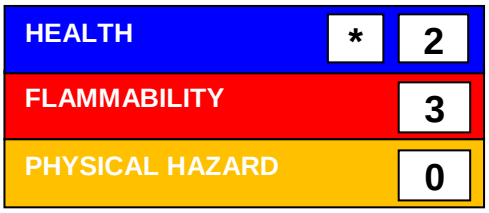
### Further information

**NFPA:**




Special hazard.

**HMIS® IV:**




HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

| | | |
|---|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| ACGIH BEI | : | ACGIH - Biological Exposure Indices (BEI) |
| DCC OEL | : | Dow Corning Guide |
| NIOSH REL | : | USA. NIOSH Recommended Exposure Limits |
| OSHA Z-1 | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| OSHA Z-2 | : | USA. Occupational Exposure Limits (OSHA) - Table Z-2 |
| ACGIH / TWA | : | 8-hour, time-weighted average |
| ACGIH / STEL | : | Short-term exposure limit |
| DCC OEL / TWA | : | Time weighted average |
| NIOSH REL / TWA | : | Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| NIOSH REL / ST | : | STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday |
| OSHA Z-1 / TWA | : | 8-hour time weighted average |
| OSHA Z-2 / TWA | : | 8-hour time weighted average |
| OSHA Z-2 / CEIL | : | Acceptable ceiling concentration |
| OSHA Z-2 / Peak | : | Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift |

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 Organiza-

tion; 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

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date : 09/13/2017

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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