

SAFETY DATA SHEET

DOW CORNING

SYLGARD(R) 184 SILICONE ELASTOMER KIT
(BASE information is below)

Version 3.0 Revision Date 10/20/2016 SDS Number 802554-00009 Date of last issue 03/19/2016
Date of first issue 11/20/2014

SECTION 1. IDENTIFICATION

Product name : SYLGARD(R) 184 SILICONE ELASTOMER KIT (BASE information is below)

Product code : 00000000091064291

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 : Corrosion inhibitors
Electrical industry and electronics

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture

GHS label elements

Not a hazardous substance or mixture

Other hazards

None known

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone

Hazardous Ingredients

Chemical name	CAS-No	Concentration (% w/w)
Ethylbenzene	100-41-4	>= 0.1 - < 1

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

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

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water
Remove contaminated clothing and shoes
Get medical attention
Wash clothing before reuse
Thoroughly clean shoes before reuse

In case of eye contact : Flush eyes with water as a precaution
Get medical attention if irritation develops and persists

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 : None known

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 : None known

Specific hazards during fire fighting : 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 : In the event of fire, wear self-contained breathing apparatus.

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for fire-fighters : Use personal protective equipment

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : 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 : Soak up with inert absorbent material
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 : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section

Local/Total ventilation : Use only with adequate ventilation

Advice on safe handling : Avoid inhalation of vapor or mist.
Do not swallow
Avoid contact with eyes
Avoid prolonged or repeated contact with skin
Handle in accordance with good industrial hygiene and safety practice
Take care to prevent spills, waste and minimize release to the environment.

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

Materials to avoid : Do not store with the following product types
Strong oxidizing agents

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		TWA	100 ppm 435 mg/m ³	OSHA Z-1
		TWA	100 ppm 435 mg/m ³	NIOSH REL
		ST	125 ppm 545 mg/m ³	NIOSH REL

Biological occupational exposure limits

Ingredients	CAS-No	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
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

Engineering measures : Processing may form hazardous compounds (see section 10)
Ensure adequate ventilation, especially in confined areas
Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required

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. Wash hands before breaks and at the end of workday

Eye protection : Wear the following personal protective equipment
Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

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STOT-repeated exposure

Not classified based on available information

Ingredients:

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/6h/d

Repeated dose toxicity

Ingredients:

Ethylbenzene:

Species: Rat, female

LOAEL: 75 ppm

Application Route: inhalation (vapor)

Exposure time: 104 Weeks

Aspiration toxicity

Not classified based on available information

Ingredients:

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Ethylbenzene:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l
Exposure time: 48 hToxicity to algae: EC50 (Pseudokirchnerella subcapitata (green algae)): 5.4 mg/l
Exposure time: 72 hToxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l
Exposure time: 7 d

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Toxicity to microorganisms: EC50 (Nitrosomonas sp.): 96 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 209

Persistence and degradability

Ingredients:

Ethylbenzene:

Biodegradability: Result: Readily biodegradable
Biodegradation: 70 - 80 %
Exposure time: 28 d

Bioaccumulative potential

Ingredients:

Ethylbenzene:

Bioaccumulation: Species: Fish
Bioconcentration factor (BCF): < 100
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water: log Pow: 3.6

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA): This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.

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. If not otherwise specified, Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

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IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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/DNA number: UN 3082

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.

Class: 9

Packing group: III

Labels: CLASS 9

ERG Code: 171

Marine pollutant: no

Remarks:

THE ABOVE INFORMATION ONLY APPLIES TO PACKAGE SIZES WHERE THE HAZARDOUS SUBSTANCE MEETS THE REPORTABLE QUANTITY.

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	20408
Ethylbenzene	100-41-4	1000	-
Toluene	108-88-3	1000	-

* Calculated RQ exceeds reasonably attainable upper limit.

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: No SARA Hazards

SARA 313

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

Ethylbenzene: 100-41-4: 0.1 - 1 %

US State Regulations

Pennsylvania Right To Know

Dimethyl Siloxane, Dimethylvinylsiloxy-terminated: 68083-19-2

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Dimethylvinylated and trimethylated silica: 68088-89-6
Xylene: 1330-20-7
Ethylbenzene: 100-41-4
Toluene: 108-88-3

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

100-41-4

Ethylbenzene

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

108-88-3

Toluene

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

NZIoC

All ingredients listed or exempt

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.

TSCA

All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

PICCS

All ingredients listed or exempt.

KECI

All ingredients listed, exempt or notified.

ENCS/ISHL

All components are listed on ENCS/ISHL or exempted from inventory listing.

IECSC

All ingredients listed or exempt.

AICS

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).

TCSI

All ingredients listed or exempt.

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			Date of first issue: 11/12/2014

- be disposed of in accordance with local regulations. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
- Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures: 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: Soak up with inert absorbent material. 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. Materials in contact with water, moisture, acids or bases have the potential to generate hydrogen gas. Recovered material should be stored in a vented container. 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: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation: Use only with adequate ventilation.
- Advice on safe handling: Handle in accordance with good industrial hygiene and safety practice. Keep away from water. Protect from moisture. Take care to prevent spills, waste and minimize release to the

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- environment
- Conditions for safe storage: Keep in properly labeled containers. Store in original container. Store in a closed container. Store in accordance with the particular national regulations. Product may evolve minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Clogged container vents may increase pressure build up.
- Materials to avoid: Do not store with the following product types: Strong oxidizing agents.
- Packaging material: Unsuitable material. Do not store in or use containers except the original product package.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Ingredients with workplace control parameters: Contains no substances with occupational exposure limit values.
- Engineering measures: Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.
- Personal protective equipment: No personal respiratory protective equipment normally required.
- Respiratory protection: No personal respiratory protective equipment normally required.
- Hand protection: Wash hands before breaks and at the end of workday.
- Remarks: Wash hands before breaks and at the end of workday.
- Eye protection: Wear the following personal protective equipment: Safety glasses.
- Skin and body protection: Skin should be washed after contact.
- Hygiene measures: Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. 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

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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: colorless
- Odor: slight
- Odor Threshold: No data available
- pH: No data available
- Melting point/freezing point: No data available
- Initial boiling point and boiling range: > 100 °C
- Flash point: > 101.1 °C. Method: 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: No data available
- Lower explosion limit: No data available
- Vapor pressure: No data available
- Relative vapor density: No data available
- Relative density: 1.03
- 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:

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- Viscosity, kinematic: 110 cSt
- Explosive properties: Not explosive
- Oxidizing properties: The substance or mixture is not classified as oxidizing
- Molecular weight: No data available

SECTION 10. STABILITY AND REACTIVITY

- Reactivity: Contact with water liberates highly flammable gases
- Chemical stability: Stable under normal conditions.
- Possibility of hazardous reactions: Can react with strong oxidizing agents. Product may evolve flammable hydrogen gas on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air. 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. See OSHA formaldehyde standard, 29 CFR 1910.1048. Hazardous decomposition products will be formed at elevated temperatures.
- Conditions to avoid: Exposure to moisture.
- Incompatible materials: Oxidizing agents
- Hazardous decomposition products: Thermal decomposition: 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.
- Skin corrosion/irritation: Not classified based on available information.
- Serious eye damage/eye irritation: Not classified based on available information.

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(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 : 10/31/2016

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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