

# Safety Data Sheet

Material: 60002686

**WACKER® AK 50  
SILICONE FLUID**

Version: 2.5 (US)

Date of print: 09/17/2019

Date of last alteration: 08/07/2018

## 1. Product and company identification

### 1.1 Identification of the substance or preparation:

**Commercial product name:** **WACKER® AK 50  
SILICONE FLUID**

Use of substance / preparation: Industrial.  
Intermediate chemical

### 1.2 Company/undertaking identification:

**Manufacturer/distributor:** Wacker Chemie AG  
Hanns-Seidel-Platz 4  
81737 München  
Germany

**Customer information:** Wacker Chemical Corporation  
3301 Sutton Road  
Adrian, Michigan 49221-9397  
USA  
InfoLine:  
Tel (517) 264-8240, Fax (517) 264-8740  
Hours of operation:  
Monday - Friday, 8 am to 5 pm (eastern standard time)  
Corporate website: [www.wacker.com](http://www.wacker.com)

**Emergency telephone no. (24h):** (517) 264-8500  
**Transportation emergency:** (800) 424-9300 (CHEMTREC, USA)  
(703) 527-3887 (CHEMTREC, international)

This SDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (GHS):**

Not a hazardous substance or mixture.

### 2.2 Label elements

**Labelling (GHS):**

No labeling according to GHS required.

### 2.3 Other hazards

No data available.

## 3. Composition/information on ingredients

### 3.1 Chemical characterization (substance)

Chemical characteristics  
Polydimethylsiloxane

### 3.2 Information on ingredients:

This material does not contain any ingredients above the permitted limit(s).

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in this section are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product. Specific chemical identities and/or exact percentage (concentration) of the composition may have been withheld as a trade secret.

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## 4. First-aid measures

### 4.1 General information:

Get medical attention if irritation or other symptoms occur. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

### 4.2 After inhalation

Material cannot be inhaled under normal conditions. No special treatment required.

### 4.3 After contact with the skin

After skin contact wipe off excess material with cloth or paper. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.

### 4.4 After contact with the eyes

If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

### 4.5 After swallowing

No special measures are required after swallowing.

## 5. Fire-fighting measures

### 5.1 Flammable properties:

Property:	Value:	Method:
Flash point.....	> 250 °C (> 482 °F)	(ISO 2592)
Flash point.....	> 150 °C (> 302 °F)	(EN 22719)
Boiling point / boiling range .....	not determinable	(EU-GL.A.2)
Lower explosion limit (LEL) .....	not applicable	
Upper explosion limit (UEL).....	not applicable	
Ignition temperature .....	395 °C (743 °F)	(EN 14522)
NFPA Hazard Class (comb./flam.liquid).....	IIIB	

### 5.2 Fire and explosion hazards:

This material does not present any unusual fire or explosion hazards.

### 5.3 Recommended extinguishing media:

water-mist , carbon dioxide , sand , dry chemical or alcohol-resistant foam .

### 5.4 Unsuitable extinguishing media:

water-spray , sharp water jet .

### 5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Hazardous decomposition products: carbon dioxide , carbon monoxide , formaldehyde , silicon dioxide and incompletely burnt hydrocarbons .

### 5.6 Fire fighting procedures:

Fire fighters should wear full protective clothing including a self-contained breathing apparatus. Cool endangered containers with water.

## 6. Accidental release measures

### 6.1 Precautions:

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. If material is released indicate risk of slipping. Do not walk through spilled material.

**HAZWOPER PPE Level: D**

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**6.2 Containment:**

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

**6.3 Methods for cleaning up**

Take up mechanically and dispose of according to local/state/federal regulations. Do not flush away with water. For small amounts: Absorb with a neutral (non-acidic / non-basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations. For large amounts: Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

**7. Handling and storage****7.1 Handling****Precautions for safe handling:**

Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection). Spilled substance increases risk of slipping. Observe information in section 8.

**Precautions against fire and explosion:**

Observe the general rules for fire prevention.

**7.2 Storage****Conditions for storage rooms and vessels:**

Observe local/state/federal regulations.

**Advice for storage of incompatible materials:**

Observe local/state/federal regulations.

**Further information for storage:**

Store in a dry and cool place.

**Maximum temperature allowed during storage and transportation:** 50 °C (122 °F)

**8. Exposure controls and personal protection****8.1 Engineering controls****Ventilation:**

Use with adequate ventilation.

**Local exhaust:**

not necessary

**8.2 Associate substances with specific control parameters such as limit values****Maximum airborne concentrations at the workplace:**

CAS No.	Material	Type	mg/m <sup>3</sup>	ppm	Dust fract.
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none known

**8.3 Personal protection equipment (PPE)****Respiratory protection:**

Respiratory protection is not normally required.

**Hand protection:**

Recommendation: Any liquid-tight rubber or vinyl gloves.

**Eye protection:**

Recommendation: Safety glasses with side shields.

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**Other protective clothing or equipment:**

Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

**8.4 General hygiene and protection measures:**

When handling do not eat, drink, smoke or apply cosmetics. Wash thoroughly after handling.

**9. Physical and chemical properties****9.1 Appearance**

Physical state / form .....: liquid  
Colour .....: colourless, clear  
Odour .....: odourless

**9.2 Safety parameters**

Property:	Value:	Method:
Melting point / melting range .....	-55 °C (-67 °F)	
Boiling point / boiling range .....	not determinable	(EU-GL.A.2)
Flash point.....	> 250 °C (> 482 °F)	(ISO 2592)
Flash point.....	> 150 °C (> 302 °F)	(EN 22719)
Ignition temperature .....	395 °C (743 °F)	(EN 14522)
Lower explosion limit (LEL) .....	not applicable	
Upper explosion limit (UEL).....	not applicable	
Vapour pressure.....	not determined	
Density.....	0.96 g/cm <sup>3</sup> at 25 °C (77 °F)	
Water solubility / miscibility.....	virtually insoluble	
pH-Value .....	approx. 7	
Viscosity (dynamic) .....	50 mPa.s at 25 °C (77 °F)	(DIN 53019)
Viscosity (kinematic) .....	approx. 50 mm <sup>2</sup> /s at 25 °C (77 °F)	(DIN 53019)

**9.3 Further information**

Odour limit.....: no data available  
Corrosive to Steel or Aluminum.....: Not corrosive to steel or aluminum.  
Thermal decomposition.....: Decomposition begins at > 250 °C (> 482 °F)

**10. Stability and reactivity****10.1 General information:**

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

**10.2 Conditions to avoid**

none known

**10.3 Materials to avoid**

none known

**10.4 Hazardous decomposition products**

If stored and handled properly: none known . Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

**10.5 Further information:**

Hazardous polymerization cannot occur.

**11. Toxicological information****11.1 Information on toxicological effects****11.1.1 Acute toxicity**

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**Product details:**

Route of exposure	Result/Effect	Species/Test system	Source
oral	LD <sub>50</sub> : > 5000 mg/kg Neither mortality nor clinical signs of toxicity were observed with the given dose.	rat	literature (Polydimethylsiloxane)
dermal	LD <sub>50</sub> : > 2008 mg/kg Neither mortality nor clinical signs of toxicity were observed with the given dose.	rat	literature (Polydimethylsiloxane)

**11.1.2 Skin corrosion/irritation****Product details:**

Result/Effect	Species/Test system	Source
not irritating	rabbit	literature (Polydimethylsiloxane)

**11.1.3 Serious eye damage / eye irritation****Product details:**

Result/Effect	Species/Test system	Source
not irritating	rabbit	literature (Polydimethylsiloxane)

**11.1.4 Respiratory or skin sensitization****Product details:**

Route of exposure	Result/Effect	Species/Test system	Source
dermal	not sensitizing	guinea-pig; Magnusson-Kligman	literature (Polydimethylsiloxane) OECD 406

**11.1.5 Germ cell mutagenicity****Assessment:**

Based on known data a significant mutagenic potential may be excluded.

**Product details:**

Result/Effect	Species/Test system	Source
negative	mutation assay (in vitro) bacterial cells	literature (Polydimethylsiloxane) OECD 471

**11.1.6 Carcinogenicity****Assessment:**

Animal tests have not revealed any carcinogenic effects.

**Product details:**

Result/Effect	Species/Test system	Source
NOAEL: $\geq$ 1000 mg/kg NOAEL= NOAEL (carcinogenic effects)	carcinogenicity study rat (F344) oral (feed) 2 a	literature (Polydimethylsiloxane)

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## 11.1.7 Reproductive toxicity

### Assessment:

Animal tests have shown no indications of possibility of damage to embryo and impairment of fertility.

### Product details:

Result/Effect (Examinations of developmental toxicity and teratogenicity)	Species/Test system	Source
NOAEL (developmental): $\geq 1000$ mg/kg NOAEL (maternal): $\geq 1000$ mg/kg Symptoms/Effect: Nothing abnormal detected.	Developmental Toxicity Study rabbit oral (gavage) ; day 6 - 19 of gestation	literature (Polydimethylsiloxane)

## 11.1.8 Specific target organ toxicity (single exposure)

### Assessment:

For this endpoint no toxicological test data is available for the whole product.

## 11.1.9 Specific target organ toxicity (repeated exposure)

### Assessment:

For this endpoint no toxicological test data is available for the whole product.

### Product details:

Result/Effect	Species/Test system	Source
NOAEL: $\geq 1000$ mg/kg NOAEL = NOAEL (systemic effects)	chronic study rat oral (feed) 1 a Follow-up observation period: 1 a	literature (Polydimethylsiloxane)

## 11.1.10 Aspiration hazard

### Assessment:

For this endpoint no toxicological test data is available for the whole product.

## 11.1.11 Further toxicological information

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other information: Human patch test: Product displays good compatibility with the skin.

## 12. Ecological information

### 12.1 Toxicity

#### Assessment:

Based on available data no effects on aquatic organisms that are relevant for classification must be expected for the product up to its limits of water solubility. According to current knowledge adverse effects on water purification plants are not expected.

#### Product details:

Result/Effect	Species/Test system	Source
$> 1000$ mg/l (nominal) effect level $>$ maximum achievable concentration	static (water-accommodated fraction) Fish (96 h)	literature
EC <sub>50</sub> : $> 0.0001$ mg/l (measured) effect level $>$ maximum achievable concentration	static (water-accommodated fraction) Daphnia magna (48 h)	literature
IC <sub>50</sub> (growth rate): $> 100000$ mg/l (nominal)	static (water-accommodated fraction) Marine alga (skeleonema costatum) (72 h)	literature

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NOEC: > 10000 mg/kg	feeding study rainbow trout ( <i>Oncorhynchus mykiss</i> ) (28 d)	literature
NOEC (mortality, growth, reproduction): > 500 mg/kg The exposure to treated sediment did not result in effects.	exposure via sediment <i>Daphnia magna</i> (21 d)	literature

## 12.2 Persistence and degradability

### Assessment:

Silicone content: biologically not degradable. Elimination by adsorption to activated sludge. Polydimethylsiloxanes are degradable to a certain extent in abiotic processes.

## 12.3 Bioaccumulative potential

### Assessment:

Polymer component: Bioaccumulation is not expected to occur.

## 12.4 Mobility in soil

### Assessment:

Polymer component: insoluble in water. Adsorbs on soil.

## 12.5 Other adverse effects

none known

## 13. Disposal considerations

### 13.1 Product disposal

#### Recommendation:

Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

### 13.2 Packaging disposal

#### Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

## 14. Transport information

### 14.1 US DOT & CANADA TDG SURFACE

Valuation .....: Not regulated for transport

### 14.2 Transport by sea IMDG-Code

Valuation .....: Not regulated for transport

### 14.3 Air transport ICAO-TI/IATA-DGR

Valuation .....: Not regulated for transport

## 15. Regulatory information

### 15.1 U.S. Federal regulations

#### TSCA inventory status and TSCA information:

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

#### TSCA 12(b) Export Notification:

This material does not contain reportable amounts of any TSCA 12(b) listed chemicals.

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**CERCLA Regulated Chemicals:**

This material does not contain any CERCLA regulated chemicals.

**SARA 302 EHS Chemicals:**

This material does not contain any SARA extremely hazardous substances.

**SARA 311/312 Hazard Class:**

This product does not present any SARA 311/312 hazards.

**SARA 313 Chemicals:**

This material does not contain any SARA 313 chemicals above de minimus levels.

**HAPS (Hazardous Air Pollutants):**

This material does not contain any hazardous air pollutants.

**15.2 U.S. State regulations****California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):**

This material does not contain any chemicals known to the State of California to cause cancer.

This material does not contain any chemicals known to the State of California to cause reproductive effects.

**Massachusetts Substance List:**

This material contains no listed components.

**New Jersey Right-to-Know Hazardous Substance List:**

This material contains no listed components.

**Pennsylvania Right-to-Know Hazardous Substance List:**

This material contains no listed components.

**15.3 Details of international registration status**

Relevant information about individual substance inventories, where available, is given below.

South Korea (Republic of Korea) .....	<b>ECL</b> (Existing Chemicals List): This product is listed in, or complies with, the substance inventory.
Japan .....	<b>ENCS</b> (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory.
New Zealand .....	<b>NZIoC</b> (New Zealand Inventory of Chemicals): This product is listed in, or complies with, the substance inventory. (For a correct interpretation of the New Zealand status, additional information like GHS classification or Group Standard is required.)
Australia .....	<b>AICS</b> (Australian Inventory of Chemical Substances): This product is listed in, or complies with, the substance inventory.
People's Republic of China .....	<b>IECSC</b> (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory.
Canada .....	<b>DSL</b> (Domestic Substance List): This product is listed in, or complies with, the substance inventory.
Philippines.....	<b>PICCS</b> (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory.
United States of America (USA).....	<b>TSCA</b> (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the substance inventory.
Taiwan (Republic of China) .....	<b>TCSI</b> (Taiwan Chemical Substance Inventory): This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation.



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European Economic Area (EEA)..... : **REACH** (Regulation (EC) No 1907/2006):  
 General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.

**16. Other information**

**16.1 Additional information:**

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This SDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.  
 All deliveries are subject to the WACKER SILICONES Health Care Policy, which is available at [www.wacker.com](http://www.wacker.com).

**16.2 Glossary of Terms:**

ACGIH - American Conference of Governmental Industrial Hygienists	ppm - Parts per Million
DOT - Department of Transportation	SARA - Superfund Amendments and Reauthorization Act
hPa - Hectopascals	STEL - Short Term Exposure Limit
mPa*s - Milli Pascal-Seconds	TSCA - Toxic Substances Control Act
OSHA - Occupational Safety and Health Administration	TWA - Time Weighted Average
PEL - Permissible Exposure Limit	WHMIS - Canadian Workplace Hazardous Materials Identification System

<b>Flash point determination methods</b> .....	<b>Common name</b>
ASTM D56.....	Tagliabue (Tag) closed cup
ASTM D92, DIN 51376, ISO 2592 .....	Cleveland open cup
ASTM D93, DIN 51758, ISO 2719 .....	Pensky-Martens closed cup
ASTM D3278, DIN 55680, ISO 3679 .....	Setaflash or Rapid closed cup
DIN 51755 .....	Abel-Pensky closed cup

**16.3 Conversion table:**

Pressure:.....: 1 hPa \* 0.75 = 1 mm Hg = 1 torr; 1 bar = 1000 hPa  
 Viscosity:.....: 1 mPa\*s = 1 centipoise (cP)