WACKER SILICONES

Material Safety Data Sheet

Material: 70702006 **AK 100**
SILICONE FLUID

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1 Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: AK 100
SILICONE FLUID

Use of substance / preparation: Industrial.
Raw material for: elastomer products , cosmetics , lubricants , textile .

1.2 Company/undertaking identification:

Manufacturer/distributor:
Wacker Chemical Corporation
3301 Sutton Road
Adrian, MI 49221-9397
USA

Customer information:
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.wackersilicones.com

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

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

2 Composition/information on ingredients

2.1 Chemical characterization (substance):

Chemical characteristics
Polydimethylsiloxane

2.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	63148-62-9	Polydimethyl siloxane	100.0	100.0	NH

Type: HYD - by-product upon hydrolysis, INHA - ingredient, NEBE - by-product, MONO - residual monomer, VERU - impurity, VUL - by-product upon vulcanization. *** **Note:** C1 - IARC carcinogen, C2 - NTP carcinogen, C3 - OSHA carcinogen, NH - non-hazardous, R - reproductive toxin.

This material does not contain any OSHA or WHMIS reportable hazardous ingredients.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 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.

3 Hazards identification

3.1 Hazards classifications

HMIS® rating (product as packaged):
Health: 1 Fire: 1 Reactivity: 0 PPE: B

(HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.

Canadian WHMIS Classification: None.

3.2 Emergency overview and potential hazards

This material is not hazardous under OSHA criteria. This material is not hazardous under WHMIS criteria. Liquid silicone based materials have lubricating properties that can substantially reduce or eliminate traction and may pose a slip hazard. Please use warning labels on consumer products where traction is essential for safety.

Physical Hazards:
No known physical hazards.

Acute health effects
Route of entry or possible contact:
eyes , skin , ingestion
Eye contact:
May cause slight eye irritation.
Skin contact:
No acute toxic effects are expected.
Inhalation:
Inhalation is not expected due to low vapor pressure.
Ingestion:
Not expected in industrial use.
Additional information on acute health effects:
The toxicological evaluation is based on test results with a similar product.

3.3 Further information:
Chronic health effects:
No known or expected chronic health effects.
Medical conditions which may be aggravated by exposure:
none known
Carcinogens/Reproductive toxins:
There are no carcinogenic ingredients present at or over 0.1% in this material. This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels.

See Section 11 for Toxicological Information, if any.

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 measures required.

4.3 After contact with the skin:
For 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:
After swallowing: No special treatment is required.

5 Fire-fighting measures

5.1 Flammable properties:

		Method
Flash point:	> 279 °C (> 534 °F)	(DIN 51376)
Flash point:	> 238 - 263 °C (460 - 505 °F)	(ASTM D93)
Boiling point / boiling range:	> 200 °C (> 392 °F)	
Lower explosion limit (LEL):	not determined	
Upper explosion limit (UEL):	not determined	
Ignition temperature :	not determined	
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:
If material is released indicate risk of slipping. Do not walk through spilled material.
HAZWOPER PPE Level: D

6.2 Containment:
Prevent material from entering surface waters, drains or sewers and soil. Contain any fluid that runs out using suitable material (e.g. earth). Close leak if possible without risk. 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. For small amounts: Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Contain larger amounts and pump up into suitable containers. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Apply sand or other inert granular material to improve traction.

7 Handling and storage

7.1 Handling
Precautions for safe handling:
Spilled substance increases risk of slipping.
Precautions against fire and explosion:
Observe the general rules for fire prevention.

7.2 Storage
Conditions for storage rooms and vessels:
none known
Advice for storage of incompatible materials:
not applicable
Further information for storage:
Keep container tightly closed. Store in a dry and cool place.

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
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.

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:	clear, Colorless
Odour:	slight

9.2 Safety parameters

		Method
Melting point / melting range:	not applicable	
Boiling point / boiling range:	> 200 °C (> 392 °F)	
Flash point:	> 279 °C (> 534 °F)	(DIN 51376)
Flash point:	> 238 - 263 °C (460 - 505 °F)	(ASTM D93)
Ignition temperature :	not determined	
Lower explosion limit (LEL):	not determined	
Upper explosion limit (UEL):	not determined	
Vapour pressure:	< 0.133322 hPa at 20 °C (68 °F)	(Not Specified)
Density:	0.953 - 0.977 g/cm3	
Water solubility / miscibility:	insoluble	
pH-Value:	not applicable	
Viscosity (dynamic):	100 mPa*s	

9.3 Further information

Percent Volatiles :	<= 0.5 %	
VOC :	0.0000 g/l	(calculated value)

10 Stability and reactivity

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

10.1 Conditions to avoid:
none known

10.2 Materials to avoid:
none known

10.3 Hazardous decomposition products:
If stored and handled in accordance with standard industrial practices and local regulations where applicable: none known . Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

10.4 Further information:
Hazardous polymerization cannot occur.

11 Toxicological information

11.1 General information:
Toxicological testing has been conducted with similar product(s).

11.2 Toxicological data:

Acute toxicity (LD50/LC50-values relevant to classification):

Exposition	Value/value range	Species	Source
oral	> 5000 mg/kg	rat	literature
dermal	> 2008 mg/kg	rat (Limit Test)	test report

Primary irritation:

Exposition	Effect	Species/Testsystem	Source
to skin	not irritating	rabbit	test report
to eyes	mildly irritating	rabbit	test report

Sensitization:

Exposition	Effect	Test method	Species	Source
to skin	not sensitizing	Magnusson-Kligmann	guinea-pig	test report

Reference points for mutagenic (carcinogenic) potential:

Test system	Effect	Source
Bacterial Reverse Mutation Test	not mutagenic	test report

Experience with man:
Human patch test: Product displays good compatibility with the skin.

12 Ecological information

12.1 Information on elimination (persistence and degradability)

Biodegradation / further information:
Biologically not degradable. Polydimethylsiloxanes are degradable to a certain extent in abiotic processes.

Further information:
Elimination by adsorption to activated sludge.

12.2 Behaviour in environmental compartments

Mobility
Forms thin oil film on surface of water. Absorbed by floating particles. Separation by sedimentation.

Further information:
Bioaccumulation is not expected to occur.

12.3 Ecotoxicological effects:

No expected damaging effects to aquatic organisms.

Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):

According to current knowledge adverse effects on water purification plants are not expected.

12.4 Additional information

Other harmful effects
-

General information:
No environmental problems expected if handled and treated in accordance with standard industrial practices and local regulations where applicable.

13 Disposal considerations

13.1 Product disposal
Recommendation:
Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations.

13.2 Packaging diposal
Recommendation:
Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14 Transport information

14.1 US DOT & CANADA TDG SURFACE
Valuation.....: Not regulated for transport
Corrosive to Steel or Aluminum: Not corrosive to steel or aluminum.

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 any TSCA 12(b) regulated chemicals.

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 Carcinogens:
This material does not contain any chemicals known to the state of California to cause cancer.

California Proposition 65 Reproductive Toxins:
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 Canadian regulations

This product has been classified in accordance with the Hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Hazard Classes:
None.

DSL Status:
This material or its components are listed on the Canadian Domestic Substances List.

Non-DSL Chemicals:
This material does not contain any non-DSL chemicals.

Canadian Ingredient Disclosure List:
This material contains no listed components.

15.4 Other international regulations

EU Risk Phrases:

R-Phrase	Description
R-	-

EU Safety Phrases:

S-Phrase	Description
S-	-

Details of international registration status
Listed on the following inventories:
ENCS - Japan
AICS - Australia
EINECS - Europe
ECL - Korea
PICCS - Philippines
DSL - Canada
TSCA - USA
IECSC - China

16 Other information

16.1 Additional information:

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. 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 MSDS 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.

16.2 Glossary of Terms:

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

Flash point determination methods	**Common name**
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)