

1. Product and company identification**1.1 Identification of the substance or preparation:**

Commercial product name: AK1000
SILICONE FLUID

Use of substance / preparation: Industrial.
Intermediate chemical

1.2 Company/undertaking identification:

Supplier/distributor: Chemical Store Inc.
1059 Main Avenue
Clifton, NJ 07011.
USA
Tel: +1 (973) 405-6248

Emergency telephone no. (24h): +1 (973) 420-4972

2. Composition/information on ingredients**2.1 Chemical characterization (substance)**

Chemical characteristics
Polydimethylsiloxane

2.2 Information on ingredients:

This material does not contain any hazardous substances at or above OSHA and WHMIS reportable levels.

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

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

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 .

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:

No acute toxic effects are known.

Additional information on acute health effects:

Ingestion is not expected during industrial use. 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

Target organs affected:

No known internal organ effects.

Signs and Symptoms of Exposure:

Refer to Acute Health Effects, listed above.

Carcinogens/Reproductive toxins:

This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels. This material does not contain any reportable carcinogenic ingredients.

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.

4.3 After contact with the skin

For skin contact, immediately wipe away excess material. 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.

4.6 Advice for the physician

Treat symptomatically.

5. Fire-fighting measures

5.1 Flammable properties:

Property:	Value:	Method:
Flash point.....	> 300 °C (> 572 °F)	(ISO 2592)
Boiling point / boiling range	not applicable	
Lower explosion limit (LEL)	not applicable	
Upper explosion limit (UEL).....	not applicable	
Ignition temperature	approx. 450 °C (842 °F)	(DIN 51794)
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 General information:**

No special protective measures required.

7.2 Handling**Precautions for safe handling:**

Spilled substance increases risk of slipping.

Precautions against fire and explosion:

Observe the general rules for fire prevention.

7.3 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.

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:

No special ventilation required.

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:

Any liquid-tight rubber or vinyl gloves.

Eye protection:

Safety glasses with side shields or chemical safety goggles.

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:

Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when handling. Follow standard industrial hygiene practices when using this material. 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	-50 °C (-58 °F)	
Boiling point / boiling range	not applicable	
Flash point.....	> 300 °C (> 572 °F)	(ISO 2592)
Ignition temperature	approx. 450 °C (842 °F)	(DIN 51794)
Lower explosion limit (LEL)	not applicable	
Upper explosion limit (UEL).....	not applicable	
Vapour pressure.....	not applicable	
Density	approx. 0.97 g/cm ³ at 25 °C (77 °F)	(DIN 51757)
Water solubility / miscibility.....	virtually insoluble at 20 °C (68 °F)	
pH-Value	approx. 7	(-)
Viscosity (dynamic)	1000 mPa.s at 25 °C (77 °F)	
Viscosity (kinematic)	approx. 1000 mm ² /s at 25 °C (77 °F)	(DIN 53018)

9.3 Further information

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

Toxicological testing has been conducted with similar product(s).

11.1.1 Acute toxicity

Assessment:

Based on the available data acute toxic effects are not expected after single oral exposure. Based on the available data acute toxic effects are not expected after single dermal exposure.

Product details:

Route of exposure	Result/Effect	Species/Test system	Source
oral	LD ₅₀ : > 5000 mg/kg	rat	Conclusion by analogy
dermal	LD ₅₀ : > 2008 mg/kg	rat	Conclusion by analogy

11.1.2 Skin corrosion/irritation**Assessment:**

Based on the available data a clinically relevant skin irritation hazard is not expected.

Product details:

Result/Effect	Species/Test system	Source
not irritating	rabbit	Conclusion by analogy

11.1.3 Serious eye damage / eye irritation**Assessment:**

Based on the available data a clinically relevant eye irritation hazard is not expected.

Product details:

Result/Effect	Species/Test system	Source
not irritating	rabbit	Conclusion by analogy

11.1.4 Respiratory or skin sensitization**Assessment:**

Based on the available data a sensitization reaction is not expected from this product.

Product details:

Route of exposure	Result/Effect	Species/Test system	Source
dermal	not sensitizing	guinea-pig; Magnusson-Kligmann	Conclusion by analogy 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	Conclusion by analogy OECD 471

11.1.6 Carcinogenicity**Assessment:**

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

11.1.7 Reproductive toxicity**Assessment:**

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

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.

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

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

12. Ecological information**12.1 Toxicity****Assessment:**

Evaluation on basis of physical-chemical properties: No expected damaging effects to aquatic organisms. According to current knowledge adverse effects on water purification plants are not expected.

12.2 Persistence and degradability Assessment:

Biologically not degradable. Absorbed by floating particles. Separation by sedimentation. Polydimethylsiloxanes are degradable to a certain extent in abiotic processes.

12.3 Bioaccumulative potential Assessment:

Bioaccumulation is not expected to occur.

12.4 Mobility in soil**Assessment:**

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

12.5 Other adverse effects

none known

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 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.

14. Transport information**14.1 US DOT & CANADA TDG SURFACE****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.

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 or in accordance with the following inventories:

- IECSC - China
- EINECS - Europe
- ENCS - Japan
- PICCS - Philippines
- ECL - Korea
- DSL - Canada
- TSCA - USA
- AICS - Australia

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.

Vertical lines in the left-hand margin indicate changes compared with the previous version.

16.2 Glossary of Terms:

ACGIH - American Conference of Governmental Industrial

Version: 1.1 (US)

SILICONE FLUID AK1000

Date of last alteration: 8/1/2018

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)