WACKER

Safety Data Sheet

Material: **LUMISIL® 400 B US**

Version: 2.2 (US) Date of print: 02/05/2018 Date of last alteration: 11/04/2016

1. Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: **LUMISIL® 400 B US**
Product group: Liquid Rubber

Use of substance / preparation: Raw material for: elastomer products .

1.2 Company/undertaking identification:

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

Customer information:
Wacker Chemical Corporation
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Adrian, Michigan 49221-9397
USA
InfoLine:
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Hours of operation:
Monday - Friday, 8 am to 5 pm (eastern standard time)
Corporate website: 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

Product can release hydrogen. Risk of hydrogen gas formation with water, alcohols, acids, metallic salts, amines and alkalis. In combination with oxygen, the released hydrogen can form oxyhydrogen.

3. Composition/information on ingredients

3.1 Chemical characterization (preparation)

Chemical characteristics
Polydimethylsiloxane with functional groups and auxiliaries for addition cross-linking

3.2 Information on ingredients:

This material does not contain any reportable hazardous ingredients.

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.

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

No special treatment required.

4.3 After contact with the skin

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 treatment required.

5. Fire-fighting measures

5.1 Flammable properties:

Property:	Value:	Method:
Flash point	> 250 °C (> 482 °F)	(DIN 51376)
Boiling point / boiling range	not applicable	
Lower explosion limit (LEL)	not applicable	
Ignition temperature	> 400 °C (> 752 °F)	(DIN 51794)
NFPA Hazard Class (comb./flam.liquid)	IIIB	

5.2 Fire and explosion hazards:

Caution! Under certain conditions this material may generate flammable hydrogen gas. Consider possible formation of explosive mixtures with air, for example in uncleaned containers by moisture. Never use welding or cutting torch on or near any container of this material, even if empty, because an explosion could occur. Spontaneous ignition is possible due to electrostatic discharge. The generation of hydrogen gas is increased under circumstances mentioned in Sect. 10 "Stability and reactivity". Explosion limits for hydrolysis product: 4-75.6% v/v (hydrogen) .

5.3 Recommended extinguishing media:

carbon dioxide , dry sand , alcohol-resistant foam .

5.4 Unsuitable extinguishing media:

water , dry chemical , halones .

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. Hydrogen gas can become trapped under foam blankets, so sources of ignition must be eliminated during the clean-up and recovery process.

6. Accidental release measures

6.1 Precautions:

Secure the area. Wear personal protection equipment (see section 8). If material is released indicate risk of slipping.

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). If safe to do so, stop the leak at its source.

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

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. Use only air driven or properly rated electrical eqiupment. Use vented recovery 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.

6.4 Further information:

Eliminate all sources of ignition. Material designated for disposal must be segregated from incompatible substances or materials specified in Sect. 10. Do not blend contaminated material with uncontaminated material. Observe notes under section 7.

7. Handling and storage

7.1 General information:

Always stir well before use.

7.2 Handling

Precautions for safe handling:
Open and handle container with care. Ensure adequate ventilation. Keep container closed when not in use. Keep away from incompatible substances in accordance with section 10. Where possible, inert process equipment and blanket vessels, tanks and containers with nitrogen to reduce the available oxygen level. Contact WACKER for additional publications on the safe Handling of SiH Products.

Precautions against fire and explosion:
Product can release hydrogen. In partly emptied containers formation of explosive mixtures is possible. Keep away from sources of ignition and do not smoke. Keep away from open flames, heat and sparks. Take precautionary measures against electrostatic charging.

7.3 Storage

Conditions for storage rooms and vessels:
Do not store in virgin glass containers with basic surface.

Advice for storage of incompatible materials:
Do not store with: basic substances (e.g. alkalis, ammonia, amines) , oxidizing agents , strong acids .

Further information for storage:
Protect against moisture. Store in a dry and cool place. Store container in a well ventilated place.

8. Exposure controls and personal protection

8.1 Engineering controls

Ventilation:
Use only with adequate ventilation.

Local exhaust:
Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne contaminants at the point of use.

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: butyl rubber protective gloves , neoprene gloves , PVC 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:

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
Odour	:	odourless

9.2 Safety parameters

Property:		Value:	Method:
Melting point / melting range	:	not determined	
Boiling point / boiling range	:	not applicable	
Flash point	:	> 250 °C (> 482 °F)	(DIN 51376)
Ignition temperature	:	> 400 °C (> 752 °F)	(DIN 51794)
Lower explosion limit (LEL)	:	not applicable	
Vapour pressure	:	not applicable	
Density	:	1.02 g/cm³ at 23 °C (73 °F)	(DIN 51757)
Water solubility / miscibility	:	virtually insoluble at 20 °C (68 °F)	
pH-Value	:	not applicable	
Viscosity (dynamic)	:	5000 mPa.s at 25 °C (77 °F)	

9.3 Further information

According to previous experience spontaneous combustion temperature for polymer siloxane with SiH compounds is above 240 °C (464 °F). On a catalytically active surface ignition may occur at much lower temperature. This applies to porous or fibrous substances including those with alkaline surfaces, such as thermal insulation and cementaceous insulating materials. Explosion limits for released hydrogen: 4 - 75.6%(V). Re 9.2 pH Value: Product displays neutral reaction.

Odour limit	:	no data available
Thermal decomposition	:	> 200 °C (> 392 °F)

10. Stability and reactivity

10.1 General information:

Stable under normal conditions of use. In contact with incompatible substances this material may quickly generate a large volume of flammable hydrogen gas.

10.2 Conditions to avoid

moisture . Heat, open flames, and other sources of ignition. Contact with contaminated piping or vessels or with corroded and rusty containers can increase the rate of hydrogen formation. Observe information in section 7.

10.3 Materials to avoid

Reacts violently with: acids , basic substances (e.g. alkalis, ammonia, amines) . Reacts with: alcohols , water , moisture , oxidizing agents , catalyst . Reaction causes the formation of: hydrogen .

10.4 Hazardous decomposition products

hydrogen . 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

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

Product details:

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

11.1.3 Serious eye damage / eye irritation

Product details:

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

11.1.4 Respiratory or skin sensitization

Product details:

Route of exposure	Result/Effect	Species/Test system	Source
dermal	not sensitizing	guinea-pig; Bühler	Conclusion by analogy OECD 406

11.1.5 Germ cell mutagenicity

Assessment:

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

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.

12. Ecological information

12.1 Toxicity

Assessment:

Evaluation in analogy to similar product. 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:

Silicone content: biologically not degradable. Elimination by adsorption to activated sludge.

12.3 Bioaccumulative potential

Assessment:

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 or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations. Material designated for disposal must be segregated from incompatible substances or materials specified in Sect. 10. Wastes of this material should not be mixed with other wastes. Provide measures such as vented bungs to ensure pressure relief in the waste containers.

13.2 Packaging disposal

Recommendation:
Containers may contain hazardous quantities of hydrogen gas. Uncleaned containers should not be reused to hold another material due to the potential for reaction between residual product and incompatible materials. Uncleaned packaging should be treated with the same precautions as the material. Containers should be completely emptied before recycling as specified in government regulations.

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
Comment.....: Due to safety reasons no air transport of inner packagings > 1kg!

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.

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):

CAS No.	Chemical	Upper limit wt. %
108-88-3	Toluene	<=0.0758

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:
108-88-3 Toluene

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 SDS 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.

15.4 Details of international registration status

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

United States of America (USA).....: **TSCA** (Toxic Substance Control Act Chemical Substance Inventory):
This product is listed in, or complies with, the substance inventory.

Philippines.....: **PICCS** (Philippine Inventory of Chemicals and Chemical Substances):
This product is listed in, or complies with, the substance inventory.

Japan.....: **ENCS** (Handbook of Existing and New Chemical Substances):
This product is listed in, or complies with, the substance inventory.

People's Republic of China.....: **IECSC** (Inventory of Existing Chemical Substances in China):
This product is listed in, or complies with, the substance inventory.

South Korea (Republic of Korea)....: **ECL** (Existing Chemicals List):
This product is listed in, or complies with, the substance inventory.

Canada....: **DSL** (Domestic Substance List):
This product is listed in, or complies with, the substance inventory.

Australia ....: **AICS** (Australian Inventory of Chemical Substances):
This product is listed in, or complies with, the substance inventory.

Taiwan (Republic of China)....: **TCSI** (Taiwan Chemical Substance Inventory):
This product is listed in, or complies with, the substance inventory. General note: Taiwan REACH 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.

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 product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS 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 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.

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)