

Safety Data Sheet

Material: 60003096

**WACKER® SILICONE HEAT SINK
PASTE P 12**

Version 3.5 (US)

Print Date 12/01/2022

Date of last alteration: 11/09/2022

1. Product and company identification

1.1 Identification of the substance or preparation:

Trade name **WACKER® SILICONE HEAT SINK
PASTE P 12**

Use of the Substance/Mixture Industrial.
Auxiliary agent for: electronic

1.2 Company/undertaking identification:

Manufacturer/distributor: Wacker Chemical Corporation
4950 S State Road
Ann Arbor, MI 48108
USA

Customer information: InfoLine:
Tel (517) 264-8240
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

No data available.

Endocrine disrupting properties - human health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties - environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. Composition/information on ingredients

3.1 Chemical characterization (preparation)

Chemical characterization

Polydimethylsiloxane and auxiliary

3.2 Information on ingredients:

Type	CAS-No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	1314-13-2	Zinc oxide	>25.0	<70.0	

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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.

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.

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above $\geq 0.1\%$.

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 If inhaled

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

4.3 In case of skin contact

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 In case of eye contact

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

4.5 If swallowed

No special measures are required after swallowing.

5. Fire-fighting measures**5.1 Flammable properties:**

Property:	Value:	Method:
Flash point.....	exempt	
Boiling point/boiling range	exempt	
Lower explosion limit.....	exempt	
Upper explosion limit.....	exempt	
Ignition temperature	> 400 °C (> 752 °F)	(DIN 51794)

5.2 Fire and explosion hazards:

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

5.3 Recommended extinguishing media:

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

5.4 Unsuitable extinguishing media:

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.

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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

6.2 Containment:

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. 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

Scoop up large quantities after dusting surfaces with sand or Fuller's earth to prevent sticking. Sweep or scrape up the spilled material and place in an appropriate chemical waste container. 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:

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.

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.

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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: liquid
 Form: paste
 Colour: white
 Odour: odourless

9.2 Safety data

Property:	Value:	Method:
Melting point.....	exempt	
Boiling point/boiling range	exempt	
Flash point.....	exempt	
Ignition temperature	> 400 °C (> 752 °F)	(DIN 51794)
Lower explosion limit.....	exempt	
Upper explosion limit.....	exempt	
Vapour pressure.....	exempt	
Density	2.1 g/cm ³ at 25 °C (77 °F), at 1013 hPa	(ISO 1183-1 A)
Water solubility.....	practically insoluble at 20 °C (68 °F)	
pH	Not applicable. Insoluble in water.	
Partition coefficient: n-octanol/water	not applicable	
Viscosity, dynamic.....	exempt	
Viscosity, kinematic.....	no data available	

9.3 Further information

No data available.

Odour Threshold: no data available
 VOC: 1.05 g/l
 Thermal decomposition.....: > 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**

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11.1.1 Acute toxicity**Assessment:**

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

11.1.2 Skin corrosion/irritation**Assessment:**

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

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

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

11.1.4 Respiratory or skin sensitisation**Assessment:**

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

Product details:

Exposure routes	Result
Inhalation	No data available.

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:**

Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.1.11 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.1.12 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.

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Other information: None known.

12. Ecological information

12.1 Toxicity

Assessment:

Assessment based on ecotoxicological tests with similar products under consideration of the physical-chemical properties: For this product no effects on aquatic organisms, relevant for classification, are expected.

Product details:

Result/Effect	Species/Test system	Source
ErC50: > 100 mg/l The value refers to the water-accommodated fraction (WAF).	static test Desmodesmus subspicatus (green algae) (72 h)	Conclusion by analogy OECD 201
NOEC (Growth rate): 31.3 mg/l The value refers to the water-accommodated fraction (WAF).	static test Desmodesmus subspicatus (green algae) (72 h)	Conclusion by analogy OECD 201

12.2 Persistence and degradability

Assessment:

Silicone content: biologically not degradable. Separation by sedimentation.

12.3 Bioaccumulative potential

Assessment:

Polymer component: Bioaccumulation is not expected to occur.

12.4 Mobility in soil

Assessment:

For the product as a whole, no test data is available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 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.

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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.

CERCLA Regulated Chemicals:

CAS-No.	Chemical	RQ	Upper limit wt. %
1314-13-2	Zinc oxide		65.5

CERCLA Regulated Chemicals:

No RQ has been assigned.

SARA 302 EHS Chemicals:

This material does not contain any SARA extremely hazardous substances.

SARA 311/312 Hazard Class:

No SARA Hazards

SARA 313 Chemicals:

CAS-No.	Chemical	Upper limit wt. %
1314-13-2	Zinc oxide	65.5

SARA 313 information included on this SDS should be included in all SDSs that are copied from and distributed for this material.

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:TSRN38673700- Zinc oxide
5008P**Pennsylvania Right-to-Know Hazardous Substance List:**TSRN38673700- Zinc oxide
5008P**15.3 Details of international registration status**

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

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

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New Zealand	NZIoC (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	AIIC (Australian Inventory of Industrial Chemicals): This product is listed in, or complies with, the substance inventory.
China	IECSC (Inventory of Existing Chemical Substances in China): 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.
Philippines	PICCS (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory.
United States of America (USA)	TSCA (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	TCSI (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.
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.
South Korea (Republic of Korea)	AREC (Act on Registration and Evaluation of Chemicals; "K-REACH"): Please approach your regular contact for more detailed information.

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.

WACKER restricts the use of its products inside the human body or in contact with bodily fluids and mucosa. For further details please review our Health Care Policy on www.wacker.com. WACKER may cancel any delivery obligation(s) if the Health Care Policy is not observed.

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	

Flash point determination methods	Common name
ASTM D56.....	Tagliabue (Tag) closed cup

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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)