

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

1. Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name:

WACKER® RTV-S 691 B

Use of substance / preparation

Industrial.

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
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

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

Danger of oxyhydrogen gas formation with water, alcohols, acids, metallic salts, amines and alkalis.

3. Composition/information on ingredients

3.1 Chemical characterization (substance)

Chemical characteristics

Polysiloxane with functional groups + auxiliary

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.

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

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 measures 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 is 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	
Upper explosion limit (UEL).....	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 , benzene 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

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

6.2 Containment:

Prevent material from entering surface waters, drains or sewers and soil.

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

Remove mechanically or with liquid-binding material. 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:**

Stir thoroughly before use or catalysing.

7.2 Handling**Precautions for safe handling:**

Use caution when opening any bulging container. Wear all appropriate protective equipment. Work in an open area away from other materials, operations, and sources of ignition. Open slowly to allow a gradual release of pressure. 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:**

none known

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**Maximum airborne concentrations at the workplace:**

CAS No.	Material	Type	mg/m ³	ppm	Dust fract.
---------	----------	------	-------------------	-----	-------------

none known .

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

Respiratory protection is not normally required.

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

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	
Upper explosion limit (UEL).....	not applicable	
Vapour pressure.....	not applicable	
Density	1 g/cm ³ at 20 °C (68 °F)	
Water solubility / miscibility.....	virtually insoluble at 20 °C (68 °F)	
pH-Value	not applicable	
Viscosity (dynamic)	200 - 240 mPa.s at 20 °C (68 °F)	

9.3 Further information

According to previous experience autoignition of SiH containing products on a catalytically active surface may occur at a much lower temperature than expected. 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.

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

10.4 Hazardous decomposition products

Releases flammable hydrogen gas. Measurements have shown the formation of small amounts of benzene at temperatures above about 180 °C (356 °F). Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

10.5 Further information:

Hazardous polymerization cannot occur.

11. Toxicological information

11.1 Information on toxicological effects

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 : > 2000 mg/kg No mortality with the given dose.	rat	test report
oral	LD ₅₀ : > 15000 mg/kg	rat	Conclusion by analogy
dermal	LD ₅₀ : > 2000 mg/kg No mortality with the given dose.	rabbit	test report

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-Kligman	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.

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

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

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.

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:**

Risk of oxyhydrogen formation upon contact with the substances mentioned in 10. 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. 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.

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

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. 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

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 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 SDS contains all the information required by the CPR.

Safety Data Sheet

Material: 60004619

WACKER® RTV-S 691 B

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

WHMIS Hazard Classes:

None.

DSL Status:

This material or one or more of its components is not listed on the Canadian Domestic Substances List. However, the material or some of its components are listed on the NDSL (Non-Domestic Substances List).

Non-DSL Chemicals:

CAS No.	Chemical	Upper limit wt. %
Confidential	Wacker Proprietary Non-DSL Polymer	100.0

15.4 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.

United States of America (USA)..... : **TSCA** (Toxic Substance Control Act Chemical Substance Inventory):
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.

South Korea (Republic of Korea) : **ECL** (Existing Chemicals List):
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.

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

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

Common name

Tagliabue (Tag) closed cup
Cleveland open cup
Pensky-Martens closed cup
Setaflash or Rapid closed cup

Safety Data Sheet

Material: 60004619**WACKER® RTV-S 691 B**

Version: 1.9 (US)

Date of print: 05/24/2018

Date of last alteration: 06/24/2015

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)