WACKER

Safety Data Sheet

Material: 60003728 **ELASTOSIL® E43 TRANSPARENT**

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1. Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: **ELASTOSIL® E43 TRANSPARENT**

Use of substance / preparation: Industrial.
Adhesive / sealant .

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):

Class	Category	Route of exposure
Reproductive toxicity	Category 2 (impair fertility)	

2.2 Label elements

Labelling (GHS):

Pictogram(s):

Signal Word: Warning

H-Code	Hazard Statements
H361f	Suspected of damaging fertility.

P-Code	Precautionary Statements
P280	Wear protective gloves/protective clothing/eye protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P501	Dispose of contents/container to waste disposal.

2.3 Other hazards

No data available.

3. Composition/information on ingredients

3.1 Chemical characterization (preparation)

Chemical characteristics
Polydimethylsiloxane and fillers and auxiliaries and acetoxysilane cross-linker

3.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	4253-34-3	Triacetoxy methylsilane		<5.0	
VERU	556-67-2	Octamethyl cyclotetrasiloxane	>0.1	<0.2	R

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.

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

If inhaled, remove to fresh air.

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

If swallowed, do not induce vomiting. Induce drinking plenty of water in small portions. Get medical attention immediately. Show label.

5. Fire-fighting measures

5.1 Flammable properties:

Property:		Value:	Method:
Flash point	:	not applicable	
Boiling point / boiling range	:	not applicable	
Lower explosion limit (LEL)	:	not applicable	
Upper explosion limit (UEL)	:	not applicable	
Ignition temperature	:	approx. 460 °C (860 °F)	

5.2 Fire and explosion hazards:

Consider possible formation of explosive mixtures with air, for example in uncleaned containers.

5.3 Recommended extinguishing media:

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

5.4 Unsuitable extinguishing media:

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 , acetic acid and incompletely burnt hydrocarbons .

5.6 Fire fighting procedures:

Cool endangered containers with water. Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

6. Accidental release measures

6.1 Precautions:

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. If material is released indicate risk of slipping. Do not walk through spilled material.

HAZWOPER PPE Level: C

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.

6.4 Further information:

Exhaust vapours. Eliminate all sources of ignition. Consider explosion protection. Observe notes under section 7.

7. Handling and storage

7.1 Handling

Precautions for safe handling:
Ensure adequate ventilation. Must be syphoned off in situ. Keep away from incompatible substances in accordance with section 10. Observe information in section 8.

Precautions against fire and explosion:
Product may release acetic acid. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or other enclosed spaces. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

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. Protect against moisture. Store container in a well ventilated place.
Minimum temperature allowed during storage and transportation: 0 °C (32 °F)

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.
64-19-7	Acetic acid	OSHA PEL	25.0	10.0	
64-19-7	Acetic acid	ACGIH TWA		10.0	

Re Acetic acid (CAS-no. 64-19-7): STEL is 15 ppm (ACGIH).

none known

Further information:
Maximum concentration at workplace recommended by producer: octamethylcyclotetrasiloxane (D4, CAS no. 556-67-2) = 10 ppm (123 mg/m^3).

8.3 Personal protection equipment (PPE)

Respiratory protection:
A NIOSH approved air purifying respirator equipped with universal multi-contaminant multi-gas/vapor cartridges is recommended if overexposure to chemical vapors could occur.

Hand protection:
Protective gloves made of fluorinated rubber

Eye protection:
Safety glasses with side shields or chemical safety goggles.

Other protective clothing or equipment:
protective clothing to cover exposed areas of arms, legs and torso Provide eye bath and safety shower.

8.4 General hygiene and protection measures:

Avoid contact with eyes, skin and clothing. Do not breathe dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Wash thoroughly after handling.

9. Physical and chemical properties

9.1 Appearance

Physical state / form ..... : paste
Colour ..... : transparent
Odour ..... : pungent

9.2 Safety parameters

Property:	Value:	Method:
Melting point / melting range	not applicable	
Boiling point / boiling range	not applicable	
Flash point	not applicable	
Ignition temperature	approx. 460 °C (860 °F)	
Lower explosion limit (LEL)	not applicable	
Upper explosion limit (UEL)	not applicable	
Vapour pressure	not applicable	
Density	1.09 g/cm³ at 20 °C (68 °F)	(DIN 53217)
Water solubility / miscibility	virtually insoluble	
pH-Value	not applicable	
Viscosity (dynamic)	300000 mPa.s at 25 °C (77 °F)	(DIN EN ISO 2555)

9.3 Further information

Re 9.2 solubility in water: Hydrolytic decomposition occurs. Re 9.2 pH Value: Product displays acidic reaction with water. Explosion limits for released acetic acid: 4 - 17%(V).

Thermal decomposition.....: No decomposition when used according to regulations.

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

moisture .

10.3 Materials to avoid

Reacts with: water , basic substances and alcohols . Reaction causes the formation of: acetic acid .

10.4 Hazardous decomposition products

By hydrolysis: acetic acid . 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 General information

Data derived for the product as a whole are of higher priority than data for single ingredients.

11.1.2 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	rat	Conclusion by analogy
dermal	LD_{50}: > 2009 mg/kg	rabbit	Conclusion by analogy

11.1.3 Skin corrosion/irritation

Product details:

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

11.1.4 Serious eye damage / eye irritation

Product details:

Result/Effect	Species/Test system	Source
not irritating	in vitro method; Bovine eye / bovine cornea	Conclusion by analogy OECD 437

11.1.5 Respiratory or skin sensitization

Assessment:

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

11.1.6 Germ cell mutagenicity

Assessment:

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

11.1.7 Carcinogenicity

Assessment:

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

Data related to ingredients:

Octamethylcyclotetrasiloxane (D4, Impurity):

In a two year combined chronic toxicity and carcinogenicity inhalation study with octamethylcyclotetrasiloxane (OMCTS/D4) in rats, an increased incidence of (uterine) endometrial cell hyperplasia and endometrial adenomas were observed at the highest exposure level of 700 ppm in female rats. These same effects were not seen at the other dose levels of 10, 30, and 150 ppm. Since these effects only occurred at 700 ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing OMCTS/D4 would result in a significant risk to humans.

Decamethylcyclopentasiloxane (D5, Impurity):

In a two year combined chronic toxicity and carcinogenicity inhalation study with decamethylcyclopentasiloxane (D5) in rats, an increased incidence for (uterine) endometrial tumors was observed in the highest exposure level of 160 ppm in female rats. The same effects were not seen at the other dose levels of 10 and 40 ppm. Whether or not this increase in incidence is truly related to the exposure to D5 is questionable and yet to be determined. Based on our present knowledge it is unlikely that industrial, commercial or consumer uses of products containing D5 would result in a significant risk to humans.

11.1.8 Reproductive toxicity

Assessment:

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

Data related to ingredients

Octamethylcyclotetrasiloxane (D4, Impurity):

In a two generation reproductive study via inhalation with OMCTS/D4 rats, decreased mean live litter size and prolonged labor (dystocia) were observed at the 500 ppm and 700 ppm exposure levels. The relevance of these effects in humans cannot be determined at this time. Because these effects are only seen at very high exposure levels, it is unlikely that industrial, commercial and/or consumer uses of products containing OMCTS/D4 would result in a significant risk to humans. Based on animal experiments there is no indication of developmental effects.

11.1.9 Specific target organ toxicity (single exposure)

Assessment:

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

11.1.10 Specific target organ toxicity (repeated exposure)

Assessment:

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

11.1.11 Aspiration hazard

Assessment:

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

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.

Other information: In contact with dampness product separates a small quantity of acetic acid (64-19-7) which irritates skin and mucous membranes.

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

Product details:

Result/Effect	Species/Test system	Source
ErC50: > 100 mg/l (measured)	static Desmodesmus subspicatus (72 h)	Conclusion by analogy OECD 201

12.2 Persistence and degradability

Assessment:

Silicone content: biologically not degradable. Separation by sedimentation. The product of hydrolysis (acetic acid) is readily biodegradable.

12.3 Bioaccumulative potential

Assessment:

Bioaccumulation is not expected to occur.

12.4 Mobility in soil

Assessment:

Polymer component: insoluble in water.

12.5 Other adverse effects

none known

12.6 Additional information

In cross-linked state not soluble in water. Easily separable from water by filtration.

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.

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:
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:
Delayed (chronic) health hazard.

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	0.0238

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:
D2A

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.

South Korea (Republic of Korea) ..... :	**ECL** (Existing Chemicals List): 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.
Australia ..... :	**AICS** (Australian Inventory of 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.
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): 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)