WACKER

# Safety Data Sheet

**Material: 60008933** **WACKER® CATALYST T 77**

Version 3.8 (US) Print Date 07/21/2023 Date of last alteration: 11/29/2022

## 1. Product and company identification

### 1.1 Identification of the substance or preparation:

**Trade name** **WACKER® CATALYST T 77**
Product group: Catalyst

Use of the Substance/Mixture: Industrial. Commercial.
elastomer products .

### 1.2 Company/undertaking identification:

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

Customer information:
Wacker Chemical Corporation
4950 S State Road
Ann Arbor, MI 48108
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):**

| Classification | H-Code |
|---|---|
| Acute toxicity, Category 4, oral | H302 |
| Serious eye damage/eye irritation, Category 1 | H318 |
| Skin sensitisation, Category 1 | H317 |
| Reproductive toxicity, Category 1B | H360F |
| Reproductive toxicity, Category 1B | H360D |
| Specific target organ toxicity - single exposure, Category 3 | H335 |
| Short-term (acute) aquatic hazard, Category 3 | H402 |
| Specific target organ toxicity - repeated exposure, Category 1 | H372 |
| Flammable liquids, Category 4 | H227 |

### 2.2 Label elements

**Labelling (GHS):**

Pictogram(s):

Signal word: Danger

| H-Code | Hazard statements |
|---|---|
| H227 | Combustible liquid. |
| H302 | Harmful if swallowed. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |

| | |
|---|---|
| H360FD | May damage fertility. May damage the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H402 | Harmful to aquatic life. |

| P-Code | Precautionary statements |
|---|---|
| P280 | Wear protective gloves/protective clothing/eye protection. |
| P273 | Avoid release to the environment. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/ doctor. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/ attention. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to waste disposal. |

### 2.3 Other hazards

The product hydrolyses under formation of methanol (CAS-Nr. 67-56-1). Methanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance for the hazard profile of the product is strongly dependent on the specific conditions. The product hydrolyses under formation of ethanol (CAS-Nr. 64-17-5). Ethanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance for the hazard profile of the product is strongly dependent on the specific conditions.
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+auxiliary+silane |

### 3.2 Information on ingredients:

| Type | CAS-No. | Substance | Content [wt. %] | | Note |
|---|---|---|---|---|---|
| | | | Lower | Upper | |
| INHA | 16068-37-4 | 1,2-Bis (triethoxysilyl) ethane | >20.0 | <25.0 | |
| INHA | 1760-24-3 | Amino alkoxysilane | >10.0 | <15.0 | |
| INHA | 1333-86-4 | Carbon black | >5.0 | <10.0 | C1 |
| VERU | 16068-36-3 | 1,1-Bis(triethoxysilyl) ethane | | <2.0 | |
| INHA | 93925-42-9 | Silicic acid, tetraethyl ester, reaction product with bis(acetyloxy)dibutylstannane | >0.3 | <1.0 | 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.

Carbon black does not trigger classification of the product for inhalation hazards. Due to the product's physical properties, particulate inhalation exposure is not possible. Regarding CAS no. 93925-42-9: This substance can also be described by CAS no. 87735-26-0.

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 ≥ 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

If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.

### 4.3 In case of skin contact

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 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

For Ingestion, if conscious, give no more than two glasses of water and induce vomiting. Vomiting can be induced by giving Syrup of Ipecac. Give fluids until the vomitus is clear. Indicate the possible formation of methanol.

### 4.6 Advice for the physician

Treat symptomatically.

## 5. Fire-fighting measures

### 5.1 Flammable properties:

| Property: | | Value: | Method: |
|---|---|---|---|
| Flash point | : | 61 °C (142 °F) | (ISO 3679) |
| Sustained combustibility | : | > 110 °C (> 230 °F) | (ISO 9038) |
| Boiling point/boiling range | : | not applicable | |
| Lower explosion limit | : | not applicable | |
| Upper explosion limit | : | not applicable | |
| Ignition temperature | : | 374 °C (705 °F) | (EN 14522) |
| NFPA Hazard Class (comb./flam.liquid) | : | IIIA | |

### 5.2 Fire and explosion hazards:

Caution! OSHA Combustible liquid and vapor. Reaction with water may cause a decrease of the flash point due to formation of volatile organic compound(s) (VOC). As a result of hydrolysis flammable vapors may accumulate in the container head space. Explosion limits for hydrolysis products: 5.5-44% v/v (methanol) and 3.5-15% v/v (ethanol).

### 5.3 Recommended extinguishing media:

Carbon dioxide. , Dry chemical. , Water - Use Fine Spray or Fog. or alcohol-resistant foam

### 5.4 Unsuitable extinguishing media:

Water-spray, 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 , nitrogen oxides 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:**

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:** 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.

**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 General information:**

Avoid exposure by technical measures or personal protective equipment.

**7.2 Handling**

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

**Precautions against fire and explosion:**
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. Product can separate ethanol and methanol.

**7.3 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.

## 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:**

| Substance | Type | mg/m³ | ppm | Dust fract. |
|---|---|---|---|---|
| Ethanol | OSHA PEL | 1,900.0 | 1,000.0 | |
| Methanol | OSHA PEL | 260.0 | 200.0 | |
| Methanol | ACGIH TWA | | 200.0 | |

Re Ethanol (CAS no. 64-17-5): STEL is 1000 ppm; carcinogenicity: A3 (ACGIH).

Re Methanol (CAS-no. 67-56-1): STEL is 250 ppm, skin notation (ACGIH); STEL is 250 ppm, skin notation (NIOSH).

**8.3 Personal protection equipment (PPE)**

**Respiratory protection:**
Recommendation in case of long or strong exposure: Use a NIOSH approved respirator for: organic vapors .

**Hand protection:**
butyl rubber protective gloves

**Eye protection:**
tight fitting chemical safety goggles

**Other protective clothing or equipment:**
Any standard or disposable coveralls. Provide eye bath and safety shower.

**8.4 General hygiene and protection measures:**

Do not breathe dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling.

## 9. Physical and chemical properties

**9.1 Appearance**

| | | |
|---|---|---|
| Physical state | : | liquid |
| Form | : | paste |
| Colour | : | black |
| Odour | : | faint |

**9.2 Safety data**

| **Property:** | | **Value:** | **Method:** |
|---|---|---|---|
| Melting point | : | exempt | |
| Boiling point/boiling range | : | not applicable | |
| Flash point | : | 61 °C (142 °F) | (ISO 3679) |
| Sustained combustibility | : | > 110 °C (> 230 °F) | (ISO 9038) |
| Ignition temperature | : | 374 °C (705 °F) | (EN 14522) |
| Lower explosion limit | : | not applicable | |
| Upper explosion limit | : | not applicable | |
| Vapour pressure | : | not determined | |
| Density | : | 1.01 g/cm³ at 23 °C (73 °F) | (ISO 1183-1 A) |
| Water solubility | : | insoluble | |
| pH | : | Not applicable. Reacts with water. | |
| Partition coefficient: n-octanol/water | : | not applicable | |
| Viscosity, dynamic | : | 130000 mPa.s at 25 °C (77 °F)<br>shear rate: 0.5 1/S | (DIN EN ISO 3219) |
| Viscosity, dynamic | : | 8000 mPa.s at 25 °C (77 °F)<br>shear rate: 25 1/S | (DIN EN ISO 3219) |
| Viscosity, kinematic | : | no data available | |

**9.3 Further information**

Solubility in water: Hydrolytic decomposition occurs. Hydrolysis products reduce the flash point. Explosion Limits: Explosion limits for released ethanol: 3.5 - 15%(V). Explosion limits for released methanol: 5.5 - 44%(V).

| | | |
|---|---|---|
| Odour Threshold | : | no data available |
| Thermal decomposition | : | no data available |

## 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, heat, open flames, and other sources of ignition.

### 10.3 Materials to avoid

Reacts with: water , basic substances and acids . The reaction takes place with the formation of ethanol and methanol.

### 10.4 Hazardous decomposition products

If stored and handled properly: none known. Ethanol and methanol by hydrolysis. 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:**

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

**Acute toxicity estimate (ATE):**
$ATE_{mix}$ (Oral): 622 mg/kg
$ATE_{mix}$ (dermal): > 5000 mg/kg

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

| Exposure routes | Result/Effect |
|---|---|
| Oral | LD50 2295 mg/kg<br>Species: Rat, Sex: male and female, Source: test report |
| dermal | LD50 > 2000 mg/kg<br>Neither mortality nor clinical signs of toxicity were observed with the given dose.<br>Species: Rabbit, Sex: male and female, Source: test report |

**1,2-Bis(triethoxysilyl)ethane:**

| Exposure routes | Result/Effect |
|---|---|
| Oral | LD50 161 mg/kg<br>Species: Rat, Sex: male and female, Method: OECD 401, Source: test report |
| dermal | LD50 1972 mg/kg<br>Species: Rat, Sex: male and female, Method: OECD 402, Source: test report |
| by inhalation (vapour) | LC50 > 0.38 mg/l; 4 h<br>No mortality at room temperature in highly enriched or saturated atmosphere.<br>Species: Rat, Sex: male and female, Method: OECD 403, Source: test report |

#### 11.1.3 Skin corrosion/irritation

**Assessment:**

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

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

| |
|---|
| mildly irritating<br>(Species: Rabbit, Method: OECD 404, Source: test report) |

**1,2-Bis(triethoxysilyl)ethane:**

| |
|---|
| No skin irritation<br>(Species: Rabbit, Test system: semi-occlusive, Method: OECD 404, Source: test report) |

### 11.1.4 Serious eye damage/eye irritation

**Assessment:**

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

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

| |
|---|
| serious damages to eyes<br>(Species: Rabbit, Method: OECD 405, Source: test report) |

**1,2-Bis(triethoxysilyl)ethane:**

| |
|---|
| No eye irritation<br>(Species: Rabbit, Method: OECD 405, Source: test report) |

### 11.1.5 Respiratory or skin sensitisation

**Assessment:**

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

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

After contact to the skin a skin sensitization is possible. The product is a skin sensitiser, sub-category 1B.

| Exposure routes | Result |
|---|---|
| Skin contact | Sensitising<br>(Species: Guinea pig, Test system: Maximisation Test, Method: OECD 406, Source: test report) |
| Skin contact | Sensitising<br>(Species: Mouse, Test system: Local lymph node assay (LLNA), Method: OECD 429, Source: test report) |

**1,2-Bis(triethoxysilyl)ethane:**

| Exposure routes | Result |
|---|---|
| Skin contact | Does not cause skin sensitisation.<br>(Species: Guinea pig, Test system: Maximisation Test, Method: OECD 406, Source: test report) |

### 11.1.6 Germ cell mutagenicity

**Assessment:**

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

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

Based on known data a significant mutagenic potential may be excluded.

| |
|---|
| negative (with and without metabolic activation)<br>(Test system: mutation assay (in vitro) / bacterial cells, Method: OECD 471, Source: test report) |
| negative (with and without metabolic activation)<br>(Test system: mutation assay (in vitro) / mammalian cells, Method: OECD 476, Source: test report) |
| negative (with and without metabolic activation)<br>(Test system: Assay for sister chromatid exchange (in vitro) / mammalian cells, Source: test report) |
| negative<br>(Test system: micro nucleus assay (in vivo), Species: Mouse, Strain: Swiss Webster, Sex: male and female, Application Route: Intraperitoneal, Cell type: erythrocytes, Method: OECD 474, Source: test report) |

**1,2-Bis(triethoxysilyl)ethane:**

| |
|---|
| negative (with and without metabolic activation)<br>(Test system: mutation assay (in vitro) / bacterial cells, Method: OECD 471, Source: test report) |
| positive (with metabolic activation)<br>(Test system: mutation assay (in vitro) / mouse lymphoma cells, Method: OECD 476, Source: test report) |
| negative (with and without metabolic activation)<br>(Test system: chromosome aberration assay (in vitro) / mammalian cells, Method: OECD 473, Source: test report) |
| negative<br>(Test system: micro nucleus assay (in vivo), Species: Mouse, Strain: ICR, Sex: male and female, Application Route: Oral, Cell type: bone marrow cells, Method: OECD 474, Source: test report) |

### 11.1.7 Carcinogenicity

**Assessment:**

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

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

No data known.

### 11.1.8 Reproductive toxicity

**Assessment:**

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

**Data on substances**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

Based on the available data the criteria for classification as toxic to reproduction are not fulfilled.

| Reproductive Toxicity/Fertility |
|---|
| NOAEL: >= 500 mg/kg<br>(Test system: screening test, Species: Rat, Strain: Sprague-Dawley, Sex: male and female, Application Route: Oral, Route of administration: gavage, Frequency of Treatment: 7 d/w, Method: OECD 422, Source: test report) |

| Reproductive Toxicity/Development/Teratogenicity |
|---|
| NOAEL (developmental): >= 500 mg/kg<br>NOAEL (maternal): >= 500 mg/kg<br>(Test system: screening test, Species: Rat, Strain: Sprague-Dawley, Application Route: Oral, Route of administration: gavage, Frequency of Treatment: 7 d/w, Method: OECD 422, Source: test report) |

### 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.

**Data on substances:**

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

Based on the available data the criteria for classification as toxic after repeated exposure are not fulfilled.

| Result/Effect |
|---|
| NOAEL: >= 500 mg/kg<br>(Symptoms/Effect: Nothing abnormal detected., Test system: Subacute study, Species: Rat, Sex: male and female, Application Route: Oral, Route of administration: gavage, Test period: 28 d, Method: OECD 422, Source: test report) |

**1,2-Bis(triethoxysilyl)ethane:**

Causes damage to organs through repeated or prolonged exposure after inhalative exposure. No systemic toxicity.

| Result/Effect |
|---|
| LOAEC: 0.0027 mg/l<br>A NOAEL was not identified.<br>(target organs: nasal mucous membrane, olfactory mucosa, Test system: Subacute study, Species: Rat, Sex: male and female, Application Route: by inhalation, Route of administration: vapour, Test period: 28 d, Frequency of Treatment: 5 d/w, hours/day: 6, Method: OECD 412, Source: test report) |

**11.1.11 Aspiration hazard**

**Assessment:**

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

**11.1.12 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.

**Data on substances:**

**1,2-Bis(triethoxysilyl)ethane:**

No data available.

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

No data available.

**11.1.13 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 a carcinogen or potential carcinogen by OSHA. Carbon black has been classified by IARC as carcinogen group 2B ("possibly carcinogenic to humans").

Other information: None known.

**Data on substances:**

**Product of hydrolysis (Methanol):**

Methanol (CAS 67-56-1) is readily and rapidly absorbed at all exposure routes and is toxic by all routes. Methanol may cause irritation of the mucosa, as well as nausea, vomiting, headaches, vertigo and visual disorders, including blindness (irreversible damage to the optic nerve), acidosis, spasms, narcosis and coma. There may be a delay in the onset of these effects after exposure.

## 12. Ecological information

**12.1 Toxicity**

**Assessment:**

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

**Data on substances:**

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

**1,2-Bis (triethoxysilyl) ethane:**

| Result/Effect | Species/Test system | Source |
|---|---|---|
| LC50: 16 mg/l (nominal) | semi-static test<br>Danio rerio (zebra fish) (96 h) | test report<br>OECD 203 |
| EC50: 72.6 mg/l (nominal) | semi-static test<br>Daphnia magna (Water flea) (48 h) | test report<br>OECD 202 |
| ErC50: > 100 mg/l (nominal) | static test<br>Pseudokirchneriella subcapitata (green algae) (72 h) | test report<br>OECD 201 |
| NOEC (Growth rate): 50 mg/l (nominal) | static test<br>Pseudokirchneriella subcapitata (green algae) (72 h) | test report<br>OECD 201 |

| | | |
|---|---|---|
| EC50 (Growth inhibition): > 8000 mg/l (nominal) | static test<br>Pseudomonas putida (16 h) | test report<br>DIN 38412, part 8 |

**Amino alkoxysilane:**

Toxic to aquatic organisms.

| Result/Effect | Species/Test system | Source |
|---|---|---|
| LC50: 597 mg/l (measured) | semi-static test<br>Danio rerio (zebra fish) (96 h) | test report |
| EC50: 81 mg/l (nominal) | static test<br>Daphnia magna (Water flea) (48 h) | test report |
| ErC50: 8.8 mg/l (nominal) | static test<br>Pseudokirchneriella subcapitata (green algae) (72 h) | test report<br>OECD 201 |
| NOEC (Growth rate): 3.1 mg/l (nominal) | static test<br>Pseudokirchneriella subcapitata (green algae) (72 h) | test report<br>OECD 201 |
| EC50 (Growth inhibition): 67 mg/l | static test<br>Pseudomonas putida (16 h) | test report<br>DIN 38412, part 8 |
| NOEC (Immobilization): > 1 mg/l (nominal) | semi-static test<br>Daphnia magna (Water flea) (21 d) | test report |
| NOEC (reproduction rate): > 1 mg/l (nominal) | semi-static test<br>Daphnia magna (Water flea) (21 d) | test report |
| NOEC (mortality): >= 1000 mg/kg | Eisenia fetida (earthworms) (14 d) | test report<br>OECD 207 |
| NOEC (Growth): >= 1000 mg/kg | Eisenia fetida (earthworms) (14 d) | test report<br>OECD 207 |

### 12.2 Persistence and degradability

**Assessment:**

Polymer component: biologically not degradable. Elimination by adsorption to activated sludge.

**Data on substances:**

**Product of hydrolysis (Methanol):**

Methanol is readily biodegradable.

**Product of hydrolysis (Ethanol):**

Ethanol is readily biodegradable.

**1,2-Bis (triethoxysilyl) ethane:**

Evaluation by analogy with an already tested product: not readily biodegradable.

**Amino alkoxysilane:**

Contact with water liberates methanol and silanol- and/or siloxanol-compounds. Methanol is readily biodegradable. Silanol- and/or siloxanol-compounds: Biologically not degradable.

**Biodegradation:**

| Result | Test system/Method | Source |
|---|---|---|
| 39 % / 28 d<br>Not readily biodegradable. | DOC - decrease | test report<br>OECD 301A |

**Hydrolysis:**

| Result | Test system | Source |
|---|---|---|
| Half-life: 0.025 h | pH 7; 24.7 °C | test report<br>OECD 111 |

### 12.3 Bioaccumulative potential

**Assessment:**

Polymer component: No adverse effects expected.

**12.4 Mobility in soil**

**Assessment:**

Polymer component: insoluble in water.

**12.5 Results of PBT and vPvB assessment**

No data available.

**Data on substances:**

**1,2-Bis(triethoxysilyl)ethane:**

The substance does not fullfill the PBT criteria. The substance does not fullfill the vPvB criteria.

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

The substance does not fullfill the PBT criteria. The substance does not fullfill the vPvB criteria.

**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.

**Data on substances:**

**1,2-Bis(triethoxysilyl)ethane:**

No data available.

**3-(2-Aminoethylamino)propyl trimethoxysilane:**

No data available.

**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.

## 14. Transport information

**14.1 US DOT & CANADA TDG SURFACE**

Valuation .....: Not regulated for transport
Other Information .....: This material has been tested and does not sustain combustion. DOT Class 3 labels and placards are not required.
GHS Severe Eye Damage only. No Corrosive Class 8 DOT Diamond Required!

**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 SNUR (Significant New Use Rule):**
Restriction: This material is subject to a SNUR for any use involving an application method that generates a vapor, mist or aerosol per 40CFR 721.80(y)(1). If used as a crosslinker in silicone products it is exempt from regulatory requirements. If present as an impurity, it is exempt from regulatory requirements.

**TSCA 12(b) Export Notification:**

| CAS-No. | Chemical | Reporting required under TSCA |
|---|---|---|
| 16068-37-4 | 1,2-Bis (triethoxysilyl) ethane | One time export notification under TSCA 5(a) (2) required. |

**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:**
Reproductive toxicity. Acute toxicity (any route of exposure). Serious eye damage or eye irritation. Respiratory or skin sensitisation. Specific target organ toxicity (single or repeated exposure). Flammable (gases, aerosols, liquids, or solids)

**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. % |
|---|---|---|
| 67-56-1 | Methanol | <=0.0125 |

### 15.2 U.S. State regulations

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):**

California Proposition 65 Carcinogens:

1333-86-4 Carbon black

California Proposition 65 Reproductive Toxins:

67-56-1 Methanol

**Massachusetts Substance List:**
1333-86-4 Carbon black

**Pennsylvania Right-to-Know Hazardous Substance List:**
1333-86-4 Carbon black

### 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.

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.

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
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

| **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)