

Safety Data Sheet

Material: 60003837

WACKER® CATALYST T 40

Version: 1.4 (INTL-GHS)

Date of print: 23.03.2021

Date of last alteration: 20.11.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Commercial product name: WACKER® CATALYST T 40****1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of substance / preparation:

Industrial.

Intermediate chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/distributor:

Wacker Chemie AG

Street/POB-No.:

Hanns-Seidel-Platz 4

State/postal code/city:

D 81737 München

Telephone:

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Information about the Safety Data Sheet:

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1.4 Emergency telephone number**Emergency Information:****Europe****+44 1235 239670****Emergency Information:****Africa and the Middle East****+44 1235 239671****Emergency Information:****Caribbean, Central America and South****+1 646 844 7309****America except Chile and Colombia****Emergency Information:****Chile****+56 2 2582 9336****Emergency Information:****Colombia****+57 1 508 7337****Emergency Information:****East Asia and Southeast Asia except****+65 3158 1074****Sri Lanka, Bangladesh and Pakistan****Emergency Information:****Sri Lanka****+65 3158 1195****Emergency Information:****Bangladesh****+65 3158 1200****Emergency Information:****Pakistan****+65 3158 1329****SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

| Hazard class | Hazard category | Route of exposure |
|--|---|-------------------|
| Long-term (chronic) aquatic hazard | Category 4 | |
| Specific target organ toxicity - repeated exposure | Category 2 | |
| Specific target organ toxicity - single exposure | Category 3 (respiratory tract irritation) | |
| Serious eye damage/eye irritation | Category 2 | |
| Acute toxicity | Category 4 | by inhalation |
| Flammable liquids | Category 3 | |

2.2 Label elements

Pictogram(s):



Signal Word: Warning

| H-Code | Hazard Statements |
|--------|--|
| H226 | Flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H413 | May cause long lasting harmful effects to aquatic life. |

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| P-Code | Precautionary Statements |
|----------------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection. |
| P273 | Avoid release to the environment. |
| P243 | Take action to prevent static discharges. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P312 | Call a POISON CENTER/doctor if you feel unwell. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P370+P378 | In case of fire: use water spray, extinguishing powder, foam or carbon dioxide to extinguish. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P501 | Dispose of contents/container to waste disposal. |

Hazard ingredients (labelling):

Tetraethyl silicate

Bis(neodecanoyloxy)dioctylstannane

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 28,7 %.

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

not applicable

3.2 Mixtures**3.2.1 Chemical characteristics**

Organotin compound + Silicic acid ester

3.2.2 Hazardous ingredients

| EC-No. | CAS No. | Substance | Content % |
|-----------|------------|------------------------------------|-----------|
| 201-083-8 | 78-10-4 | Tetraethyl silicate | >50 – <60 |
| 269-595-4 | 68299-15-0 | Bis(neodecanoyloxy)dioctylstannane | >20 – <30 |

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above $\geq 0.1\%$.**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:**

Take persons to a safe place. Observe self-protection for first aid.

After contact with the eyes:

Rinse immediately with plenty of water for 10-15 minutes. Keep eyelids well open to rinse the whole eye surface and eyelids with water. Seek medical advice in case of continuous irritation.

After contact with the skin:

Wipe off excess material with cloth or paper. Remove contaminated or soaked clothing. Immediately rinse with plenty of soap and water. In serious cases, use emergency shower immediately. In the event of a visible skin change or other complaints, seek medical advice (show label or SDS where possible).

After inhalation:

Keep the patient calm. If unconscious place in stable sideways position. Protect against loss of body heat. Seek medical advice and clearly identify substance.

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After swallowing:

If conscious, give several small portions of water to drink. Do not induce vomiting. Seek medical advice and clearly identify substance.

4.2 Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section.

4.3 Indication of any immediate medical attention and special treatment needed

After inhalation: treat as early as possible using cortisone spray.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media:**

alcohol-resistant foam , carbon dioxide , water mist , sprinkler system , sand , extinguishing powder .

Extinguishing media which must not be used for safety reasons:

water jet .

5.2 Special hazards arising from the substance or mixture

Risk of hazardous gasses or fumes in the event of fire. Exposure to combustion products may be a health hazard! Hazardous combustion products: toxic and very toxic fumes .

5.3 Advice for firefighters**Special protective equipment for fire fighting:**

Use respiratory protection independent of recirculated air. Keep unprotected persons away.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

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.

6.2 Environmental precautions

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

6.3 Methods and material for containment and cleaning up

Take up mechanically and dispose of according to local/state/federal regulations. Do not flush away with water. For small amounts: Absorb with a neutral (non-acidic / non-basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations. For large amounts: Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

Further information:

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

6.4 Reference to other sections

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Precautions for safe handling:**

Ensure adequate ventilation. Must be syphoned off in situ. Spilled substance increases risk of slipping. Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection). Observe information in section 8. Keep away from incompatible substances in accordance with section 10.

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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.

7.2 Conditions for safe storage, including any incompatibilities**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.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Maximum airborne concentrations at the workplace:**

| CAS No. | Substance | Type | mg/m ³ | ppm | Dust fract. | Fibre/m ³ |
|---------|------------------------------|------|-------------------|-----|-------------|----------------------|
| - | Aerosol - inhalable fraction | | 10,0 | | | |

The aerosol limit specified is a recommendation should aerosol be formed during processing.

8.2 Exposure controls**8.2.1 Exposure in the work place limited and controlled****General protection and hygiene measures:**

Observe standard industrial hygiene practices for the handling of chemical substances. Do not inhale gases/vapours/aerosols. Use with adequate ventilation. Avoid contact with eyes and skin. Preventive skin protection recommended. Remove contaminated, soaked clothing immediately. Clean work areas regularly. Provide emergency shower and eye-bath. Do not eat, drink or smoke when handling. Keep away from foodstuff, drink and feedingstuff.

Personal protection equipment:**Respiratory protection**

If inhalative exposure above the occupational exposure limit cannot be excluded, adequate respiratory protection equipment must be used. Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136. Recommended Filter type: Gas filter type ABEK (certain inorganic, organic and acidic gases and vapors; ammonia/amines), according to acknowledged standards such as EN 14387

In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Suitable respiratory equipment: Respirator with a full face mask, according to acknowledged standards such as EN 136.

Recommended Filter type: Combined filter type ABEK-P2 (certain inorganic, organic and acidic gases and vapors; ammonia/amines; particles), according to acknowledged standards such as EN 14387

For long or intense exposure, use respiratory protective equipment. Suitable respiratory equipment: Positive pressure self contained breathing apparatus, according to acknowledged standards such as EN 137.

Observe the equipment manufacturer's information and wear time limits for respirators.

Eye protection

tight fitting protective goggles .

Hand protection

Gloves are required at all times when handling the material.

Recommended glove types: Protective gloves made of butyl rubber
thickness of the material: > 0,3 mm

Breakthrough time: > 480 min

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Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Skin protection

If handled uncovered: Chemical protective clothing, full-body liquid-tight protection if necessary. Please observe the instructions regarding permeability time which are provided by the supplier.

8.2.2 Exposure to the environment limited and controlled

Prevent material from entering surface waters, drains or sewers and soil. Observe local waste water bye-laws for organo tin and tin compounds. Do not introduce large amounts into purification plants.

8.3 Further information for system design and engineering measures

Observe information in section 7. Observe national regulatory requirements.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

| Property: | Value: | Method: |
|---|---|-------------|
| Appearance | | |
| Physical state | liquid | |
| Colour | colourless dark | |
| Odour | | |
| Odour | faint | |
| Odour limit | | |
| Odour limit | no data available | |
| pH-Value | | |
| pH-Value | not applicable | |
| Melting point/freezing point | | |
| Melting point / melting range | not determined | |
| Initial boiling point and boiling range | | |
| Boiling point / boiling range | 160 - 161 °C at 1013 hPa | |
| Flash point | | |
| Flash point | 34 °C | (ISO 2719) |
| Evaporation rate | | |
| Evaporation rate | no data available | |
| Upper/lower flammability or explosive limits | | |
| Lower explosion limit (LEL) | 1,3 Vol-% | |
| Vapour pressure | | |
| Vapour pressure | ca. 1 hPa / 20 °C | |
| Solubility(ies) | | |
| Water solubility / miscibility | virtually insoluble | |
| Vapour density | | |
| Relative gas/vapour density | No data known. | |
| Relative Density | | |
| Relative Density | ca. 1,04 (25 °C) (Water / 4 °C = 1,00) | (DIN 51757) |
| Density | ca. 1,04 g/cm ³ (25 °C) | (DIN 51757) |
| Partition coefficient: n-octanol/water | | |
| Partition coefficient: n-octanol/water | No data known. | |
| Auto-ignition temperature | | |
| Ignition temperature | 210 °C | (DIN 51794) |
| Decomposition temperature | | |
| Thermal decomposition | not applicable | |
| Viscosity | | |
| Viscosity (dynamic) | ca. 2 mPa.s at 23 °C | |
| Molecular mass | | |
| Molecular mass | not applicable | |

9.2 Other information

Solubility in water: Hydrolytic decomposition occurs. Hydrolysis products reduce the flash point.

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SECTION 10: Stability and reactivity

10.1 – 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Relevant information can possibly be found in other parts of this section.

10.4 Conditions to avoid

moisture , Heat, open flames, and other sources of ignition.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

If stored and handled properly: none known . Under the effect of humidity, water and protic agents: alcohols .

SECTION 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): > 2000 mg/kg

11.1.3 Skin corrosion/irritation

Assessment:

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

11.1.4 Serious eye damage / eye irritation

Assessment:

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

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.

11.1.8 Reproductive toxicity

Assessment:

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

11.1.9 Specific target organ toxicity (single exposure)

Assessment:

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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:

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

11.1.12 Further toxicological information

Data on substances:

Product of hydrolysis (Ethanol):

Ethanol (64-17-5) is readily absorbed at all exposure routes. Ethanol may cause irritation of eyes and mucosa, trigger dysfunction of the central nervous system and cause nausea as well as dizziness. Chronic exposure to high amounts of ethanol may cause damage to liver and central nervous system.

SECTION 12: Ecological information

12.1 Toxicity

Assessment:

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

12.2 Persistence and degradability

Assessment:

Contact with water liberates ethanol and silicic acid.

Data on substances:

Product of hydrolysis (Ethanol):

Ethanol is readily biodegradable.

12.3 Bioaccumulative potential

Assessment:

Bioaccumulation is not excluded.

12.4 Mobility in soil

Assessment:

No data known.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

none known

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Material

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.

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13.1.2 Uncleaned packaging

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.

SECTION 14: Transport information**14.1 – 14.4 UN number; UN proper shipping name; Transport hazard class(es); Packing group****Road ADR:**

Valuation: Dangerous Goods
14.1 UN no.: 1292
14.2 Proper Shipping Name: Tetraethylsilicat, Lösung
14.3 Class: 3
14.4 Packaging Group: III

Railway RID:

Valuation: Dangerous Goods
14.1 UN no.: 1292
14.2 Proper Shipping Name: Tetraethylsilicat, Lösung
14.3 Class: 3
14.4 Packaging Group: III

Transport by sea IMDG-Code:

Valuation: Dangerous Goods
14.1 UN no.: 1292
14.2 Proper Shipping Name: Tetraethyl silicate solution
14.3 Class: 3
14.4 Packaging Group: III

Air transport ICAO-TI/IATA-DGR:

Valuation: Dangerous Goods
14.1 UN no.: 1292
14.2 Proper Shipping Name: Tetraethyl silicate solution
14.3 Class: 3
14.4 Packaging Group: III

14.5 Environmental hazards

Hazardous to the environment: no

Marine Pollutant (IMDG): no

14.6 Special precautions for user

Relevant information in other sections has to be considered.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Bulk transport in tankers is not intended.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

15.2 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: **AICS** (Australian Inventory of Chemical Substances):
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.

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| | |
|---------------------------------------|---|
| 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"): General note: in case of registration obligations for substances or polymers imported into Korea or manufactured within Korea these are fulfilled by the supplier mentioned in section 1. The registration obligations for substances or polymers imported into Korea by customers or other downstream users must be fulfilled by the latter. |

SECTION 16: Other information**16.1 Material**

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

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 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

| Classification | Rationale: |
|---|------------------------|
| Long-term (chronic) aquatic hazard, Category 4 | Calculation method |
| Specific target organ toxicity - repeated exposure, Category 2 | Calculation method |
| Specific target organ toxicity - single exposure, Category 3 (respiratory tract irritation) | Calculation method |
| Serious eye damage/eye irritation, Category 2 | Calculation method |
| Acute toxicity, Category 4, by inhalation | Calculation method |
| Flammable liquids, Category 3 | On basis of test data. |

- End of Safety Data Sheet -