

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (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 47**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:

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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
Reproductive toxicity	Category 2 (developmental toxicity)	
Long-term (chronic) aquatic hazard	Category 4	
Specific target organ toxicity - repeated exposure	Category 1	
Specific target organ toxicity - single exposure	Category 3 (respiratory tract irritation)	
Serious eye damage/eye irritation	Category 2	
Acute toxicity	Category 4	by inhalation / dust/mist
Flammable liquids	Category 3	

2.2 Label elements

Pictogram(s):



Signal Word: Danger

H-Code	Hazard Statements
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

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H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.

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.
P260	Do not breathe vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection.
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

Silicic acid (H₄SiO₄), tetraethyl ester, reaction products with bis(acetyloxy)dioctylstannane

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 35 %.

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	>60
300-346-5	93925-43-0	Silicic acid (H ₄ SiO ₄), tetraethyl ester, reaction products with bis(acetyloxy)dioctylstannane	<30
269-595-4	68299-15-0	Bis(neodecanoyloxy)dioctylstannane	<5

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above ≥ 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. Pregnant women exposed to this substance must seek medical advice.

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.

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

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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.

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. After exposure, it is recommended that you seek specialist medical advice. Product contains reproductive toxins (may cause harm to the unborn child and /or impairs male or female reproductive function).

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.

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

Date of print: 23.03.2021

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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

General information:

Avoid exposure by technical measures or personal protective equipment.

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.

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:

Avoid exposure - obtain special instructions before use. Avoid exposure of the substance to pregnant women. Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Use with adequate ventilation. Preventive skin protection recommended. Remove contaminated, soaked clothing immediately. Clean work areas regularly. Wash hands at the end of work and before eating. Provide emergency shower and eye-bath. Keep working clothes separately. 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

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

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Date of print: 23.03.2021

Date of last alteration: 20.11.2019

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

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	
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 applicable	
Initial boiling point and boiling range		
Boiling point / boiling range	> 100 °C at 1013 hPa	
Flash point		
Flash point.....	34 °C	(DIN 51755)
Evaporation rate		
Evaporation rate	no data available	
Upper/lower flammability or explosive limits		
Lower explosion limit (LEL)	1,3 Vol-%	
Upper explosion limit (UEL).....	23 Vol-%	
Vapour pressure		
Vapour pressure.....	12,5 hPa / 20 °C	
Solubility(ies)		
Water solubility / miscibility.....	virtually insoluble	

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

Date of print: 23.03.2021

Date of last alteration: 20.11.2019

Vapour density

Relative gas/vapour density: No data known.

Relative DensityRelative Density: 1,02
(Water / 4 °C = 1,00)
Density: 1,02 g/cm³**Partition coefficient: n-octanol/water**

Partition coefficient: n-octanol/water.....: No data known.

Auto-ignition temperature

Ignition temperature: 215 °C (DIN 51794)

ViscosityViscosity (kinematic).....: 1,6 mm²/s at 25 °C (DIN 51562)**Molecular mass**

Molecular mass: not applicable

9.2 Other information

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

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 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**11.1.2 Skin corrosion/irritation****Assessment:**

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

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

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

11.1.4 Respiratory or skin sensitization**Assessment:**

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

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

Date of print: 23.03.2021

Date of last alteration: 20.11.2019

11.1.5 Germ cell mutagenicity**Assessment:**

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

11.1.6 Carcinogenicity**Assessment:**

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

11.1.7 Reproductive toxicity**Assessment:**

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

11.1.8 Specific target organ toxicity (single exposure)**Assessment:**

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

11.1.9 Specific target organ toxicity (repeated exposure)**Assessment:**

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

11.1.10 Aspiration hazard**Assessment:**

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

SECTION 12: Ecological information

12.1 Toxicity**Assessment:**

No data known.

12.2 Persistence and degradability**Assessment:**

Contact with water liberates ethanol and silicic acid.

12.3 Bioaccumulative potential**Assessment:**

No data known.

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

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

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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.

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.

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

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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.
- New Zealand : **NZIoC** (New Zealand Inventory of Chemicals):
This product is listed in, or complies with, the substance inventory. (For a correct interpretation of the New Zealand status, additional information like GHS classification or Group Standard is required.)
- Australia : **AICS** (Australian Inventory of Chemical Substances):
This product is listed in, or complies with, the substance inventory.
- Canada : **DSL** (Domestic Substance List):
This product is not listed or in compliance with the substance inventory.
- Philippines..... : **PICCS** (Philippine Inventory of Chemicals and Chemical Substances):
This product is not listed or 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:
Reproductive toxicity, Category 2 (developmental toxicity)	Calculation method
Long-term (chronic) aquatic hazard, Category 4	Calculation method
Specific target organ toxicity - repeated exposure, Category 1	Calculation method
Specific target organ toxicity - single exposure, Category 3 (respiratory tract irritation)	Calculation method
Serious eye damage/eye irritation, Category 2	Calculation method

Safety Data Sheet

Material: 60078496

WACKER® CATALYST T 47

Version: 2.2 (INTL-GHS)

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Acute toxicity, Category 4, by inhalation / dust/mist

Calculation method

Flammable liquids, Category 3

On basis of test data.

- End of Safety Data Sheet -