

Safety Data Sheet

Material: 60078497

WACKER® CATALYST T 40

Version: 2.4 (US)

Date of print: 10/05/2022

Date of last alteration: 11/16/2019

1. Product and company identification

1.1 Identification of the substance or preparation:

Commercial product name: WACKER® CATALYST T 40
Product group: Tin Catalyst
Use of substance / preparation: Industrial.
Intermediate chemical

1.2 Company/undertaking identification:

Manufacturer/distributor: Wacker Chemical Corporation
3301 Sutton Road
Adrian, MI 49221-9397
USA

Customer information: 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):

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)	
Flammable liquids	Category 3	
Serious eye damage/eye irritation	Category 2A	

2.2 Label elements

Labelling (GHS):

Pictogram(s):



Signal Word: Warning

H-Code	Hazard Statements
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
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.

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.

3. Composition/information on ingredients

3.1 Chemical characterization (preparation)

Chemical characteristics

Organotin compound+Silicic acid ester

3.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	78-10-4	Ethyl silicate	>50.0	<60.0	
INHA	68299-15-0	Bis(neodecanoyloxy)diocetylstannane	>20.0	<30.0	

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. 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 $\geq 0.1\%$.

4. First-aid measures

4.1 General information:

Get medical attention immediately. 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. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Allow cortisone spray inhalation at first possible opportunity.

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.

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4.5 After swallowing

For ingestion, if conscious, give several glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids. Get medical attention immediately. Show label if possible.

5. Fire-fighting measures

5.1 Flammable properties:

Property:	Value:	Method:
Flash point.....	34 °C (93 °F)	(ISO 2719)
Boiling point / boiling range	160 - 161 °C (320 - 322 °F) at 1013 hPa	
Lower explosion limit (LEL)	1.3 %(V)	
Ignition temperature	210 °C (410 °F)	(DIN 51794)
NFPA Hazard Class (comb./flam.liquid)	IC	

5.2 Fire and explosion hazards:

Warning! Flammable liquid and vapor. As a result of hydrolysis flammable vapors may accumulate in the container head space. Explosion limits for hydrolysis product: 3.5-15% v/v (ethanol) .

5.3 Recommended extinguishing media:

carbon dioxide , sand , dry chemical or alcohol-resistant foam .

5.4 Unsuitable extinguishing media:

water jet , water-spray .

5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

carbon dioxide , carbon monoxide , silicon dioxide , tin dioxide and incompletely burnt hydrocarbons .

5.6 Fire fighting procedures:

Fire fighters should wear full protective clothing including a self-contained breathing apparatus. Use respiratory protection independent of recirculated air. 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: C

6.2 Containment:

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.

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

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.

6.4 Further information:

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

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7. Handling and storage

7.1 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.

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 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:

General ventilation sufficient to provide 1 CFM per square foot of floor area or 6 room air exchanges per hour is recommended.

Local exhaust:

To control flammable/combustible vapors: 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.	Substance	Type	mg/m ³	ppm	Dust fract.
78-10-4	Tetraethyl silicate	OSHA PEL	850.0	100.0	
	Tin compounds (organic)	OSHA PEL	0.1		
64-17-5	Ethanol	OSHA PEL	1,900.0	1,000.0	
78-10-4	Tetraethyl silicate	ACGIH TWA		10.0	
	Tin compounds (organic)	ACGIH TWA	0.1		

Re Tin compounds (organic): STEL is 0,2 mg/m³, skin notation (ACGIH).

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

8.3 Personal protection equipment (PPE)

Respiratory protection:

Recommendation in case of long or strong exposure: A NIOSH approved air purifying respirator equipped with universal multi-contaminant multi-gas/vapor cartridges is recommended if overexposure to chemical vapors could occur. If eye-irritating dusts or vapors are present, a full-face respirator should be worn.

Hand protection:

butyl rubber protective gloves .

Eye protection:

Safety glasses with side shields or chemical safety goggles. Additional eye and face protection, splash-proof goggles, hood, full-faced respirator, or face shield is recommended if splashing could occur.

Other protective clothing or equipment:

Additional skin protection, such as SARANEX coated Tyvek apron, over-sleeves, lab coat, coveralls, or protective suit should be worn if splashing could occur. Provide eye bath and safety shower.

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8.4 General hygiene and protection measures:

Avoid contact with eyes, skin and clothing. Avoid breathing dust/vapor/mist/gas/aerosol. When handling do not eat, drink, smoke or apply cosmetics. Wash thoroughly after handling.

9. Physical and chemical properties

9.1 Appearance

Physical state : liquid
Colour : colourless dark
Odour : faint

9.2 Safety parameters

Property:	Value:	Method:
Melting point / melting range	not determined	
Boiling point / boiling range	160 - 161 °C (320 - 322 °F) at 1013 hPa	
Flash point.....	34 °C (93 °F)	(ISO 2719)
Ignition temperature	210 °C (410 °F)	(DIN 51794)
Lower explosion limit (LEL)	1.3 %(V)	
Vapour pressure.....	ca. 1 hPa / 20 °C (68 °F)	
Density	ca. 1.04 g/cm ³ at 25 °C (77 °F)	(DIN 51757)
Water solubility / miscibility.....	virtually insoluble	
pH-Value	not applicable	
Viscosity (dynamic)	ca. 2 mPa.s at 23 °C (73 °F)	

9.3 Further information

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

Odour limit..... : no data available
Thermal decomposition..... : not applicable

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 . Reaction causes the formation of: alcohols .

10.4 Hazardous decomposition products

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

10.5 Further information:

Hazardous polymerization cannot occur.
Conditions to avoid hazardous polymerization: none known

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.

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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:**

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

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.

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.

12. Ecological information

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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

13. Disposal considerations**13.1 RCRA Waste Classification:**

D001 (Ignitable)

This classification applies only to the material as it was originally produced.

13.2 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.

13.3 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: Dangerous Goods
Proper Shipping Name.....: Tetraethyl silicate solution
Class: 3
UN no.: 1292
Packaging Group: III
Label: **TL:flammable liquid/3
NAERG Guide.....: 128

14.2 Transport by sea IMDG-Code

Valuation: Dangerous Goods
Class: 3

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Packaging Group III
 UN no. 1292
 Proper Shipping Name Tetraethyl silicate solution
 Marine Pollutant no

14.3 Air transport ICAO-TI/IATA-DGR

Valuation Dangerous Goods
 Class 3
 UN no. 1292
 Proper Shipping Name Tetraethyl silicate solution
 Packaging Group III

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:

Fire 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. %
110-54-3	n-Hexane	≤0.0211

This material does not contain any hazardous air pollutants.

15.2 U.S. State regulations

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

This material does not contain any chemicals known to the State of California to cause cancer.

This material does not contain any chemicals known to the State of California to cause reproductive effects.

Massachusetts Substance List:

78-10-4 Ethyl silicate

New Jersey Right-to-Know Hazardous Substance List:

78-10-4 Ethyl silicate

Pennsylvania Right-to-Know Hazardous Substance List:

78-10-4 Ethyl silicate

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 : **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.
 Canada : **DSL** (Domestic Substance List):
 This product is listed in, or complies with, the substance inventory.

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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.

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	ppm - Parts per Million
DOT - Department of Transportation	SARA - Superfund Amendments and Reauthorization Act
hPa - Hectopascals	STEL - Short Term Exposure Limit
mPa*s - Milli Pascal-Seconds	TSCA - Toxic Substances Control Act
OSHA - Occupational Safety and Health Administration	TWA - Time Weighted Average
PEL - Permissible Exposure Limit	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

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Viscosity:: 1 mPa*s = 1 centipoise (cP)