

**Material Safety Data Sheet**

Material: CATALYST T 124 BLUE E

Version: 1.9 (US) Date of print: 01/06/2009 Date of last alteration: 01/06/2009

**1 Product and company identification****1.1 Identification of the substance or preparation:**

Commercial product name: CATALYST T 124 BLUE E  
 Use of substance / preparation: Industrial.  
 Catalysts

**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, Fax (517) 264-8740  
 Hours of operation:  
 Monday - Friday, 8 am to 5 pm (eastern standard time)  
 Corporate website: www.wackersilicones.com

Emergency telephone no. (24h): (517) 264-8500  
 Transportation emergency: (800) 424-9300 (CHEMTREC, USA)  
 (703) 527-3887 (CHEMTREC, international)

This MSDS was prepared by the Regulatory Affairs and Product Safety Department (RAPS) of Wacker Chemical Corporation.

**2 Composition/information on ingredients**

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	78-10-4	Ethyl silicate	10.0	30.0	
INHA	68299-15-0	Bis(neodecanoyloxy)dioctylstannane	10.0	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.

Due to the physical nature of this material (liquid), exposure to dusts/particulates is not expected.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in Section 2 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.

**3 Hazards identification****3.1 Hazards classifications****HMIS® rating (product as packaged):**

Health: 2\* Fire: 2 Reactivity: 1 PPE: H

(HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association. Note: Respiratory protection is only recommended in the event that ventilation or engineering controls are unable to maintain exposures below recommended levels; or in the event of a spill or other emergency response situation.

Canadian WHMIS Classification: B3, D2B, D2A

**Material Safety Data Sheet**

Material: CATALYST T 124 BLUE E

Version: 1.9 (US) Date of print: 01/06/2009 Date of last alteration: 01/06/2009

**3.2 Emergency overview and potential hazards****Signal Word:**

WARNING

**Physical Hazards:**

Combustible liquid and vapor.

**Acute health effects****Route of entry or possible contact:**

eyes , skin , inhalation (aerosol) , ingestion .

**Eye contact:**

Causes eye irritation.

**Skin contact:**

May cause skin irritation.

**Inhalation:**

In case of aerosol formation: Causes respiratory tract irritation. Inhalation may cause central nervous system effects. May cause lung damage if inhaled as an aerosol. May be harmful if inhaled.

**Ingestion:**

Not expected in industrial use.

**Additional information on acute health effects:**

Ingestion is not expected during industrial use. This material releases n-propanol upon hydrolysis. Propanol (CAS-No. 71-23-8) is an irritant to the eyes, to the mucous membranes and to the skin. At high concentrations propanol causes central nervous system effects. This material releases ethanol upon hydrolysis. Ethanol (CAS-No. 64-17-5) is an irritant to the eyes and mucous membranes. Overexposure has been shown to cause central nervous system depression. Direct contact with the eyes will cause burning and stinging. See Sect. 3.3 "Chronic health effects".

**3.3 Further information:****Chronic health effects:**

May cause damage to kidneys and liver. May cause lung damage. May cause chronic dermatitis. Contains a substance which may cause: Based on animal tests. Harmful: danger of serious damage to health by prolonged exposure if swallowed.

**Medical conditions which may be aggravated by exposure:**

none known

**Target organs affected:**

Liver and Kidneys. Lungs

**Signs and Symptoms of Exposure:**

Refer to Acute Health Effects, listed above.

**Carcinogens/Reproductive toxins:**

There are no carcinogenic ingredients present at or over 0.1% in this material. This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels.

See Section 11 for Toxicological Information, if any.

**Material Safety Data Sheet****Material:** CATALYST T 124 BLUE E

Version: 1.9 (US)

Date of print: 01/06/2009

Date of last alteration: 01/06/2009

**4 First-aid measures****4.1 General information:**

Get medical attention if irritation occurs or if breathing becomes difficult. Remove contaminated clothing and shoes.

**4.2 After inhalation:**

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

**4.3 After contact with the skin:**

For skin contact, immediately wipe away excess material. Use a waterless hand cleaner to remove as much of the remaining material as possible. Wash with soap and water.

**4.4 After contact with the eyes:**

If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

**4.5 After swallowing:**

For ingestion, if conscious, give several glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids.

**4.6 Advice for the physician:**

Treat symptomatically.

**5 Fire-fighting measures****5.1 Flammable properties:**

Flash point.....	57 °C (134 °F)	<b>Method</b> (ASTM D93)
Sustained combustibility.....	75 °C (167 °F)	(ASTM D4206)
Boiling point / boiling range.....	110 - 195 °C (230 - 383 °F)	
Lower explosion limit (LEL).....	not determined	
Upper explosion limit (UEL).....	not determined	
Ignition temperature .....	not determined	
NFPA Hazard Class (comb./flam.liquid):	II	

**5.2 Fire and explosion hazards:**

Combustible liquid and vapor. Vapors are heavier than air and may travel along the ground, be moved by ventilation systems, settle in pits or low areas, and be ignited by ignition sources distant from the handling point. The material is lighter than water, burning spilled material will float on top of any water released from hose or sprinkler systems spreading the fire beyond the initial fire response area. Never use welding or cutting torch on or near any container of this material, even if empty, because an explosion could occur. Hydrolyzes on contact with moisture releasing ignitable vapors.

**5.3 Recommended extinguishing media:**

AFFF alcohol compatible foam. Carbon dioxide. Dry chemical. Water may be used to cool tanks and structures adjacent to the fire.

**5.4 Unsuitable extinguishing media:**

Water may be ineffective in controlling fires of this material. Do not use water to fight these fires.

**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 . tin dioxide , nitrogen oxides , Various hydrocarbon fragments

**5.6 Fire fighting procedures:**

Full turn-out gear and Self Contained Breathing Apparatus (SCBA) should be worn when fighting large fires.

**Material Safety Data Sheet**

Material: CATALYST T 124 BLUE E

Version: 1.9 (US)

Date of print: 01/06/2009

Date of last alteration: 01/06/2009

**6 Accidental release measures****6.1 Precautions:**

Secure the area. Obtain appropriate PPE, supplies, and equipment prior to attempting any response.

**HAZWOPER PPE Level:** C

**6.2 Containment:**

Use loose absorbant material or prefabricated socks to dike around small quantities of spilled material (incidental spills). Cover openings to underground drains and sewers. If safe to do so, stop the leak at its source.

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:**

Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction. Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Use absorbant materials to pick up residual liquids.

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

Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Avoid breathing dust/vapor/mist/gas/aerosol. Use with adequate ventilation. Keep container closed when not in use.

**Precautions against fire and explosion:**

Do not weld, cut, or grind on empty containers. Keep away from sources of ignition and do not smoke. Ignitable vapors may be released during processing or curing.

**7.2 Storage****Conditions for storage rooms and vessels:**

Store in a dry and sheltered place.

**Advice for storage of incompatible materials:**

No restriction.

**Further information for storage:**

Store in a cool, temperature regulated location.

**8 Exposure controls and personal protection****8.1 Engineering controls****Ventilation:**

Use with adequate ventilation.

**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.

**Material Safety Data Sheet**

Material: CATALYST T 124 BLUE E

Version: 1.9 (US)

Date of print: 01/06/2009

Date of last alteration: 01/06/2009

**8.2 Associate substances with specific control parameters such as limit values****Maximum airborne concentrations at the workplace:**

CAS No.	Material	Type	mg/m <sup>3</sup>	ppm	Dust fract.
78-10-4	Tetraethyl silicate	OSHA PEL	850.0	100.0	
64-17-5	Ethanol	OSHA PEL	1,900.0	1,000.0	
	Tin compounds (organic)	OSHA PEL	0.1		
78-10-4	Tetraethyl silicate	ACGIH TWA		10.0	
64-17-5	Ethanol	ACGIH TWA		1,000.0	
	Tin compounds (organic)	ACGIH TWA	0.1		

Re Ethanol (CAS no. 64-17-5): carcinogenicity: A4 (ACGIH).

Re Tin compounds (organic): STEL is 0,2 mg/m<sup>3</sup>, skin notation (ACGIH).**8.3 Personal protection equipment (PPE)****Respiratory protection:**

If spraying or other operations which generate an aerosol mist are conducted, respiratory protection for exposed personnel is recommended. A NIOSH approved air purifying respirator equipped with universal multi-contaminant, multi-gas/vapor cartridges and at least P-99 solid/aerosol particulate filters is recommended if overexposure to dusts, mists, or vapors could occur.

**Hand protection:**

Any liquid-tight rubber or vinyl 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.

**8.4 General hygiene and protection measures:**

Follow standard industrial hygiene practices when using this material. When handling do not eat, drink, smoke or apply cosmetics. Wash thoroughly after handling.

**9 Physical and chemical properties****9.1 Appearance**

Physical state / form.....: liquid  
 Colour.....: blue  
 Odour.....: characteristic

**9.2 Safety parameters**

	Method
Melting point / melting range.....: not applicable	
Boiling point / boiling range.....: 110 - 195 °C (230 - 383 °F)	
Flash point.....: 57 °C (134 °F)	(ASTM D93)
Sustained combustibility.....: 75 °C (167 °F)	(ASTM D4206)
Ignition temperature .....: not determined	
Lower explosion limit (LEL).....: not determined	
Upper explosion limit (UEL).....: not determined	
Vapour pressure.....: not determined	
Density.....: 0.964 g/cm <sup>3</sup>	
Water solubility / miscibility.....: insoluble	
pH-Value.....: not applicable	
Viscosity (dynamic).....: 100 mPa.s	

**9.3 Further information**

Percent Volatiles .....: 27.20 %

**Material Safety Data Sheet**

Material: CATALYST T 124 BLUE E

Version: 1.9 (US)

Date of print: 01/06/2009

Date of last alteration: 01/06/2009

**10 Stability and reactivity****10.0 General information:**

Stable under normal conditions of use.

**10.1 Conditions to avoid:**

Although this product is not expected to react with commonly used materials of construction and process equipment, it is advised that any rubber or plastic items such as hoses and gaskets be tested prior to large scale processing to ensure there is no degradation of performance or durability.

**10.2 Materials to avoid:**

Oxidizing materials (oxygen, oxidizers, peroxides, etc.). strong acids , alkalis .

**10.3 Hazardous decomposition products:**

Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation. n-Propanol is released upon contact with water. Ethanol is released upon contact with water.

**10.4 Further information:**

Hazardous polymerization cannot occur.

**11 Toxicological information****11.1 General information:**

Toxicological testing has not been conducted with this material.

**11.2 Toxicological data:****Experience with man:**

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**12 Ecological information****12.1 Information on elimination (persistence and degradability)****Biodegradation / further information:**

The hydrolysis product (Ethanol) is readily biologically degradable. The hydrolysis product (propanol) is readily biologically degradable.

**Further information:**

By hydrolysis: ethanol , propanol and silanol- and/or siloxanol-compounds .

**12.2 Behaviour in environmental compartments****Mobility**

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**Further information:**

No data known.

**12.3 Ecotoxicological effects:**

According to past experience toxicity to fish is improbable.

**Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):**

Do not introduce large amounts into purification plants.

**12.4 Additional information****Other harmful effects**

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**General information:**

Prevent material from entering surface waters and soil.

**Material Safety Data Sheet**

Material: CATALYST T 124 BLUE E

Version: 1.9 (US)

Date of print: 01/06/2009

Date of last alteration: 01/06/2009

**13 Disposal considerations****13.0 RCRA Waste Classification:**

D001 (Ignitable)

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

**13.1 Product disposal****Recommendation:**

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations. State and local regulations may be more stringent than Federal regulations.

**13.2 Packaging disposal****Recommendation:**

Uncleaned containers should not be reused to hold another material due to the potential for reaction between residual product and incompatible materials. Uncleaned packaging should be treated with the same precautions as the material. After emptying contaminated containers may be cleansed and recycled.

**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 regulated as a Class 9 Environmentally Hazardous Substance when packaged in bulk containers.

Not regulated in containers up to 119 Gal./450 L each!

**14.2 Transport by sea IMDG-Code**

Valuation.....: Hazardous product

Comment.....: Not regulated in Class 3 - IMDG 2.3.1.3 - Substance does not sustain combustion!

Class.....: 9

Packaging Group.....: III

UN no. ....: 3082

Proper Shipping Name.....: Environmentally hazardous substance, liquid, n.o.s.

Technical name.....: (contains dioctyl tin compounds)

Marine Pollutant.....: yes

**14.3 Air transport ICAO-TI/IATA-DGR**

Valuation.....: Hazardous product

Comment.....: Not regulated in Class 3 - IATA 3.3.1.3 / ICAO 3.1.3 - Substance does not sustain combustion!

Class.....: 9

UN no. ....: 3082

Proper Shipping Name.....: Environmentally hazardous substance, liquid, n.o.s.

Technical name.....: (contains dioctyl tin compounds)

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 any TSCA 12(b) regulated 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.

**Material Safety Data Sheet****Material:** CATALYST T 124 BLUE E

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**SARA 311/312 Hazard Class:**

Fire hazard. Immediate (acute) health hazard. Delayed (chronic) health hazard.

**SARA 313 Chemicals:**

This material does not contain any SARA 313 chemicals above de minimus levels.

**HAPS (Hazardous Air Pollutants):**

This material does not contain any hazardous air pollutants.

**15.2 U.S. State regulations****California Proposition 65 Carcinogens:**

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

**California Proposition 65 Reproductive Toxins:**

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 Canadian regulations**

This product has been classified in accordance with the Hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Classes:**

B3, D2B, D2A


**DSL Status:**

This material or its components are listed on the Canadian Domestic Substances List.

**Canadian Ingredient Disclosure List:**

78-10-4      Ethyl silicate

**15.4 Other international regulations****EU Hazard Symbols:**

	Xn	Harmful
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**EU Risk Phrases:**

R-Phrase	Description
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.

**EU Safety Phrases:**

S-Phrase	Description
S46	If swallowed, seek medical advice immediately and show this container or label.

**Details of international registration status**

Listed on or in accordance with the following inventories:

EINECS - Europe  
 ECL - Korea  
 AICS - Australia  
 IECSC - China  
 DSL - Canada  
 PICCS - Philippines  
 TSCA - USA

**Material Safety Data Sheet****Material:** CATALYST T 124 BLUE E

Version: 1.9 (US) Date of print: 01/06/2009 Date of last alteration: 01/06/2009

**16 Other information****16.1 Additional information:**

This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS 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.

**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
<b>Flash point determination methods</b>	<b>Common name</b>
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)