

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

COTIN* 430

Synonyms:

dioctylbis[(1-oxododecyl)oxy]-Stannane

Chemical Abstracts Registry No:

3648-18-8

1.2. Relevant identified uses of the substance or mixture and uses advised against

Catalyst for urethane systems

1.3. Details of the supplier of the safety data sheet

Vertellus LLC
201 North Illinois Street, Suite 1800,
Indianapolis, IN 46204
1-336-292-1781

e-mail Address:

sds@vertellus.com

1.4. Emergency telephone number

Vertellus: 1-336-292-1781

CHEMTREC (USA): +1-800-424-9300 (collect calls accepted)

CHEMTREC (International): +1-703-527-3887 (collect calls accepted)

NRCC (China): +86 532 83889090

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture (According to Regulation (EC) No 1272/2008, 29 CFR 1910.1200 and the Globally Harmonized System)

Specific Target Organ Systemic Toxicity Single Exposure Category 2
Reproductive Toxicity Category 1B

2.2. Label elements

Hazard Symbols (Pictogram):



Signal Word:

Danger

Hazard Precautions:

H371 - May cause damage to organs.
H360D - May damage the unborn child.

Prevention Precautionary Statements:

P201 - Obtain special instructions before use.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P270 - Do not eat, drink or smoke when using this product.

First Aid Precautionary Statements:

P308+P313 - IF exposed or concerned: Get medical advice/attention.
P309+P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Storage Precautionary Statements:

P405 - Store locked up

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Disposal Precautionary Statements: P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

SECTION 3: Composition/information on ingredients

3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (weight %)	EC Number	CLP Inventory/Annex VI	EU CLP Classification (1272/2008)
Diocetyl tin dilaurate	3648-18-8	~ 100	222-883-3	Not listed	STOT SE 2; H371 Repr. 1B; H360D

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable). See Section 16 for the full text of the R-phrases above.

SECTION 4: First aid measures

4.1. Description of first aid measures

- Skin Contact:** Wash with soap and water. Get medical attention if irritation develops or persists.
- Eye Contact:** Flush eyes with water for at least 15 minutes; if irritation occurs seek medical attention.
- Inhalation:** Remove from exposure. If not breathing, give artificial respiration and call a physician.
- Ingestion:** If swallowed, contact physician or poison control center immediately. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

- Acute:** Not expected to cause significant eye or skin irritation or sensitization. Not expected to be acutely toxic.
- Delayed Effects:** None known.

4.3. Indication of any immediate medical attention and special treatment needed

- Note to Physician:** No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Appropriate Extinguishing Media:** Carbon dioxide, Alcohol foam, Water spray, Foam

5.2. Special hazards arising from the substance or mixture

- Hazardous Products of Combustion:** During a fire, irritating and toxic gases/fumes/vapors containing tin and tin compounds may be released.
- Potential for Dust Explosion:** Not applicable.
- Special Flammability Hazards:** None expected

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5.3. Advice for firefighters

Basic Fire Fighting Guidance: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Special Instructions: See Section 8 for personal protective equipment recommendations. Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

6.2. Environmental precautions

Prevent releases to soils, drains, sewers and waterways.

6.3. Methods and material for containment and cleaning up

Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all ignition sources. Ventilate the area of spill or leak. Wear protective equipment during clean-up. For small spills, use suitable absorbent material and collect for later disposal. For large spills, the area may require diking to contain the spill. Material can then be collected (eg., suction) for later disposal. Do not allow the spilled product to enter public drainage system or open waterways. Dispose of the material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws.

6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for Unique Hazards: Not applicable.

Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material. Do not eat, drink or smoke in work areas. Prevent contact with incompatible materials. Avoid spills and keep away from drains. Handle in a manner to prevent generation of aerosols, vapors or dust clouds.

Special Handling Equipment: Not applicable.

7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions & Recommendations: This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container closed when not in use. Store in a cool dry place

Dangerous Incompatibility Reactions: Strong oxidizing agents

Incompatibilities with Materials of Construction: None known

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7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Country	Occupational Exposure Limit
Germany (AGS)	0.009 mg/m ³ as 8 hour limit value; 0.009 mg/m ³ as 15 minute limit value (Dibutyltin diacetate)
Australia, Belgium, Germany (DFG), Ireland, New Zealand, Spain, Sweden, Switzerland; US ACGIH	0.1 mg/m ³ as 8 hour limit value; 0.2 mg/m ³ as 15 minute limit value (Organic tin compounds)
Canada (Ontario), S. Korea, USA (NIOSH & OSHA)	0.1 mg/m ³ as 8 hour limit value (Organic tin compounds)
Finland	0.1 mg/m ³ as 8 hour limit value; 0.3 mg/m ³ as 15 minute limit value (Organic tin compounds)
Hungary	0.1 mg/m ³ as 8 hour limit value; 0.4 mg/m ³ as 15 minute limit value (Organic tin compounds)
Air Monitoring Method:	Glass fiber filter with XAD-2 sorbent, HPLC/AA detector (NIOSH method 5504)

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Other Engineering Controls:	All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.
Personal Protective Equipment:	Use chemical goggles (EN 166 for EU), faceshields, boots and impervious clothing, if conditions involve potential for splashing or spraying.
Respirator Caution:	Observe OSHA regulations for respirator use (29 CFR 1910.134) . Use EN136 and 140 for half-face and full-face.. Air-purifying respirators must not be used in oxygen-deficient atmospheres.
Thermal Hazards:	Not applicable.
Environmental Exposure Controls:	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature):	Pale yellow to colorless, clear liquid with a mild odor		
Molecular Formula:	C40H80O4Sn	Molecular Weight:	743.77 g/mol
Vapor Pressure:	0.002 Pa @ 25°C	Evaporation Rate:	< 1 (Butyl Acetate = 1)

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Specific Gravity or Density:	0.998 g/cm ³	Vapor Density (air = 1):	> 1
Boiling Point:	674 °C	Freezing / Melting Point:	35°F (2 °C)
Solubility in Water:	Insoluble	Octanol / Water Coefficient:	Log Kow = 9.26
pH:	No data available.	Odor Threshold:	No data available.
Viscosity:	27.74 mPa.s	Autoignition Temperature:	No data available.
Flash Point and Method:	388°F (198°C) CC	Flammable Limits:	No data available
Flammability (solid, gas):	Not applicable.	Decomposition Temperature:	Not applicable.
Explosive Properties:	Not explosive.	Oxidizing Properties:	Not an oxidizer.

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	Not classified as dangerously reactive.
<u>10.2. Chemical stability</u>	Stable under normal conditions.
<u>10.3. Possibility of hazardous reactions</u>	Not prone to hazardous polymerization
<u>10.4. Conditions to avoid</u>	Avoid humidity and moisture; product hydrolyzes on contact with water or moisture.
<u>10.5. Incompatible materials</u>	Strong oxidizing agents
<u>10.6. Hazardous decomposition products</u>	Products of incomplete combustion may include carbon monoxide, carbon dioxide and dense smoke.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Oral LD ₅₀ :	Oral LD ₅₀ (rat) 6000 mg/kg	Diocetyl tin dilaurate
Acute Dermal LD ₅₀ :	(rat) > 2000 mg/ kg	Diocetyl tin dilaurate
Acute Inhalation LC ₅₀ :	No data available.	
Skin Irritation:	Expected to be non-irritating to skin.	
Eye Irritation:	Slightly irritating to eyes.	
Skin Sensitization:	Not a sensitizer	
Mutagenicity:	A similar structured compound was tested in a mammalian mutagenicity assay and was found not to be mutagenic under the conditions of the test.	
Reproductive / Developmental Toxicity:	May damage the unborn child	
Carcinogenicity:	This material is not listed by IARC, NTP or OSHA as a carcinogen. No test data is available that indicates this material is a carcinogen.	
Target Organs:	Information is available that suggests dibutyltin substances may target the immune system (thymus gland).	

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Aspiration Hazard:	Not an aspiration hazard
Primary Route(s) of Exposure:	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.
Most important symptoms and effects, both acute and delayed	Not expected to cause significant eye or skin irritation or sensitization. Not expected to be acutely toxic.
Additive or Synergistic effects:	Delayed Effects: None known. None known.

SECTION 12: Ecological information

<u>12.1. Toxicity</u>	No data available.
<u>12.2. Persistence and degradability</u>	Does not biodegrade readily. No data available.
<u>12.3. Bioaccumulative potential</u>	Bioconcentration is not expected to occur.
<u>12.4. Mobility in soil</u>	No data available
<u>12.5. Results of PBT and vPvB assessment</u>	This substance is not a PBT or vPvB.
<u>12.6. Other adverse effects</u>	No data available.

SECTION 13: Disposal considerations

<u>13.1. Waste treatment methods</u>	
US EPA Waste Number:	Not applicable
Waste Classification: (per US regulations)	Non-Hazardous
Waste Disposal:	NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations. Dispose of this material responsibly, and in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws, and environmental protection duty of care principles. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate classification code according to the European Community List of Wastes should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

The following information applies to all shipping modes (DOT/IATA/ICAO/IMDG/ADR/RID/ADN), unless otherwise indicated:

14.1. UN number	Non-Hazardous	14.2. UN proper shipping name	Non-hazardous
14.3. Transport hazard class(es)	Non-Hazardous	14.4. Packing group	Non-Hazardous
14.5. Environmental hazards	Not applicable.		
14.6. Special precautions for user	Not applicable.		
NA Emergency Guidebook Numbers:	No data available.	IMDG EMS:	Not applicable.

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14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Inventory Lists:	Status:		
USA TSCA:	Listed	EINECS:	222-883-3
Canada(DSL/NDSL):	Listed DSL	Japan:	Listed 3-3424X; 2-2252X
Korea:	Listed KE-11994	Australia:	Listed
China:	Listed	Philippines:	Listed
Taiwan:	Listed	New Zealand:	Listed HSR007500
German Water Hazard Classification:	Not applicable.		
SARA 313:	Not listed.		

HMIS IV:

HEALTH	*1
FLAMMABILITY	0
PHYSICAL HAZARD	0

NFPA:



15.2. Chemical safety assessment

A chemical safety assessment has not been performed on this substance.

SECTION 16: Other information

Classification Method: On basis of test data
Expert judgment
Bridging principle - similar substance

Legend of Abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists. CAS = Chemical Abstracts Service. CFR = Code of Federal Regulations. DSL/NDSL = Domestic Substances List/Non-Domestic Substances List. EC = European Community. EINECS = European Inventory of Existing Commercial Chemical Substances. ELINCS = European List of Notified Chemical Substances. EU = European Union. GHS = Globally Harmonized System. LC = Lethal Concentration.	LD = Lethal Dose. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration PEL = Permissible Exposure Limit. RQ = Reportable Quantity. SARA = Superfund Amendments and Reauthorization Act of 1986. TLV = Threshold Limit Value. WHMIS = Workplace Hazardous Materials Information System.
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Important Note: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. The information contained herein may change without prior notice. THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS.



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