

## SAFETY DATA SHEET

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

**1.1. Product identifier** COTIN\* 227

**Synonyms:** Dibutyltin diacetate

**Chemical Abstracts Registry No:** 1067-33-0

**REACH Registration Number:** Not registered

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

catalyst

**1.3. Details of the supplier of the safety data sheet**

Vertellus LLC  
201 North Illinois Street, Suite 1800  
Indianapolis, Indiana 46204 USA  
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 25 85477110

### 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)

Skin Corrosion Category 1B  
Environmental Chronic Category 1  
Serious Eye Damage Category 1  
Germ Cell Mutagenicity Category 2  
Reproductive Toxicity Category 1B  
Skin Sensitization Category 1B  
Specific Target Organ Systemic Toxicity Repeated Exposure Category 1  
Specific Target Organ Systemic Toxicity Single Exposure Category 1

**2.2. Label elements**

**Hazard Symbols (Pictogram):**



**Signal Word:**

Danger

**Hazard Precautions:**

H314 - Causes severe skin burns and eye damage.  
H410 - Very toxic to aquatic life with long lasting effects.  
H341 - Suspected of causing genetic defects.

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H360FD - May damage fertility. May damage the unborn child.  
H317 - May cause an allergic skin reaction.  
H372 - Causes damage to organs through prolonged or repeated exposure.  
H370 - Causes damage to organs.

**Prevention Precautionary Statements:** P201 - Obtain special instructions before use.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P281 - Use personal protective equipment as required.

**First Aid Precautionary Statements:** P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P307+P311 - IF exposed: Call a POISON CENTER or doctor/physician.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.

### 2.3. Other hazards

## 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)
Dibutyltin diacetate	1067-33-0	~ 100	213-928-8	Not listed.	Aquatic Chronic 1; H410 Eye Dam. 1; H318 Muta. 2; H341 Skin Corr. 1B; H314 Repr. 1B; H360FD Skin Sens. 1; H317 STOT RE 1; H372 STOT SE 1; H370

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable).

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Skin Contact:** Immediately flush affected area with copious amounts of water. Remove contaminated clothing and continue flushing with water. The exposed area should be examined by medical personnel if irritation or pain persists after the area has been washed.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 20 minutes. Get immediate medical attention. Hold eyelids apart periodically while flushing.

**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.

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

<b>Acute:</b>	This material is considered corrosive to skin and eyes. Prolonged or repeated skin contact may cause skin irritation in some individuals.
<b>Delayed Effects:</b>	None known.

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

<b>Note to Physician:</b>	No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Appropriate Extinguishing Media:</b>	Water spray, Dry chemical, Foam, Carbon dioxide
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### 5.2. Special hazards arising from the substance or mixture

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

### 5.3. Advice for firefighters

<b>Basic Fire Fighting Guidance:</b>	Wear self-contained breathing apparatus and full protective clothing (i.e., Bunker gear). Skin and eye contact must be avoided due to corrosivity. Normal fire fighting procedures may be used.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Evacuation Procedures:</b>	Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
<b>Special Instructions:</b>	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

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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.

**Dangerous Incompatibility Reactions:** Strong oxidizing agents

**Incompatibilities with Materials of Construction:** None known

#### 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 <sup>3</sup> as 8 hour limit value; 0.009 mg/m <sup>3</sup> as 15 minute limit value (Dibutyltin diacetate)
Australia, Belgium, Germany (DFG), Ireland, New Zealand, Spain, Sweden, Switzerland	0.1 mg/m <sup>3</sup> as 8 hour limit value; 0.2 mg/m <sup>3</sup> as 15 minute limit value (Organic tin compounds)
Canada (Ontario), S. Korea, USA (NIOSH & OSHA)	0.1 mg/m <sup>3</sup> as 8 hour limit value (Organic tin compounds)
Finland	0.1 mg/m <sup>3</sup> as 8 hour limit value; 0.3 mg/m <sup>3</sup> as 15 minute limit value (Organic tin compounds)
Hungary	0.1 mg/m <sup>3</sup> as 8 hour limit value; 0.4 mg/m <sup>3</sup> 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.

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<b>Personal Protective Equipment:</b>	Up to 5 mg/m <sup>3</sup> , air-purifying respirators with particulate (HEPA) filters are acceptable. Higher or unknown concentrations require supplied-air respiratory protection. Impermeable gloves and safety goggles should be worn at all times Where splashing, misting or contact with eyes is likely, wear a face shield. Impervious clothing and boots.
<b>Respirator Caution:</b>	Observe OSHA regulations for respirator use (29 CFR 1910.134) or equivalent guidance. Air-purifying respirators must not be used in oxygen-deficient atmospheres.
<b>Thermal Hazards:</b>	Not applicable.
<b>Environmental Exposure Controls:</b>	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

<b>Appearance, State &amp; Odor (ambient temperature):</b>	Clear liquid with mild odor		
<b>Vapor Pressure:</b>	0.32 Pa @ 20°C	<b>Evaporation Rate:</b>	< 1 (Butyl Acetate = 1)
<b>Specific Gravity or Density:</b>	No data available.	<b>Vapor Density (air = 1):</b>	No data available.
<b>Boiling Point:</b>	(282 °F (139 °C))	<b>Freezing / Melting Point:</b>	50 °F (9 °C)
<b>Solubility in Water:</b>	Insoluble	<b>Octanol / Water Coefficient:</b>	Log Pow = 3.39 (est.)
<b>pH:</b>	No data available.	<b>Odor Threshold:</b>	No data available.
<b>Viscosity:</b>	No data available.	<b>Autoignition Temperature:</b>	968°F (520°C)
<b>Flash Point and Method:</b>	302°F (150°C)	<b>Flammable Limits:</b>	No data available.
<b>Flammability (solid, gas):</b>	Not applicable.	<b>Decomposition Temperature:</b>	No data available.
<b>Explosive Properties:</b>	Not explosive.	<b>Oxidizing Properties:</b>	Not an oxidizer.

#### 9.2. Other information

### SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not classified as dangerously reactive.
<b>10.2. Chemical stability</b>	Stable
<b>10.3. Possibility of hazardous reactions</b>	Will not autopolymerize.
<b>10.4. Conditions to avoid</b>	Avoid contact with strong oxidizers.
<b>10.5. Incompatible materials</b>	Strong oxidizing agents
<b>10.6. Hazardous decomposition</b>	none known

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products

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<b>Acute Oral LD<sub>50</sub>:</b>	32 mg/kg	Dibutyltin diacetate
<b>Acute Dermal LD<sub>50</sub>:</b>	2318 mg/kg	Dibutyltin diacetate
<b>Acute Inhalation LC<sub>50</sub>:</b>	No data available.	
<b>Skin Irritation:</b>	Corrosive to skin.	
<b>Eye Irritation:</b>	Severely irritating to eyes.	
<b>Skin Sensitization:</b>	A similar substance causes skin sensitization in animal tests.	
<b>Mutagenicity:</b>	A similarly structured substance has been shown to be positive in the chromosomal aberration assay, both with and without metabolic activation.	
<b>Reproductive / Developmental Toxicity:</b>	A similar substance has shown to affect fertility in studies. In the oral (gavage) teratogenicity study in the rat dibutyltin diacetate was determined not to be toxic maternally, but was teratogenic to developing fetuses.	
<b>Carcinogenicity:</b>	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.	
<b>Target Organs:</b>	Information is available that suggests dibutyltin substances may target the immune system (thymus gland).	
<b>Aspiration Hazard:</b>	Based on physical properties, not likely to be an aspiration hazard.	
<b>Primary Route(s) of Exposure:</b>	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.	
<b>Most important symptoms and effects, both acute and delayed</b>	This material is considered corrosive to skin and eyes. Prolonged or repeated skin contact may cause skin irritation in some individuals. Delayed Effects: None known.	
<b>Additive or Synergistic effects:</b>	None known.	

### SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Aquatic EC50 (48h) Daphnia 2 mg/L	Dibutyltin diacetate
<b>12.2. Persistence and degradability</b>	Does not biodegrade readily.	
<b>12.3. Bioaccumulative potential</b>	No data available	
<b>12.4. Mobility in soil</b>	No data available	
<b>12.5. Results of PBT and vPvB assessment</b>	This substance is not a PBT or vPvB.	
<b>12.6. Other adverse effects</b>	No data available.	

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

<b>US EPA Waste Number:</b>	Non-Hazardous
<b>Waste Classification: (per US regulations)</b>	The waste may be classified as "special" or hazardous per State regulations.
<b>Waste Disposal:</b>	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:

<b>14.1. UN number</b>	UN2922	<b>14.2. UN proper shipping name</b>	Corrosive Liquids, Toxic., n.o.s (Dibutyltin Diacetate)
<b>14.3. Transport hazard class(es)</b>	8(6.1)	<b>14.4. Packing group</b>	PG II
<b>14.5. Environmental hazards</b>	Marine Pollutant		
<b>14.6. Special precautions for user</b>	Consult regulations if shipping in bulk.		
<b>NA Emergency Guidebook Numbers:</b>	154	<b>IMDG EMS:</b>	S-B; F-A
<b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>			Not applicable.

### SECTION 15: Regulatory information

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

<b>Chemical Inventory Lists:</b>	<b>Status:</b>		
<b>USA TSCA:</b>	Listed	<b>EC / list No.:</b>	213-928-8
<b>Canada(DSL/NDSL):</b>	DSL	<b>Japan:</b>	(2)-2330X
<b>Korea:</b>	KE-10000	<b>Australia:</b>	Listed
<b>China:</b>	Listed	<b>Philippines:</b>	Listed
<b>Taiwan:</b>	Listed	<b>New Zealand:</b>	Listed
<b>German Water Hazard Classification:</b>	ID Number 2011, hazard class 3 - severe hazard to waters ( <i>Dibutylzinnndi(acetat)</i> )		
<b>SARA 313:</b>	Not listed.		
<b>State Regulations:</b>	This product contains chemicals listed on the Massachusetts Substance List for Right-to-Know Law.		
<b>Other Regulatory Listings:</b>	Based on the final product composition and the specifications of the raw materials, this product may contain trace levels [ $\leq 0.07\%$ as Cl] Dibutyltin dichloride (DBTC), which is a Substance of Very High Concern (SVHC) as determined by the European Chemicals Agency (ECHA) under REACH (EC No. 1907/2006). This product contains substances subject to the Rotterdam Convention on the Prior Informed Consent		

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Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.  
 (Dibutyltin Compounds)

HMIS IV:

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1

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/NDL = 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.

**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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