



## TIB KAT 321

### Description

*TIB KAT 321* (Dibutyltin bis-(2-Ethylhexyl Mercaptoacetate), more commonly known as dibutyl tin mercaptide, is butyl-based dialkyl organotin with added functionality. *TIB KAT 321* has the characteristic reactivity of a Sn (IV) organotin catalyst with improved upfront delay and improved hydrolytic stability due to the presence of a ligand with thiol functionality. Used primarily in polyurethane applications, *TIB KAT 321* imparts more controlled reactivity when compared to standard metal carboxylates such as *TIB KAT 218* (Dibutyltin Dilaurate), *TIB KAT 216* (Dioctyltin Dilaurate), and *TIB KAT 300* (Dimethyltin Dineodecanoate).

Catalysts such as *TIB KAT 321* tend to be inactive in regard to reactivity when used in silicone and esterification-related applications. Since the sulfur ligand acts as a blocking agent, thermal deblocking is required to initiate the back-end cure. Thus, catalysts such as *TIB KAT 321* tend to perform best in adhesive, elastomer, and foam applications with adequate exotherms. For coatings applications, *TIB KAT 321* can be used in baked cured systems in contrast to ambient cured systems.

In regard to the reactivity of the various urethane reactions, catalysts like *TIB KAT 321* will selectively catalyze the isocyanate-polyol reaction with less effect on the water reaction. The use in water-based systems is possible within certain limits.

### Product Data

Chemical Name	Dibutyltin Mercaptoacetate or Dibutyltin bis-(2-Ethylhexyl Mercaptoacetate)
CAS	10584-98-2
Molecular weight	639.59 g/mol
State of aggregation	clear liquid at RT

### Specification

Tin content	17,5 -18,5%
Colour (Gardner)	≤ 2

### Storage

*TIB KAT 321* can be stored at least one year if kept closed in the original packaging. Sensitive to frost. The container should be closed tightly after each use to maximize shelf life. Characteristic of most Sn (IV) organotins, the primary cause of instability would be hydrolysis. Although more stable compared to organotin carboxylates, long term contact with moisture could result in hydrolysis with the formation of tin oxide insolubles leading to deactivation of *TIB KAT 321*.

### Packaging

18 kg pail, 200 kg plastic drum,  
other packaging size upon request.



## TIB KAT 321

### Packaging USA

44 lb (20 kg) plastic pail,  
440 lb (200 kg) steel drum,  
other packaging size upon request.

### Special advice for Security

Information concerning

- ▣ classification and labelling according to the regulations governing transport and hazardous chemicals
- ▣ protective measures for storage and handling
- ▣ safety measures in case of accident and fire
- ▣ toxicity and ecological effects

is given in our material safety data sheet.

**Customs Tariff No.: 2931 9000**



## TIB KAT 321

### Product Carbon Footprint (PCF)

Created by: KlimAktiv Consulting GmbH

PCF-results (emissions)	Value (Mannheim)	Value (Pittsburgh)	Unit
<b>Sum of PCFs (Cradle-to-gate)</b>	-	-	kg CO <sub>2</sub> eq/kg
<b>PCF excluding biogenic emissions</b>	-	-	kg CO <sub>2</sub> eq/kg
<b>Biogenic emissions</b>	-	-	kg CO <sub>2</sub> eq/kg

The Product Carbon Footprint (PCF) covers one of several environmental impacts of chemical products. The PCF does not allow comprehensive conclusions about the overall environmental performance of the product. Comparisons of PCFs from different data sources are only possible to a limited extent. The PCF presented here applies to the product sold by TIB Chemicals.

The PCF is based on data of the accounting year 2024 and follows the calculation method outlined in ISO 14067, the Tfs Guideline, the BASF Guideline, the cradle-to-gate system boundaries, the declared unit kg CO<sub>2</sub>e/kg product (excl. packaging) and the sum of different emissions from Scope 1, 2 and 3 (raw material and preliminary products (e.g. secondary data), transportation of purchased products and inbound logistics, as well as company- and site-specific processes including primary energy consumption, electricity and heat consumption). The emissions from biogenic carbon and land-use changes are considered as far as data sources are available.