TIBCHEMICALS

TIB KAT 227

Description

TIB KAT 227 (Dibutyltin bis-(1-thioglycerol)), also known as Dibutyl bis-(2,3-Dihydroxypropyl Mercaptan), is butyl-based dialkyl organotin with added functionality. *TIB KAT 227* has the characteristic reactivity of a Sn (IV) organotin catalyst with improved upfront delay and hydrolytic stability due to the presence of a ligand with thiol functionality.

Used primarily in polyurethanes, *TIB KAT 227* imparts more controlled reactivity versus standard metal carboxylates such as *TIB KAT 218* (Dibutyltin Dilaurate) and *TIB KAT 300* (Dimethyltin Dineodecanoate).

Unlike standard organotin carboxylates, sulfur-bearing organotins are primarily used as a catalyst for polyurethane applications. Catalysts such as *TIB KAT 227* tend to be inactive in silicone and esterification-related applications. As the sulfur ligand acts as a blocking agent, thermal deblocking is required to initiate the back-end cure. Thus, catalysts such as *TIB KAT 227* tend to perform best in adhesive, elastomer, and foam applications with adequate exotherms. For coating applications, *TIB KAT 227* can be used in baked cured systems in contrast to ambient cured systems. Given its synthetic nature, *TIB KAT 227* imparts minimal color at higher temperatures

Product Data

Chemical name	Dibutyltin bis-(1-thioglycerol)
CAS No	68298-38-4
Molecular weight	447.24 g/mol
State of aggregation	liquid

Specification

Tin content	25.5 – 27.5 %
Colour (Gardner)	≤ 5
Density (20°C)	1.35 – 1.40

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Storage

TIB KAT 227 can be stored for 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. 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 227*.

Packaging

Packaging size upon request.

Packaging USA

55 lb (25 kg) plastic pails

485 lb (220 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

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Product Carbon Footprint (PCF)

Created by: KlimAktiv Consulting GmbH

PCF-results (emissions)	Value (Mannheim)	Value (Pittsburgh)	Unit
Sum of PCFs (Cradle-to-gate)	-	-	kg CO_2eq/kg
PCF excluding biogenic emissions	-	-	kg CO_2eq/kg
Biogenic emissions	-	-	kg CO_2eq/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 CO2e/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.

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