



TIB KAT 319

Description

TIB KAT 319 (Dibutyltin Dilauryl Mercaptide), also known as Di-N bis-(Dodecylthio)Tin or Dibutyl bis-(Dodecylthio) Stannane, is a butyl-based dialkyl organotin with added functionality. *TIB KAT 319* 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 319* imparts more controlled reactivity when compared to standard metal carboxylates such as *TIB KAT 218* (Dibutyltin Dilaurate), *TIB KAT 216* (Diocetyl tin Dilaurate), and *TIB KAT 300* (Dimethyltin Dineodecanoate). *TIB KAT 319* is a commonly used commercial Dibutyltin Dilauryl Mercaptide catalyst present on most global inventory lists.

Catalysts such as *TIB KAT 319* 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 319* tend to perform best in adhesive, elastomer, and foam applications with adequate exotherms. For coatings applications, *TIB KAT 319* 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 319* 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 Dilauryl Mercaptide or Dibutylbis (dodecylthio) stannane
CAS	1185-81-5
Molecular weight	635.72 g/mol
Appearance	clear liquid
Solubility	almost insoluble in water

Specification

Total tin content	17.5 – 19.0 %
Colour (Gardner)	≤ 5.0
Density (20°C)	0.980 – 1.040 g/ml



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Storage

TIB KAT 319 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 319*.

Packaging

25 kg pail, 200 kg drum,
other packaging size upon request.

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.: 2930 9098



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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)	12,6	-	kg CO ₂ eq/kg
PCF excluding biogenic emissions	12,6	-	kg CO ₂ eq/kg
Biogenic emissions	7,93 E-03	-	kg CO ₂ 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 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.