



TIB KAT 223

Description

TIB KAT 223 (Diocetyl Tin bis-(Acetylacetonate)) is an octyl-based organotin with a ketonate functionality. Diocetyl tin Diacetyl Acetonate is a highly reactive, neat liquid octyl tin catalyst. Having a much better toxicological profile due to the octyl based structure, it is suitable to replace *TIB KAT 226*.

TIB KAT 223 can be used as:

- 🔹 catalyst for 1 component MS Silyl systems
- 🔹 catalyst for synthesis of polyurethan-systems
- 🔹 catalyst for polycondensation reactions of RTV silicon resins and of silane terminated polymers

Given its high tin content, liquid form, small ligand, and good compatibility with a wide range of raw materials *TIB KAT 223* tends to be a highly reactive catalyst across a broad range of silicone formulations. In regard to silicone reactions, *TIB KAT 223*, like all tin-based catalysts, will catalyze the silanol/silane condensation reaction, acting as both a polymerization and crosslinking catalyst. *TIB KAT 223* is less hydrolytically stable toward condensation-generated moisture compared to carboxylate organotins. Reactivity-wise, *TIB KAT 417* or *TIB KAT 425* would be an ideal choice for similar specialty chemical applications.

TIB KAT 223 is miscible with organic solvents, but sensitive to moisture.

TIB KAT 223 is available in special formulations upon request.

Product Data

Chemical description	Diocetyl tin bisacetyl acetonate
CAS No	54068-28-9
Molecular weight	543.1 g/mol
Appearance	clear liquid

Specification

Tin content	≥ 19.0 %
Colour (Gardner)	≤ 5
Refractive index (20°C)	1.4950 - 1.5100



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Storage

TIB KAT 223 can be stored for at least one year if kept closed in the original packaging. Sensitive to humidity. 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. Hydrolysis results in the formation of tin oxide insolubles leading to deactivation of *TIB KAT 223*.

Packaging

25 kg pail, 50 kg pail, 200 kg drum, 1000 kg IBC,
other packaging size upon request.

Packaging USA

440 lb (200 kg) steel drum,
2400 lb (1089 kg) IBC,
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)	10,8		kg CO ₂ eq/kg
PCF excluding biogenic emissions	10,8		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.