



TIB KAT 154

Description

TIB KAT 154 (Stannous Chloride Dihydrate) also known as $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$, is a versatile, high metal content stannous inorganic tin that is used in several reactions. Stannous Chloride Dihydrate is produced to the highest standards, meeting A.C.S. specifications. *TIB KAT 154* is a solid version of stannous chloride dihydrate, though liquid versions are available. The stability/free-flowability of stannous chloride dihydrate can be enhanced via blends with various products including silica, talc, and numerous solid resins. Stannous chloride dihydrate is a tin catalyst that can also be supplied as a liquid in various concentrations, including *TIB STAN S45* and *TIB STAN S72*.

Common end-use chemistries and applications for *TIB KAT 154* include esterification, thermoplastic elastomers, personal care, surface finishing, oil well simulation (acidizing additive), corrosion inhibition, and glass (silver mirroring and color modifier). As a catalyst, Stannous Chloride Dihydrate plays a crucial role in the esterification process, which is fundamental to the production of various esters. As a reducing agent, Stannous Chloride Dihydrate finds diverse applications and benefits in various industries. As a plating agent in electroplating applications, it serves as a primary reducing agent to deposit metal layers, such as silver or tin, onto substrates. By donating electrons, REAXIS® C154, stannous chloride dihydrate, reduces the metal ions to their corresponding metallic forms, which adhere to the substrate's surface. This process creates a uniform, thin coating that improves the final product's appearance, durability, and corrosion resistance.

Having finished the reaction, it is easy to remove *TIB KAT 154* by chemical treatment or adsorption with *TINEX*® -products.

Product Data

Chemical name	Stannous Chloride, Dihydrate
Cas No.	10025-69-1
Molecular weight	225.7 g/mol
State of aggregation	solid

Specification

Assay as $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$	99.2 - 103.0 %
Stannous Tin	≥ 52.2 %
Fe	≤ 30 ppm
Pb	≤ 100 ppm
Na Content	≤ 100 ppm
K Content	≤ 50 ppm
Ca Content	≤ 50 ppm
Sulfates	Passes A.C.S. Test
Solubility in HCl	Passes A.C.S. Test

Storage

TIB KAT 154 should be stored in the original packaging. The container should be closed tightly after each use to maximize shelf life. Characteristic of most inorganic tins (Sn(II)), the primary cause of instability would be oxidation. Additionally, *TIB KAT 154* has a low melting point (38C) and is hygroscopic.



TIB KAT 154

Packaging

25 kg plastic pail,
other packaging size upon request.

Packaging USA

55 lb (25 kg) plastic pail,
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.: 2827 3910



TIB KAT 154

Product Carbon Footprint (PCF)

Created by: KlimAktiv Consulting GmbH

PCF-results (emissions)	Value (Mannheim)	Value (Pittsburgh)	Unit
Sum of PCFs (Cradle-to-gate)	12,11	-	kg CO ₂ eq/kg
PCF excluding biogenic emissions	-	-	kg CO ₂ eq/kg
Biogenic emissions	-	-	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.