



TIB KAT 154S+

Description

TIB KAT 154S+ (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 used in applications where a free-flowing solid is required. *TIB KAT 154S+* is a tin catalyst that consists of stannous chloride dihydrate (*TIB KAT 154*) combined with silica and is processed to ensure a free-flowing solid that acts to minimize the negative effects of temperature and hygroscopicity. This variant of stannous chloride dihydrate, *TIB KAT 154S+*, has an improved stability versus *TIB KAT 154S*, another grade of stannous chloride dihydrate available. Stannous Chloride Dihydrate is produced to the highest standards, meeting A.C.S. specifications.

Common end-use chemistries and applications for *TIB KAT 154S+* include esterification, thermoplastic elastomers, personal care, surface finishing, oil well simulation (acidizing additive), corrosion inhibition, and glass (silver mirroring and color modifier). *TIB KAT 154S+* is primarily used in hybrid thermoplastic elastomer formulations, specifically in the production of EPDM and polyethylene-based thermoplastic vulcanizates (TPVs). Other applications include personal care products and use as a reducing agent. *TIB KAT 154S+* is of the inorganic tin family of tin chemicals and is an ideal candidate, in select chemistries and formulations, as an alternative to more regulatory controlled organotin.

Due to its high tin concentration, small ligand, and inorganic Sn (II) nature, Stannous Chloride Dihydrate is a very active catalyst and reducing agent. Given its inorganic tin nature, *TIB KAT 154S+* is stable at high reaction temperatures typical of many reactions. In addition, *TIB KAT 154S+* is a tin chemical characterized by a narrow particle size distribution resulting in ideal blending with other solid raw materials.

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

Product Data

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

Specification

Assay as $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$	≥ 97.0 %
Stannous Tin	≥ 51.0 %



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Storage

TIB KAT 154S+ 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. Minimize exposure to temperatures > 45°C.

Packaging

Packaging size upon request.

Packaging USA

40 lb (20 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



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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)	12,11	-	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.