



TIB STAN S45

Description

TIB STAN S45 (Stannous Chloride Dihydrate solution) also known as $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$, is a versatile high metal content stannous inorganic tin catalyst. *TIB STAN S45* is one of our family of liquid grades of the primary solid grade stannous chloride dihydrate, *TIB KAT 154*. *TIB KAT 154* is produced to the highest standards, utilizing high-purity tin metal while minimizing stannic and maximizing stannous content. *TIB STAN S45* is a stable liquid grade containing approximately 45% of *TIB KAT 154* and 23% active stannous tin. Other liquid grades include *TIB STAN S25*, *TIB STAN S72* and *TIB STAN S50*.

TIB STAN S45 is present on a wide range of international regulatory inventories, making it ideal for multinational formula development.

Common end-use chemistries and applications for *TIB STAN S45* include esterifications, personal care, surface finishing, oil well stimulation (acidizing additive), corrosion inhibition, and glass (silver mirroring and color modifier). As a reducing agent, *TIB STAN S45* finds diverse applications and benefits in applications such as those requiring the reduction of silver used for mirror coatings and the reduction of iron needed in oil & gas well stimulations. This reduction functionality is commonly used in industrial water treatment applications requiring the minimization of toxic metals.

The main reactivity attribute of *TIB STAN S45* would be in its reduction of a wide range of metals. This is primarily due to the presence of a high concentration of stannous tins. This electron transfer makes *TIB STAN S45* an ideal metal-based additive where toxic metal impurities are present and need to either be reduced or separated out. This type of reactivity would be a function of stannous tin content and thus the various liquid grades of stannous chloride would be differentiated here due to the differences in tin content.

Product Data

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

Specification

Assay as $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$	44.5 – 45.5 %
Stannous tin	≥ 23.4 %
Fe	≤ 10 ppm
Pb	≤ 20 ppm



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Storage

TIB STAN S45 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, where the signs of oxidation would be the yellowing of the white crystals.

Packaging

25 kg pail, other packaging size upon request.

Packaging USA

55 gal plastic drum, 720 lb net,
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)	-	-	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.