



TIB KAT 721 E

Description

TIB KAT 721 E is a proprietary liquid catalyst based on bismuth. *TIB KAT 721 E* is unique in that it is both non-carboxylate and water soluble which differentiates it from the more common bismuth carboxylates such as *TIB KAT 716* (bismuth neodecanoate) and *TIB KAT 728* (bismuth octoate). *TIB KAT 721 E* is provided as a 50% active bismuth catalyst in 50% ethylene glycol. It can be used for curing solvent borne polyurethane formulations.

Like most bismuth-based products, *TIB KAT 721 E* is commonly used in polyurethane applications. It is used in a wide range of polyurethane applications including coatings, adhesives and sealants, elastomers, foams, and plastics. *TIB KAT 721 E* is used in applications where toxicity (when compared with organotins), water solubility and shelf-life issues are primary priorities.

Although *TIB KAT 721 E* has a different chemical make-up compared to the traditional bismuth carboxylates, it does exhibit a similar, bismuth-like reactivity profile. One of the benefits this product brings is that the Use of *TIB KAT 721 E* as a polyurethane catalyst results in good overall reactivity. A well-balanced cure is achievable given the presence of both a low bismuth metal content and ligand characteristics. Thus, a balanced front-end/pot-life and back-end/ final cure reactivity profile can be achieved. Reactivity, especially in regard to back-end cure, is greatly improved with the addition of added and exothermically generated heat. Typical of the bismuth catalysts in general, *TIB KAT 721 E* will catalyze most polyurethane reactions and is somewhat

similar in reactivity to tin-based catalysts; it is primarily selective toward the polyol-isocyanate and water-isocyanate reactions. In addition to its enhanced water stability, *TIB KAT 721 E* will impart a longer polyol-side shelf-life compared to bismuth carboxylates.

Product Data

Chemical Name	Proprietary Water Soluble Bismuth Complex
State of aggregation	clear yellow liquid

Specification

Bismuth content	19.0 – 21.0 %
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Storage

TIB KAT 721 E can be stored for at least one year if kept closed in the original packaging at moderate temperatures and kept from freezing. The product is susceptible towards light.

Packaging

Packaging size upon request.

Packaging USA

Packaging size upon request.



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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.: 3815 9090



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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.