

# IndiTri-Indium-Trichloride

## Introduction

**IndiTri™ (Indium Trichloride)** is a white, odorless, and highly deliquescent powder. Its particles are flake-shaped and highly soluble in water and mineral acids. It is used as a starting chemical for the synthesis of other inorganic and organic indium compounds (e.g., MOCVD precursors) and as an additive to alkaline batteries to reduce outgassing and improve operational efficiency of the battery when under electrical load. **IndiTri™** is available as an anhydrous powder and as a solution up to its solubility limit.

## Properties

Chemical Formula	InCl <sub>3</sub>
Molecular Weight	221.18
General Description	White deliquescent powder
Uses	MOCVD precursor; chemical synthesis; alkaline battery additive
Purity Grades Available	99.999%(5N) 99.9999%(6N)
Solubility	66.11g/100g of solution @ 22°C
Specific Gravity	3.46g/cc solid 197g/cc saturated solution
Melting Point	586°C (sublimes @ 300°C)
Boiling Point	Volatilizes @ 600°C
Crystalline Form	White plates, deliquescent
Isomorphous with	AlCl <sub>3</sub> , YCl <sub>3</sub>
Coordination Number	6
Theoretical Indium Content	51.9%
Indium Content	51.5 ± 1.0%

Impurities	Typical (ppm)	Maximum (ppm)
Aluminum (Al)	< 1	< 5
Gold (Au)	< 1	< 5
Cobalt (Co)	< 1	< 5
Iron (Fe)	< 1	< 5
Gallium (Ga)	< 1	< 5
Sodium (Na)	< 1	< 5
Lead (Pb)	< 1	< 5
Tin (Sn)	< 1	< 5
Zinc (Zn)	< 1	< 5

All information is for reference only.  
Not to be used as incoming product specifications.

This product data sheet is provided for general information only. It is not intended, and shall not be construed, to warrant or guarantee the performance of the products described which are sold subject exclusively to written warranties and limitations thereon included in product packaging and invoices. All Indium Corporation's products and solutions are designed to be commercially available unless specifically stated otherwise.

All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.



## Packaging

- Double-bagged, sealed LDPE pouches inside HDPE bottle; desiccants are used in outer bag and bottle.
- Container sizes from 0.5kg up to 10kg. Packaging in other sizes is available upon request.

## Storage and Shelf Life

**IndiTri™** is highly deliquescent and the solid crystals will liquefy quickly in humid environments. The container should contain a desiccant and should be kept tightly sealed. **IndiTri™** has a shelf life of 12 months due to the deliquescent nature of the chemical.

## Technical Support

Indium Corporation sets the industry standard in providing rapid response, onsite technical support for our customers worldwide. Indium Corporation's team of Technical Support Engineers can provide expertise in all aspects of Materials Science.

## Safety Data Sheet

The SDS for this product can be found online at <http://www.indium.com/sds>