

PRODUCT DATA SHEET

Indium Trichloride, 5N Anhydrous

Introduction

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. **Indium trichloride** is available as an anhydrous powder and as a solution up to its solubility limit.

Properties

Chemical Formula	InCl ₃
Molecular Weight	221.18
General Description	White deliquescent powder
Uses	MOCVD precursor; chemical synthesis; alkaline battery additive
Purity Grades Available	5N (99.999%)
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 ₃ , YCl ₃
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



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

Indium trichloride 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. **Indium trichloride** has a shelf life of 6 months due to the deliquescent nature of the chemical.

Safety Data Sheet

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

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

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Contact our engineers today: askus@indium.com

Learn more: www.indium.com

ASIA +65 6268 8678 • CHINA +86 (0) 512 628 34900 • EUROPE +44 (0) 1908 580400 • USA +1 315 853 4900

Form No. 99193 (A4) R0

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