

PRODUCT DATA SHEET

Indium Trichloride

4 Mole Hydrated Crystal $\text{InCl}_3 \cdot 4\text{H}_2\text{O}$

Introduction

Indium trichloride hydrate is a white, odorless, and highly deliquescent crystal. Its crystals are highly-soluble in water and mineral acids. It is used as a starting chemical for the synthesis of other inorganic and organic indium compounds. It is also used as an additive to alkaline batteries to reduce outgassing and improve operational efficiency of the battery when under electrical load. **Indium trichloride** is also available as an anhydrous powder and as a solution up to its solubility limit.



Properties

Chemical Formula	$\text{InCl}_3 \cdot 4\text{H}_2\text{O}$
Molecular Weight	293.18
General Description	Clear crystals
Uses	Chemical synthesis; alkaline battery additive
Purity Grades Available	4N (99.99%), 5N (99.999%)
Solubility	66.11g/100g of solution @ 22°C
Specific Gravity	3.46g/cc solid 1.97g/cc saturated solution
Melting Point	586°C (sublimes at 300°C)
Boiling Point	Volatilizes @ 600°C
Crystalline Form	White plates, deliquescent
Isomorphous with	AlCl_3 , YCl_3
Coordination Number	6
Theoretical Indium Percentage	39.16

Standard Packaging Powder

Quantity*	Container
1.8kg	3.8-liter plastic
0.5kg	1-liter plastic

Solution

1-liter polyethylene bottles
3.8-liter (1-gallon) polyethylene bottles
18.9-liter (5-gallon) polyethylene bottles

*All package sizes contain suitable desiccant. Packaging in other sizes or in glass may be available upon request.

Storage and Shelf Life

Indium trichloride hydrate is highly deliquescent and the solid crystals will liquefy quickly in humid environments. The container should contain a desiccant and the container kept tightly sealed. **Indium trichloride hydrate** has a shelf life of 6 months due to the deliquescent nature of the chemical.

Safety Data Sheets

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

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