

## PRODUCT DATA SHEET

# Indium Trichloride

4 Mole Hydrated Crystal



### 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<br>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              | $\text{AlCl}_3$ , $\text{YCl}_3$              |
| 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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