

PRODUCT DATA SHEET

Indium Sulfate



Introduction

Indium sulfate is a grayish-white powder. It is hygroscopic and possesses a monoclinic prism structure. It is available as an anhydrous powder, a hydrated salt with 9 moles of associated water, and a solution in varying concentrations up to its solubility limit in water. **Indium sulfate** is used as a synthesis chemical and as a hardening agent in gold electroplating baths.

Properties: Anhydrous

| | |
|-------------------------------|---|
| Chemical Formula | $\text{In}_2(\text{SO}_4)_3$ |
| Molecular Weight | 517.81 |
| General Description | Grayish-white hygroscopic powder; monoclinic prisms |
| Uses | Chemical synthesis, hardening agent in gold electroplating baths |
| Purity Grades Available | 4N (99.99%), 5N (99.999%) |
| Solubility | 53.92g/100g solution at 20°C |
| Specific Gravity | 3.438g/cc |
| Specific Heat | 0.129cal/gram°C (0–100°C) |
| Heat of Formation | 49.039cal (2In + 3H ₂ SO ₄ =In ₂ (SO ₄) ₃ + 3H ₂) 72.78cal (In ₂ O ₃ + 3H ₂ SO ₄ =In ₂ (SO ₄) ₃ + 3H ₂ O) |
| Dissociation Pressure | 10mm Hg @ 645°C 900mm Hg @ 820°C |
| Theoretical Indium Percentage | 44.35 |
| Minimum Indium Percentage | 40.4 |
| Nominal Indium Percentage | 42.6 ± 2.2 |

Standard Packaging Powder

| | |
|------------------|-------------------|
| Quantity* | Container |
| 2.5kg | 3.8-liter plastic |
| 0.66kg | 1-liter plastic |

Solution

1-liter (2.1 pints) polyethylene bottles
3.8-liter (1 gallon) polyethylene bottles
18.9-liter (5 gallons) polyethylene bottles

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

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.

From One Engineer To Another®

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Properties: Hydrated Salt

| | |
|-------------------------------|---|
| Chemical Formula | $\text{In}_2(\text{SO}_4)_3 \cdot 9\text{H}_2\text{O}$ |
| Molecular Weight | 679.95 |
| General Description | Grayish-white hygroscopic powder; monoclinic prisms |
| Uses | Chemical synthesis, hardening agent in gold electroplating baths |
| Purity Grades Available | 4N (99.99%), 5N (99.999%) |
| Solubility | 53.92g/100g solution at 20°C |
| Specific Gravity | 3.438g/cc |
| Specific Heat | 0.129cal/gram°C (0–100°C) |
| Heat of Formation | 49.039cal (2In + 3H ₂ SO ₄ =In ₂ (SO ₄) ₃ + 3H ₂) 72.78cal (In ₂ O ₃ + 3H ₂ SO ₄ =In ₂ (SO ₄) ₃ + 3H ₂ O) |
| Dissociation Pressure | 10mm Hg @ 645°C 900mm Hg @ 820°C |
| Theoretical Indium Percentage | 33.77 |
| Minimum Indium Percentage | 31.5 |
| Nominal Indium Percentage | 33.7 ± 2.2 |

Storage and Shelf Life

Indium sulfate should be stored at room temperature and the container kept tightly sealed. **Indium sulfate** has a shelf life of 12 months.

Safety Data Sheets

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



Form No. 97551 R7 

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