

PRODUCT DATA SHEET

IndiSul™ (Indium Sulfate)



Introduction

IndiSul™ (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. **IndiSul™** 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.

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

IndiSul™ should be stored at room temperature and the container kept tightly sealed. **IndiSul™** 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>

From One Engineer To Another®

Contact our engineers: 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

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