# Antimony (Sb)

Element 51 — Complete Summary

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51
**Sb**
Antimony
121.76

## Key Properties

| | |
|---|---|
| Atomic Mass | 121.76 |
| Category | Metalloids |
| State at 20°C | solid |
| Melting Point | 630.628°C |
| Boiling Point | 1587°C |
| Density | 6.697 |
| Electron Config | [Kr] 4d105s25p3 |
| Electronegativity | 2.05 |
| Year Discovered | c. 1450 |
| Discovered By | Tholden |

## ✨ Did You Know?

1. Its chemical symbol, Sb, comes from its historical Latin name, 'stibium'.
2. Ancient Egyptians used powdered stibnite (antimony sulfide) as a black eyeliner and mascara, known as kohl.
3. Antimony is a crucial ingredient in flame retardants, added to plastics, textiles, and other materials to make them less flammable.
4. Adding antimony to lead makes the lead harder and stronger, which is why it's used in lead-acid car batteries.
5. Despite being a metalloid, it is a poor conductor of heat and electricity.

**APPEARANCE**
Antimony is a brittle, silvery-white metalloid.

**SUPERHERO PERSONA**
*"The Flame Retardant, a hero who stops fires before they can spread through plastics and textiles."*

**EVERYDAY CONNECTION**
Antimony is found as an ingredient in flame-retardant clothing or electronics.

**POP CULTURE**
Antimony was used by ancient Egyptians as kohl eyeliner  seen in many historical films.

## Antimony (Sb): The Brittle, Ancient Semi-Metal

Antimony is a silvery, hard, and brittle semi-metal that has been known since ancient times. Its name comes from the Greek words anti and monos, which may mean “not alone”—a reference to how it’s usually found combined with other elements. Civilizations have used antimony for over 5,000 years, from cosmetics to metallurgy.

## Why Is Antimony Useful?

Antimony is prized for its ability to harden metals and for its role in modern industry:

Alloys: Added to lead to make it harder and stronger. Lead–antimony alloys are essential for car batteries, bullets, and the old printing press “type metal.”

Electronics: Used as a semiconductor in devices like infrared detectors and diodes.

Flame Retardants: Antimony compounds are added to fabrics, paints, and plastics to make them resistant to fire.

Historical Uses: In ancient times, the mineral stibnite (antimony sulfide) was ground into a fine powder and used as kohl, a black pigment for eye makeup.

## Natural Abundance & History

Antimony is not very common but is found in over 100 minerals, most often as stibnite ($Sb_2S_3$). It can also occur in small amounts in pure form. Today, about 88% of the world’s antimony is produced in China.

5,000 years ago: A vase made of antimony was crafted in Mesopotamia (modern Iraq).

Ancient Egypt & Babylon: Antimony sulfide was used as a pigment and glaze for decorative objects.

Medieval Europe: Doctors even prescribed antimony “pills” as laxatives—and in some cases, the same pill was reused multiple times!

## Biological Role

Antimony has no biological role. Many of its compounds are toxic and must be handled with care.