

Hassium (Hs)

Element 108 | Transition metal - superheavy | Period 7 | d-block

Atomic number	108
Atomic mass	[269]
Electron configuration	[Rn] 5f ¹⁴ 6d ⁶ 7s ²
Reference isotope	270Hs
Density	Unknown
Melting point	Unknown
Boiling point	Unknown
Structure	Bulk crystal structure unknown

Big idea

Hassium is scientifically interesting because volatile HsO₄ experiments probe Group 8 chemistry at the atom scale. Bulk appearance, density and lattice remain unknown and are shown that way.

Five things to remember

- Atomic number 108 means every hassium nucleus has 108 protons.
- The ground-state/reference electron configuration is [Rn] 5f¹⁴ 6d⁶ 7s².
- The representative teaching isotope is 270Hs.
- Hassium is scientifically interesting because volatile HsO₄ experiments probe Group 8 chemistry at the atom scale. Bulk appearance, density and lattice remain unknown and are shown that way.
- Material structure status: Bulk crystal structure unknown.

Structure, evidence and real-world context

No defensible macroscopic crystal lattice is displayed for Hassium. Nuclear/atomic evidence and theory are kept separate from unmeasured bulk material properties.

Evidence boundary

Atomic identity and source-reviewed reference values are separated from predictions. Search demand shapes headings and FAQs but never overrides scientific evidence; unknown bulk structure/density/phase values remain visibly unknown.

Where is it used?

Scientific research only - Research-only context; no operational production or handling guidance.

Atom-scale chemistry and nuclear-decay studies - Research-only context; no operational production or handling guidance.

Discovery and history

1984 - GSI researchers in Darmstadt produced convincing evidence for element 108; the name refers to the German state of Hesse.

Naming / context - The element name and discovery story are part of the historical record; search-led questions are answered without turning history into scientific evidence for bulk properties.

Today - Current use is described at the level supported by the element's availability and evidence, with research-only elements kept research-only.

Safety / interpretation

This page is educational and non-operational. It provides no radioactive-material production, separation, source-preparation, handling or access instructions.

Search-led questions and review

The questions below reflect genuine learner/search intent. Answers remain source- and evidence-led.

What is the atomic number of hassium?

The atomic number is 108, meaning every hassium nucleus has 108 protons.

What is the symbol for hassium?

The chemical symbol is Hs.

What is hassium?

Hassium is element 108, symbol Hs, a synthetic superheavy element in Group 8.

What is hassium used for?

Hassium has no practical use; it is produced only for scientific research.

What does hassium look like?

Only very small numbers of atoms have been produced. No macroscopic sample has been seen, so this guide does not invent a measured color, density or crystal structure.

Is hassium an inner transition metal?

No. Hassium is a Group 8 d-block transactinide/transition element, not an f-block inner-transition element.

Quick review

What is Hassium's atomic number?

Answer: 108

Atomic number 108 defines Hassium by its proton count.

Which statement best describes the material evidence for Hassium?

Answer: Bulk crystal structure unknown

The Structure view follows measured/reviewed evidence; unknown bulk structures remain unknown.

What is the safest rule for Hassium uses?

Answer: Distinguish the element from its isotopes, compounds and engineered materials

Elemental, isotope-specific and compound properties must not be conflated.

Sources

Royal Society of Chemistry - Hassium: <https://periodic-table.rsc.org/element/108/>

NIST - Atomic Weights and Isotopic Compositions: https://physics.nist.gov/cgi-bin/Compositions/stand_alone.pl

IUPAC - Periodic Table of Elements: <https://iupac.org/what-we-do/periodic-table-of-elements/>