

Properties: Gallium is a silvery-white liquid metal or soft, moldable solid metal at room temperature with a low melting point and high boiling point. Stable in dry air, in moist air it tarnishes. If exposed to high temperatures, gallium may emit toxic fumes which may form a corrosive alkaline solution with water.

Uses: Gallium source for molecular beam epitaxy (MBE); preparation of semiconductor materials; Manufacture of laser diodes and solar cells.

· Identifier

Chemical Formula	Ga
CAS No.	7440-55-3
EINECS No.	231-163-8

· Physical and chemical properties

Molecular weight	69.72 g/mol	Flash point	/	Reactivity	Stable in dry air at room temperature oxidized in humid air
Appearance	grayish-blue or silvery-white metal	Melting point	29.8°C	Solubility	Insoluble with strong acids, strong bases, strong oxidizing agents
Density	5.904 g/cm ³	Boiling point	2403°C	Storage	Shady and cool, well-ventilated

· Metal impurities

Impurities	7.5N/ppbw	8N/ppbw	Impurities	7.5N/ppbw	8N/ppbw
Li	/	≤5	Pd	/	≤5
Be	≤0.5	≤0.5	Cd	≤4	≤5
B	≤0.5	≤0.5	Sb	≤1	≤4
P	≤0.5	≤0.5	Te	≤1	≤1
S	≤0.5	≤0.5	Cs	/	≤1
K	≤10	≤10	Ba	/	≤5
Sc	/	≤0.5	Hf	/	≤5
Ti	≤0.5	≤0.5	Re	/	≤5
V	≤0.5	≤0.5	Os	/	≤5
Ge	≤5	≤5	Ir	/	≤5
As	≤5	≤5	Pt	/	≤5
Se	≤5	≤5	Tl	≤1	≤1
Rb	/	≤5	Bi	≤5	≤5
Sr	/	≤5	Th	/	≤1
Y	/	≤1	U	/	≤1
Zr	/	≤1	Cu	≤5	≤1
Nb	/	≤1	Pb	≤1	≤1
Mo	≤5	≤5	Zn	≤1	≤1
Ru	/	≤5	Al	≤2	≤2
Rh	/	≤5	In	≤5	≤5

· Metal impurities

Impurities	7.5N/ppbw	8N/ppbw	Impurities	7.5N/ppbw	8N/ppbw
Ca	≤3	≤3	Au	≤20	≤20
Fe	≤5	≤1	Si	≤2	≤0.5
Sn	≤3	≤3	Hg	≤1	≤1
Ni	≤1	≤1	Mn	≤0.5	≤0.5
Co	≤0.5	≤0.5	Cr	≤1	≤1
Ag	≤100	≤100	Na	≤1	≤1
Mg	≤0.5	≤0.5	Combined total impurities	≤50	≤10



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