

GaCl₃

Properties: Gallium trichloride is white needle crystal with formula GaCl₃, strong hygroscopicity, easy to deliquesce, hydrolyzed and fumed in the air by moisture. Gallium trichloride is very soluble in water, and releases a lot of heat when dissolved. In aqueous solution, trivalent gallium exists as oxyanion at pH>6. Gallium chloride is usually prepared by the direct reaction of gallium and chlorine, or by the reaction of hydrogen chloride and gallium trioxide at 200 °C.

Uses: Organic reaction catalysts, solar cell manufacturing, synthesis of organoindium series compounds.

· Identifier

Chemical Formula	GaCl ₃
CAS No.	13450-90-3
EINECS No.	236-610-0

· Physical and chemical properties

Molecular weight	176.08 g/mol	Flash point	-32°C	Reactivity	Easily deliquescent, easily oxidized, extremely flammable
Appearance	white needle crystal	Melting point	78°C	Solubility	Easily soluble in water and ethanol, soluble in ammonia
Density	2.47 g/cm ³	Boiling point	201°C	Storage	Shady and cool, well-ventilated

· Metal impurities

Impurities	4N/ppm	5N/ppm	Impurities	4N/ppm	5N/ppm
Na	≤20	≤1	Fe	20	≤1
Mg	≤5	≤1	Ge	≤5	≤1
Al	20	≤1	In	≤5	≤1
Si	≤5	≤1	Ni	20	≤1
Ca	≤5	≤1	Pb	20	≤1
Cr	≤5	≤1	Sn	20	≤1
Cu	20	≤1	Zn	20	≤1

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