

Technical Data Sheet

Lithium Tetrafluoroborate: LITHIUM TETRAFLUOROBORATE
Formula: LiBF_4
Relative weight: 93.75
CAS NO.: 14283-07-9
Physical Chemical Properties: An inorganic compound with its chemical formula LiBF_4 . It is an odorless white crystalline powder; its molecular weight is 93.75, density 0.852g/cm^3 , melting point 296.5°C (565.7°F ; 569.6K). It is hygroscopic and very soluble in water. It has been extensively tested for use in commercial secondary batteries, an application that exploits its high solubility in nonpolar solvents.
Applications: As an electrolyte additive in lithium-ion batteries, LiBF_4 offers some advantages compared to the more common lithium salt LiPF_6 . It exhibits greater thermal stability and moisture tolerance. For example, LiBF_4 can tolerate a moisture content up to 620 ppm at room temperature whereas LiPF_6 readily hydrolyzes into toxic POF_3 and HF gases, often destroying the battery's electrode materials. Disadvantages of the electrolyte include a relatively low conductivity and difficulties forming a stable solid electrolyte interface with graphite electrodes.

Component		Lithium Tetrafluoroborate
LiBF ₄ Purity (Min%)		99.90%
Impurity Content Max ppm	H ₂ O	150
	Free Acid (HF)	100
	DMC Insoluble substance	1000
	Na ⁺	10
	K ⁺	5
	Ca	5
	Fe	5
	Ni	5
	Cr	5
	Cu	5
	Mn	5
	Pb	5
	Cl	5
	SO ₄ ²⁻	10
Packing: 25kg/woven bag with sealed layer bag; 25kg/sealed bag /paper drum.		