



ROSATOM
CHEMICAL

DEVELOPMENT AND PRODUCTION OF ELECTROLYTE

**ROSATOM CHEMICAL PRODUCES
WIDE RANGE OF CUSTOM-DESIGNED
ELECTROLYTES INCLUDING FOR:**

- PRIMARY BATTERIES (NON-RECHARGEABLE).

Applications: wearable medical devices, UAVs

- SECONDARY BATTERIES (RECHARGEABLE).

Applications: portable electronic devices, electric vehicles

**- POST-LITHIUM BATTERIES:
SODIUM-ION, POTASSIUM-ION BATTERIES.**

Applications: large-sized electronic devices.

ELECTROLYTE FOR $CF_x||Li$ BATTERIES.

Allows the batteries to provide extremely high specific capacity (~ 800 mAh/g_{cfx}), as well as stability of operating potential during slow discharge

ELECTROLYTE FOR $V_2O_5-CF_x||Li$ BATTERIES.

Allows the cells to maintain high values of specific energy intensity during rapid discharge (with speed $\geq 1C$).

ELECTROLYTE FOR LI-ION BATTERIES (NMC||graphite).

Provides stable operation and long service life of the batteries (more than 500 charge-discharge cycles with a capacity loss of less than 10 % for 60 Ah cells).

**ELECTROLYTE FOR FROST-RESISTANT
METAL-ION BATTERIES.**

Guarantees cells' functionality at low temperatures (down to -20 °C).

ELECTROLYTE FOR SODIUM-ION BATTERIES.

Ideal for conducting R&D and launching pilot production.



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Main electrolyte product line specifications

Technical specifications

X

Item	Normal value
Form	transparent colorless or yellowish liquid
Mass fraction of lithium tetrafluoroborate (LiBF ₄), %	7 – 8
Mass fraction of water (H ₂ O), %	< 0,01
Mass fraction of ethylene carbonate (EC), %	45-47
Mass fraction of dimethyl carbonate (DC), %	45-47
Mass fraction of iron (Fe), %	< 5×10 ⁻³

ELIA-S

Item	Value
Form	colorless liquid without mechanical impurities
Mass fraction of lithium hexafluorophosphate (LiPF ₆), %	12,5-13
Mass fraction of water (H ₂ O), %	< 0,002
Mass fraction of ethylene carbonate (EC), %	42,4-42,9
Mass fraction of dimethyl carbonate (DC), %	42,4-42,9
Mass fraction of vinyl carbonate (VC), %	1,8-2,2
Mass fraction of iron (Fe), %	< 5×10 ⁻⁴

