

^7Li in Form of Lithium Hydroxide for the Nuclear Industry



Enriched Lithium Hydroxide Monohydrate for use as an alkalinizing agent in pressurized water reactors.

Our Lithium-7 is specifically designed to meet the quality requirements of the nuclear power industry. Four grades are available – three of them world exclusively produced for NUKEM:

- Grade „A“ is a material of ultimate high purity and enrichment setting a new standard for those reactor operators who need absolute purity of primary circuit water.
- Grade „BY“ is a material of ultimate high enrichment. The purity exceeds the normal specification for use in reactors. Grade „BY“ is setting a new standard for the enrichment level of Lithium-7.
- Grade „X“ is a material of x-tra high purity and enrichment, far exceeding the requirements of all NPP specifications.
- Grade „BD“ is a free flowing material for application in Lithium-7-resin manufacturing.

Typical Results of Product Analyses

	Typical reactor specification	Grade „A“ ultra pure/ ultra high enriched	Grade „BY“ ultra high enriched	Grade „X“ extra high enriched/ high pure	Grade „BD“ resin grade „dry“
Li ⁷ Enrichment, at%	99.9	≥ 99.99	≥ 99.99	≥ 99.97	≥ 99.96
LiOH, wt%	48-58	48-58	48-58	48-58	> 56
Water, wt%	42-52	42-52	42-52	42-52	< 44
Li ⁷ content, wt%	-	14.0-16.9	14.0-16.9	14.0-16.9	> 16.3
Cl µg/g	5000	< 10	< 100	< 20	< 500
F µg/g	5000	< 50	< 300	< 200	< 50
SO ₄ µg/g	-	< 10	< 100	< 50	< 500
Hg µg/g	0.5	< 0.05	< 0.02	< 0.05	< 0.05
Pb µg/g	10	< 0.2	< 0.2	< 0.2	< 0.2
Zn µg/g	5	< 0.5	< 1	< 1	< 1
Al µg/g	-	< 3	-	-	-
Ca µg/g	-	< 10	-	< 5	-
Cu µg/g	-	< 1	-	< 1	-
Fe µg/g	-	< 5	< 10	< 10	-
K µg/g	-	< 5	-	-	-
Mg µg/g	-	< 1	-	-	-
Na µg/g	-	< 5	< 5	< 10	-
PO ₄ µg/g	-	< 125	< 200	< 200	-
SiO ₂ µg/g	-	< 100	-	< 250	-
Insolubles, wt%	-	< 0.1	< 0.1	< 0.1	-

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