

Aluminum Oxides

Aluminium oxide is one of the most versatile sorbents for preparative chromatography. Due to its amphoteric character, aluminium oxide can be used in specifically defined pH ranges. Aluminium oxide is widely used for preparative column chromatographic separations, isolation and purifications for both in laboratory and industrial production.¹

Various types of aluminium oxide are used in the following processes:

- Preparative Column Chromatography
- Flash Chromatography
- Selective Filtration

Furthermore, aluminium oxide has various niche applications and other research uses such as:

- Support material in analytical chromatographic columns
- Purification & dehydration of organic solvents
- On industrial scale for the removal of small amounts of undesired components^{2,3}
- Separation and purification of dyes, steroids, liquids, natural products etc.
- As a catalyst support of precious metals^{4,5}
- Abrasive and polishing applications (semiconductors, silicon wafer, optical or jewelry polishing)^{6,7}
- As a dosimeter for radiation protection and therapy applications⁸
- Insulation for high temperature furnaces

Alfa Aesar has introduced 35 new forms of aluminum oxide to our range of over 180 different forms. Please visit www.alfa.com for a complete listing of aluminum oxides.

Item	Description	Sizes
45586	Aluminum oxide, NanoArc AL-2220, 30% in mineral spirits, colloidal dispersion with dispersant	100g, 500g
45790	Aluminum oxide, NanoDur AL-2420, 50% in mineral spirits, colloidal dispersion with dispersant	100g, 500g
46126	Aluminum oxide, Drysphere desiccant, with 20% indicator	250g, 1kg
46093	Aluminum oxide, Drysphere desiccant, without indicator	250g, 1kg
46172	Aluminum oxide, Drysphere desiccant, without indicator	100g
46099	Aluminum oxide, acidic, for TLC	100g, 500g
45935	Aluminum oxide, acidic, HPLC Flash Grade	100g, 500g
45956	Aluminum oxide, acidic, HPLC Flash Grade	100g, 500g
46101	Aluminum oxide, activated, Grade II-III	250g, 1kg
45949	Aluminum oxide, basic, HPLC Flash Grade	250g, 1kg
46001	Aluminum oxide, basic, for TLC	100g, 500g
45985	Aluminum oxide, neutral, HPLC Flash Grade	250g, 1kg
46025	Aluminum oxide, neutral, HPLC Flash Grade	250g, 1kg
46065	Aluminum oxide, super activated, acidic, Grade I	250g, 1kg
45886	Aluminum oxide, super activated, basic, Grade I	250g, 1kg
45901	Aluminum oxide, super activated, neutral, Grade I	250g, 1kg
46200	Aluminum oxide, for Bio-Mass Cleanup	250g, 1kg
46066	Aluminum oxide, for Decolorization	250g, 1kg
46082	Aluminum oxide, for Dioxin Analysis	250g, 1kg

Aluminum Oxides

Item	Description	Sizes
46033	Aluminum oxide, for PCB removal	100g, 500g
45998	Aluminum oxide, for Process Cleanup (Scavenger)	250g, 1kg
46105	Aluminum oxide, for Process Cleanup (Scavenger)	250g, 1kg
46296	Aluminum oxide, for Process Cleanup (Scavenger)	250g, 1kg
46145	Aluminum oxide, for Pyrogen removal	100g, 500g
46113	Aluminum oxide, for TLC, with gypsum	100g, 500g
46056	Aluminum oxide, neutral, for TLC	100g, 500g
45895	Aluminum oxide, wide pore (1000 angstrom), for Biotechnology	10g
45940	Aluminum oxide, wide pore (1000 angstrom), for Biotechnology	25g, 100g
45972	Aluminum oxide, wide pore (1000 angstrom), for Biotechnology	100g, 500g
45988	Aluminum oxide, wide pore (1000 angstrom), for Biotechnology	100g, 500g
46016	Aluminum oxide, wide pore (1000 angstrom), for Biotechnology	100g, 500g
46043	Aluminum oxide, wide pore (1000 angstrom), for Biotechnology	100g, 500g
46067	Aluminum oxide, wide pore (300 angstrom), for Biotechnology	100g, 500g
46088	Aluminum oxide, wide pore (300 angstrom), for Biotechnology	100g, 500g
46132	Aluminum oxide, wide pore (300 angstrom), for Biotechnology	100g, 500g
46240	Aluminum oxide, wide pore (300 angstrom), for Biotechnology	25g, 100g
46299	Aluminum oxide, wide pore (300 angstrom), for Biotechnology	10g
45482	Aluminum oxide, α -phase, 99.98% (metals basis)	25g, 100g, 500g

¹L. T. Boulton, *et al.*, *Org. Process Res. Dev.*, 2002, **6**, 138.

²Y. C. Sharma, *et al.*, *J. Chem. Eng. Data*, 2010, **55**, 2390.

³T. K. Sen, *et al.*, *Chem. Eng. J.* 2008, **142**, 256.

⁴T. Risse, *et al.*, *Acc. Chem. Res.*, 2008, **41**, 949.

⁵A. Bernas, *et al.*, *Org. Process Res. Dev.*, 2004, **8**, 341.

⁶I. Perelshtein, *et al.*, *ACS Appl. Mater. Interfaces*, 2010, **2**, 1999.

⁷D. Stein, *et al.*, *J. Electrochem. Soc.*, 1999, **146**, 376.

⁸J. P. Santos, *et al.*, *Radiat. Prot. Dosimetry*, 2006, **120**, 349.