



ALMATIS

PREMIUM ALUMINA



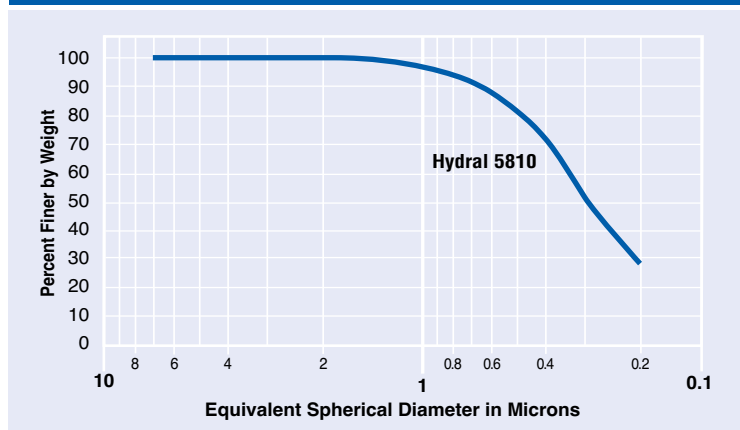
Provisional Product Data

Almatis Hydral[®] 5810

Almatis Hydral 5810 is a newly developed white aluminum trihydroxide $\text{Al}(\text{OH})_3$ that has been partially calcined. This product has been partially calcined to increase the surface area, yet provide a soft particle. It is a fine precipitated high-purity white aluminum trihydroxide powder with a uniform median particle size of 0.25 microns (250 nanometers) and a surface area of 150+ square meters per gram. The Z percent brightness value is 99+.

Hydral 5810 was developed for specialty applications where a nano-type particle size with extremely high surface area yet a soft particle is needed. This grade of Hydral is an ideal candidate for polishing of soft metals and non-metallics, viscosity modification of adhesives, coatings or paints, and a filler for specialty polymer applications where extremely high physical properties are required.

Typical Particle-Size Analysis by Horiba



Think alumina, think Almatis.

PP-SH/032/R01/1207/MSDS 839



Almatris Hydral[®] 5810

Product	Hydral 5810	
	Typical	Test Methods
Chemical Composition (%)		
SiO ₂	0.017	DC Arc Optical Emissions Spectrometry
Fe ₂ O ₃	0.012	DC Arc Optical Emissions Spectrometry
Na ₂ O (total)	0.343	DC Arc Optical Emissions Spectrometry
Moisture	1.25	Microwave
Physical Properties		
Loose bulk density (g/cm ³)	0.21	Modified ASTM B527-93
Packed bulk density (g/cm ³)	0.30	Modified ASTM B527-85
Surface area (m ² /g)	200	Brunauer-Emmett-Teller Nitrogen Adsorption
Mohs hardness	2.5-3.5	
LOI (%)	10	Loss on Ignition from 110-1100°C
Oil absorption (%)	48.65	Almatris IP 14.LU02-01-26
Particle Size		
% on 325 mesh	0.13	Wet Screen
d ₉₅ (μ)	0.47	Horiba CAPA 700
d ₅₀ (μ)	0.25	Horiba CAPA 700
d ₁₀ (μ)	0.05	Horiba CAPA 700
Standard Packaging⁽¹⁾	50 lb paper bags	

(1) Other packaging options are available on special request.

All data are based upon Almatris standard test methods, and all test methods are available upon request. The typical properties are based upon the actual averages from production data.



Almatis Hydral® 5810

Hydral® nomenclature

HYDRAL A B C D

A = MANUFACTURING PROCESS	B = PARTICLE SIZE	C = SURFACE AREA	D = SPECIAL SUFFIX
9 = Precipitated only 8 = Ground 6 = Surface treated 5 = Calcined 4 = Slurry 3 = Custom	9 = 0 to <0.25 μ 8 = 0.25 to <0.50 μ 7 = 0.50 to <0.75 μ 6 = 0.75 to <1.0 μ 5 = 1.0 to <1.25 μ 4 = 1.25 to <1.50 μ 3 = 1.50 to <1.75 μ 2 = 1.75 to <2.0 μ 1 = 2.0+ μ	9 = 0 to <2.5 m ² /g 8 = 2.5 to <5.0 m ² /g 7 = 5.0 to <7.5 m ² /g 6 = 7.5 to <10.0 m ² /g 5 = 10.0 to <12.5 m ² /g 4 = 12.5 to <15.0 m ² /g 3 = 15.0 to <17.5 m ² /g 2 = 17.5 to <100 m ² /g 1 = 100 to <200 m ² /g 0 = 200+ m ² /g	0 = No special treatment 1 = Vinyl silane treatment 2 = Amino treatment 3 = Epoxy treatment 4 = Proprietary vinyl silane treatment



Contacts for sales, technical information and application assistance

Almatis GmbH

Lyoner Straße 9
60528 Frankfurt/Germany

Phone
49 69 957 341 0

Fax
49 69 957 341 13

Almatis Headquarters

Lyoner Straße 9
60528 Frankfurt/Germany

Phone **49 69 957 341 0**
Fax **49 69 957 341 13**

info@almatis.com
www.almatis.com

Almatis, Inc.

501 West Park Road
Leetsdale, PA 15056
USA

Phone (within US)
1 800 643 8771

Phone (outside US)
1 412 630 2800

Fax
1 412 630 2900

Qingdao Almatis Co., Ltd.

15F, Sunshine Tower
61 Hongkong Middle Road
Qingdao, 266071, China

Phone
86 532 8572 8035

Fax
86 532 8572 8551

Almatis Limited

Morimura Bldg.
1-3-1 Toranomom
Minato-ku, Tokyo 105-8451

Japan

Phone
81 3 3502 2371

Fax
81 3 3502 2375

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