

HP-AlCl₃

Aluminum Trichloride

Aluminum Trichloride (AlCl₃) is used in atomic layer deposition (ALD) formation of the Aluminum oxide layer for high- κ dielectric films.

Entegris offers AlCl₃ in a high-purity grade. The material is proprietary and packaged using techniques specifically developed by Entegris. A certificate of analysis will be provided with each AlCl₃ order detailing the results of a comprehensive analysis including trace metals and GC analysis.

Entegris suggests the use of our ProE-Vap® 200 for the delivery of sufficiently high flux to meet stringest conformality requirements. Our ProE-Vap 500 offers 2x fill capacity and 33% more tray surface area to enable next generation devices.

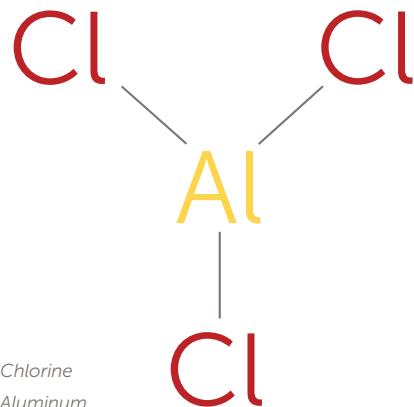
Entegris is a leading industry supplier that provides a complete line of advanced materials, delivery systems, and control/monitoring systems which enable comprehensive material lifecycle management solutions for OEMs and end users.

FEATURES & BENEFITS

- High elemental purity
- No carbon deposit in thin-films
- Excellent flux and transport rates at elevated temperatures
- Robust solid delivery system
- Non-pyrophoric
- Standard shelf life of 2 years

APPLICATIONS

- Solid precursor for use in ALD of aluminum oxide dielectric layers and aluminum nitride films



PERFORMANCE DATA

AlCl₃ Vapor Pressure

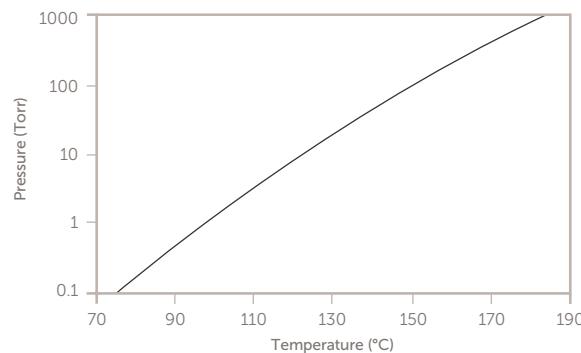


Figure 1. Vapor pressure curve

SPECIFICATIONS

Physical properties

Chemical formula	AlCl ₃
Form	White crystals
Molecular weight	133.34 g/mol
Density	2.48 g/cc
Melting point	192.4°C (378.32°F)
Sublimation point	180°C (356°F)
Vapor pressure (@99°C)	1 Torr
Vapor pressure (@151°C)	99.75 Torr

Purity analysis

Element	Specification	Analytical method
Antimony	2.000 ppm	ICP-MS
Arsenic	2.000 ppm	ICP-MS
Calcium	10.000 ppm	ICP-MS
Chromium	5.000 ppm	ICP-MS
Copper	2.000 ppm	ICP-MS
Gallium	2.000 ppm	ICP-MS
Hafnium	2.000 ppm	ICP-MS
Iron	5.000 ppm	ICP-MS
Lead	2.000 ppm	ICP-MS
Magnesium	2.000 ppm	ICP-MS
Manganese	2.000 ppm	ICP-MS
Nickel	5.000 ppm	ICP-MS
Sodium	20.000 ppm	ICP-MS
Tin	5.000 ppm	ICP-MS
Titanium	25.000 ppm	ICP-MS
Uranium	2.000 ppm	ICP-MS
Zinc	5.000 ppm	ICP-MS
Zirconium	2.000 ppm	ICP-MS

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the Contact Us link to find the customer service center nearest you.

TERMS AND CONDITIONS OF SALE

All purchases are subject to Entegris' Terms and Conditions of Sale. To view and print this information, visit entegris.com and select the Terms & Conditions link in the footer.



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