

Brightchem Nitric Acid (HNO₃)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

Electronic grade nitric acid is used in the texturization process of silicon wafers to improve the efficiency of photovoltaic cells. This application significantly contributes to the growing demand for electronic grade nitric acid, driven by the expanding solar energy sector.

Semiconductor manufacturing heavily relies on electronic grade nitric acid for its high-purity properties. This chemical is crucial for etching and cleaning silicon wafers, meeting the stringent requirements of modern semiconductor devices.

Specification	Units	Typical spec Guidelines		
		EL	VLSI	ULSI
Assay (wt %)	wt %	68 – 69 %	68 – 69 %	68 – 69 %
Color	APHA	< 10	< 10	< 10
Bromide	ppm	< 1	< 0.5	< 0.5
Chloride	ppm	< 1	< 0.5	< 0.5
Phosphate	ppb	< 1000	< 500	< 500
Sulfate	ppb	< 1000	< 500	< 500
Sulfite	ppb	< 1000	< 500	< 500
Aluminum	ppb	< 50	< 50	< 10
Antimony	ppb	< 50	< 50	< 10
Arsenic	ppb	< 10	< 10	< 10
Barium	ppb	< 50	< 50	< 10
Beryllium	ppb	< 100	< 50	< 10
Bismuth	ppb	< 100	< 50	< 10
Boron	ppb	< 100	< 50	< 10
Cadmium	ppb	< 100	< 50	< 10
Calcium	ppb	< 100	< 50	< 10
Chromium	ppb	< 100	< 50	< 10
Cobalt	ppb	< 100	< 50	< 10
Copper	ppb	< 100	< 50	< 10
Gallium	ppb	< 100	< 50	< 10
Germanium	ppb	< 100	< 50	< 10
Gold	ppb	< 100	< 50	< 10
Iron	ppb	< 100	< 50	< 30
Lead	ppb	< 100	< 50	< 10
Lithium	ppb	< 100	< 50	< 10
Magnesium	ppb	< 100	< 50	< 10
Manganese	ppb	< 100	< 50	< 10
Molybdenum	ppb	< 100	< 50	< 10
Nickel	ppb	< 100	< 50	< 10
Niobium	ppb	< 100	< 50	< 10
Potassium	ppb	< 100	< 50	< 10
Silver	ppb	< 100	< 50	< 10
Sodium	ppb	< 300	< 50	< 10
Strontium	ppb	< 100	< 50	< 10
Tantalum	ppb	< 100	< 50	< 10
Thallium	ppb	< 100	< 50	< 10
Tin	ppb	< 100	< 50	< 10
Titanium	ppb	< 100	< 50	< 10
Vanadium	ppb	< 100	< 50	< 10
Zinc	ppb	< 100	< 50	< 10
Zirconium	ppb	< 100	< 50	< 10

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Brightchem Hydrofluoric Acid (HF)

VARIOUS GRADES AND PACKAGING AVAILABLE

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

In the semiconductor field, it is mainly used for wafer surface cleaning, cleaning and etching during chip processing, and other processes; In the field of new displays, it is mainly used for glass substrate cleaning, silicon nitride, silicon dioxide etching, etc; In the field of photovoltaic solar cells, it is mainly used for surface cleaning, etching edge removal, cleaning and velvet making of silicon wafers.

Specification	Units	Typical spec Guidelines		
		EL	VLSI	ULSI
Assay (wt %)	wt %	50 ± 1 , 60 ± 1		
Color	APHA	< 10	< 10	< 10
Bromide	ppm	< 1	< 0.5	< 0.5
Chloride	ppm	< 1	< 0.5	< 0.5
Phosphate	ppb	< 1000	< 500	< 500
Sulfate	ppb	< 1000	< 500	< 500
Sulfite	ppb	< 1000	< 500	< 500
Aluminum	ppb	< 50	< 50	< 10
Antimony	ppb	< 50	< 50	< 10
Arsenic	ppb	< 10	< 10	< 10
Barium	ppb	< 50	< 50	< 10
Beryllium	ppb	< 100	< 50	< 10
Bismuth	ppb	< 100	< 50	< 10
Boron	ppb	< 100	< 50	< 10
Cadmium	ppb	< 100	< 50	< 10
Calcium	ppb	< 100	< 50	< 10
Chromium	ppb	< 100	< 50	< 10
Cobalt	ppb	< 100	< 50	< 10
Copper	ppb	< 100	< 50	< 10
Gallium	ppb	< 100	< 50	< 10
Germanium	ppb	< 100	< 50	< 10
Gold	ppb	< 100	< 50	< 10
Iron	ppb	< 100	< 50	< 30
Lead	ppb	< 100	< 50	< 10
Lithium	ppb	< 100	< 50	< 10
Magnesium	ppb	< 100	< 50	< 10
Manganese	ppb	< 100	< 50	< 10
Molybdenum	ppb	< 100	< 50	< 10
Nickel	ppb	< 100	< 50	< 10
Niobium	ppb	< 100	< 50	< 10
Potassium	ppb	< 100	< 50	< 10
Silver	ppb	< 100	< 50	< 10
Sodium	ppb	< 300	< 50	< 10
Strontium	ppb	< 100	< 50	< 10
Tantalum	ppb	< 100	< 50	< 10
Thallium	ppb	< 100	< 50	< 10
Tin	ppb	< 100	< 50	< 10
Titanium	ppb	< 100	< 50	< 10
Vanadium	ppb	< 100	< 50	< 10
Zinc	ppb	< 100	< 50	< 10
Zirconium	ppb	< 100	< 50	< 10

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Brightchem Hydrochloric Acid (HCl)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

The electronic grade HCl is produced and handled with strict adherence to industry standards to meet the stringent requirements of the semiconductor,electronics and solar industry sector. In the semiconductor,electronics and solar industry, high-purity electronic grade HCl is used in various processes. It is a critical etchant for silicon wafer cleaning, surface preparation, and etching of metals.Prior to metal deposition, it is vitally important to keep wafer surfaces free of trace metals in integrated circuit manufacturing. Metallic impurities on the wafer surface can diffuse into a wafer, risking degrada- tion of device performance and yield loss.

One method for reducing these risks is to clean the wafer surface with ultra high-purity hydrochloric acid. Hydrochloric acid reacts with most metals to form water-soluble chlorides that can be easily rinsed away.

Specification	Units	Typical spec Guidelines		
		EL	VLSI	
Assay (wt %)	wt %	36 - 38	36 - 38	
Color	APHA	< 10	< 10	
Bromide	ppm	< 1	< 0.5	
Free Chlorine	ppm	< 1	< 0.5	
Phosphate	ppb	< 1000	< 500	
Sulfate	ppb	< 1000	< 500	
Sulfite	ppb	< 1000	< 500	
Aluminum	ppb	< 50	< 50	
Antimony	ppb	< 50	< 50	
Arsenic	ppb	< 10	< 10	
Barium	ppb	< 50	< 50	
Beryllium	ppb	< 100	< 50	
Bismuth	ppb	< 100	< 50	
Boron	ppb	< 100	< 50	
Cadmium	ppb	< 100	< 50	
Calcium	ppb	< 100	< 50	
Chromium	ppb	< 100	< 50	
Cobalt	ppb	< 100	< 50	
Copper	ppb	< 100	< 50	
Gallium	ppb	< 100	< 50	
Germanium	ppb	< 100	< 50	
Gold	ppb	< 100	< 50	
Iron	ppb	< 100	< 50	
Lead	ppb	< 100	< 50	
Lithium	ppb	< 100	< 50	
Magnesium	ppb	< 100	< 50	
Manganese	ppb	< 100	< 50	
Molybdenum	ppb	< 100	< 50	
Nickel	ppb	< 100	< 50	
Niobium	ppb	< 100	< 50	
Potassium	ppb	< 100	< 50	
Silver	ppb	< 100	< 50	
Sodium	ppb	< 300	< 50	
Strontium	ppb	< 100	< 50	
Tantalum	ppb	< 100	< 50	
Thallium	ppb	< 100	< 50	
Tin	ppb	< 100	< 50	
Titanium	ppb	< 100	< 50	
Vanadium	ppb	< 100	< 50	
Zinc	ppb	< 100	< 50	
Zirconium	ppb	< 100	< 50	

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Brightchem Sulphuric Acid (H₂SO₄)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

Electronic Grade Sulfuric Acid is a highly pure form of sulfuric acid used primarily in the semiconductor industry for cleaning and etching silicon wafers. The necessity of electronic grade sulfuric acid stems from its critical role in microelectronics manufacturing, where it ensures the precision and quality needed for advanced technological products. Its applications extend to cleaning substrates, etching processes, and serving as a reagent in various chemical reactions within semiconductor fabrication.

Specification	Units	Typical spec Guidelines		
		EL	VLSI	ULSI
Assay (wt %)	wt %	96-97 %	96-97 %	96-97 %
Color	APHA	< 10	< 10	< 10
Bromide	ppm	< 1	< 0.5	< 0.5
Chloride	ppm	< 1	< 0.5	< 0.5
Phosphate	ppb	< 1000	< 500	< 500
Sulfate	ppb	< 1000	< 500	< 500
Sulfite	ppb	< 1000	< 500	< 500
Aluminum	ppb	< 50	< 50	< 10
Antimony	ppb	< 50	< 50	< 10
Arsenic	ppb	< 10	< 10	< 10
Barium	ppb	< 50	< 50	< 10
Beryllium	ppb	< 100	< 50	< 10
Bismuth	ppb	< 100	< 50	< 10
Boron	ppb	< 100	< 50	< 10
Cadmium	ppb	< 100	< 50	< 10
Calcium	ppb	< 100	< 50	< 10
Chromium	ppb	< 100	< 50	< 10
Cobalt	ppb	< 100	< 50	< 10
Copper	ppb	< 100	< 50	< 10
Gallium	ppb	< 100	< 50	< 10
Germanium	ppb	< 100	< 50	< 10
Gold	ppb	< 100	< 50	< 10
Iron	ppb	< 100	< 50	< 30
Lead	ppb	< 100	< 50	< 10
Lithium	ppb	< 100	< 50	< 10
Magnesium	ppb	< 100	< 50	< 10
Manganese	ppb	< 100	< 50	< 10
Molybdenum	ppb	< 100	< 50	< 10
Nickel	ppb	< 100	< 50	< 10
Niobium	ppb	< 100	< 50	< 10
Potassium	ppb	< 100	< 50	< 10
Silver	ppb	< 100	< 50	< 10
Sodium	ppb	< 300	< 50	< 10
Strontium	ppb	< 100	< 50	< 10
Tantalum	ppb	< 100	< 50	< 10
Thallium	ppb	< 100	< 50	< 10
Tin	ppb	< 100	< 50	< 10
Titanium	ppb	< 100	< 50	< 10
Vanadium	ppb	< 100	< 50	< 10
Zinc	ppb	< 100	< 50	< 10
Zirconium	ppb	< 100	< 50	< 10

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Brightchem Sulphuric Acid (H₂SO₄)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

Electronic Grade Sulfuric Acid is a highly pure form of sulfuric acid used primarily in the semiconductor industry for cleaning and etching silicon wafers. Concentrated Sulphuric Acid produced by Brightchem is diluted by ultrapure water to customer required concentration.

This diluted electronic grade Sulfuric Acis is widely used in PCB or PWB manufacturing process.

Specification	Units	Typical spec Guidelines	
		EL	VLSI
Assay (wt %)	wt %	50 ± 1 , 62 ± 1	
Color	APHA	< 10	< 10
Bromide	ppm	< 1	< 0.5
Chloride	ppm	< 0.5	< 0.5
Phosphate	ppb	< 1000	< 500
Sulfate	ppb	< 1000	< 500
Sulfite	ppb	< 1000	< 500
Aluminum	ppb	< 50	< 50
Antimony	ppb	< 50	< 50
Arsenic	ppb	< 10	< 10
Barium	ppb	< 50	< 50
Beryllium	ppb	< 100	< 50
Bismuth	ppb	< 100	< 50
Boron	ppb	< 100	< 50
Cadmium	ppb	< 100	< 50
Calcium	ppb	< 100	< 50
Chromium	ppb	< 100	< 50
Cobalt	ppb	< 100	< 50
Copper	ppb	< 100	< 50
Gallium	ppb	< 100	< 50
Germanium	ppb	< 100	< 50
Gold	ppb	< 100	< 50
Iron	ppb	< 100	< 50
Lead	ppb	< 100	< 50
Lithium	ppb	< 100	< 50
Magnesium	ppb	< 100	< 50
Manganese	ppb	< 100	< 50
Molybdenum	ppb	< 100	< 50
Nickel	ppb	< 100	< 50
Niobium	ppb	< 100	< 50
Potassium	ppb	< 100	< 50
Silver	ppb	< 100	< 50
Sodium	ppb	< 300	< 50
Strontium	ppb	< 100	< 50
Tantalum	ppb	< 100	< 50
Thallium	ppb	< 100	< 50
Tin	ppb	< 100	< 50
Titanium	ppb	< 100	< 50
Vanadium	ppb	< 100	< 50
Zinc	ppb	< 100	< 50
Zirconium	ppb	< 100	< 50

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Brightchem Ammonia Solution (NH₃)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

Ammonium hydroxide (NH₄OH), also known as aqueous ammonia, is a basic solution formed by dissolving ammonia gas in water. It can behave as a mild etchant or a strong cleaning agent, depending on concentration and temperature. In the semiconductor context, ammonium hydroxide solutions are commonly combined with hydrogen peroxide to create the well-known “SC1” cleaning solution (Standard Clean 1). This mixture effectively removes organic residues, particles, and certain metallic contaminants from the wafer surface without excessive etching of silicon.

Specification	Units	Typical spec Guidelines		
		EL	VLSI	ULSI
Assay (wt %)	wt %	25 ± 1 , 28 ± 1		
Color	APHA	< 10	< 10	< 10
Bromide	ppm	< 1	< 0.5	< 0.5
Chloride	ppm	< 1	< 0.5	< 0.5
Phosphate	ppb	< 1000	< 500	< 500
Sulfate	ppb	< 1000	< 500	< 500
Sulfite	ppb	< 1000	< 500	< 500
Aluminum	ppb	< 50	< 50	< 10
Antimony	ppb	< 50	< 50	< 10
Arsenic	ppb	< 10	< 10	< 10
Barium	ppb	< 50	< 50	< 10
Beryllium	ppb	< 100	< 50	< 10
Bismuth	ppb	< 100	< 50	< 10
Boron	ppb	< 100	< 50	< 10
Cadmium	ppb	< 100	< 50	< 10
Calcium	ppb	< 100	< 50	< 10
Chromium	ppb	< 100	< 50	< 10
Cobalt	ppb	< 100	< 50	< 10
Copper	ppb	< 100	< 50	< 10
Gallium	ppb	< 100	< 50	< 10
Germanium	ppb	< 100	< 50	< 10
Gold	ppb	< 100	< 50	< 10
Iron	ppb	< 100	< 50	< 30
Lead	ppb	< 100	< 50	< 10
Lithium	ppb	< 100	< 50	< 10
Magnesium	ppb	< 100	< 50	< 10
Manganese	ppb	< 100	< 50	< 10
Molybdenum	ppb	< 100	< 50	< 10
Nickel	ppb	< 100	< 50	< 10
Niobium	ppb	< 100	< 50	< 10
Potassium	ppb	< 100	< 50	< 10
Silver	ppb	< 100	< 50	< 10
Sodium	ppb	< 300	< 50	< 10
Strontium	ppb	< 100	< 50	< 10
Tantalum	ppb	< 100	< 50	< 10
Thallium	ppb	< 100	< 50	< 10
Tin	ppb	< 100	< 50	< 10
Titanium	ppb	< 100	< 50	< 10
Vanadium	ppb	< 100	< 50	< 10
Zinc	ppb	< 100	< 50	< 10
Zirconium	ppb	< 100	< 50	< 10

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Brightchem Hydrogen Peroxide (H₂O₂)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

Electronic Grade Hydrogen Peroxide is the simplest peroxide, a strong oxidizer that appears as a clear and slightly viscous liquid. Its oxidizing properties are so strong that it is considered a highly reactive oxygen species. Due to it being a weak acid, it can form thermally unstable hydroperoxides. One of its biggest uses of electronic grade hydrogen peroxide is for the microetch roughening of copper surfaces during printed circuit board manufacturing.

Electronic Grade Hydrogen Peroxide is also widely used in semiconductor and solar industries as cleaning agent for the removal of organic matter,

Specification	Units	Typical spec Guidelines	
		EL	VLSI
Assay (wt %)	wt %	25 ± 1 , 30 ± 1 , 35 ± 1	
Color	APHA	< 10	< 10
Bromide	ppm	< 1	< 0.5
Free Chlorine	ppm	< 1	< 0.5
Phosphate	ppb	< 1000	< 500
Sulfate	ppb	< 1000	< 500
Sulfite	ppb	< 1000	< 500
Aluminum	ppb	< 50	< 50
Antimony	ppb	< 50	< 50
Arsenic	ppb	< 10	< 10
Barium	ppb	< 50	< 50
Beryllium	ppb	< 100	< 50
Bismuth	ppb	< 100	< 50
Boron	ppb	< 100	< 50
Cadmium	ppb	< 100	< 50
Calcium	ppb	< 100	< 50
Chromium	ppb	< 100	< 50
Cobalt	ppb	< 100	< 50
Copper	ppb	< 100	< 50
Gallium	ppb	< 100	< 50
Germanium	ppb	< 100	< 50
Gold	ppb	< 100	< 50
Iron	ppb	< 100	< 50
Lead	ppb	< 100	< 50
Lithium	ppb	< 100	< 50
Magnesium	ppb	< 100	< 50
Manganese	ppb	< 100	< 50
Molybdenum	ppb	< 100	< 50
Nickel	ppb	< 100	< 50
Niobium	ppb	< 100	< 50
Potassium	ppb	< 100	< 50
Silver	ppb	< 100	< 50
Sodium	ppb	< 500	< 100
Strontium	ppb	< 100	< 50
Tantalum	ppb	< 100	< 50
Thallium	ppb	< 100	< 50
Tin	ppb	< 100	< 50
Titanium	ppb	< 100	< 50
Vanadium	ppb	< 100	< 50
Zinc	ppb	< 100	< 50
Zirconium	ppb	< 100	< 50

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Brightchem 2 Propanol (IPA)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply

OVERVIEW

Electronic grade isopropyl alcohol (IPA), a highly refined form of isopropyl alcohol, is primarily used as a cleaning agent in the electronics industry, removing contaminants like watermarks and particles during manufacturing processes of ICs, TFT-LCDs, LEDs, and PVs.

Specification	Units	Typical spec Guidelines		
		EL	VLSI	ULSI
Assay (wt %)	wt %	99.95 %		
Color	APHA	< 10	< 10	< 10
Water	w/w%	< 0.05	< 0.05	< 0.05
Chloride	ppm	< 1	< 0.5	< 0.5
Phosphate	ppb	< 1000	< 500	< 500
Sulfate	ppb	< 1000	< 500	< 500
Sulfite	ppb	< 1000	< 500	< 500
Aluminum	ppb	< 50	< 50	< 10
Antimony	ppb	< 50	< 50	< 10
Arsenic	ppb	< 10	< 10	< 10
Barium	ppb	< 50	< 50	< 10
Beryllium	ppb	< 100	< 50	< 10
Bismuth	ppb	< 100	< 50	< 10
Boron	ppb	< 100	< 50	< 10
Cadmium	ppb	< 100	< 50	< 10
Calcium	ppb	< 100	< 50	< 10
Chromium	ppb	< 100	< 50	< 10
Cobalt	ppb	< 100	< 50	< 10
Copper	ppb	< 100	< 50	< 10
Gallium	ppb	< 100	< 50	< 10
Germanium	ppb	< 100	< 50	< 10
Gold	ppb	< 100	< 50	< 10
Iron	ppb	< 100	< 50	< 30
Lead	ppb	< 100	< 50	< 10
Lithium	ppb	< 100	< 50	< 10
Magnesium	ppb	< 100	< 50	< 10
Manganese	ppb	< 100	< 50	< 10
Molybdenum	ppb	< 100	< 50	< 10
Nickel	ppb	< 100	< 50	< 10
Niobium	ppb	< 100	< 50	< 10
Potassium	ppb	< 100	< 50	< 10
Silver	ppb	< 100	< 50	< 10
Sodium	ppb	< 300	< 50	< 10
Strontium	ppb	< 100	< 50	< 10
Tantalum	ppb	< 100	< 50	< 10
Thallium	ppb	< 100	< 50	< 10
Tin	ppb	< 100	< 50	< 10
Titanium	ppb	< 100	< 50	< 10
Vanadium	ppb	< 100	< 50	< 10
Zinc	ppb	< 100	< 50	< 10
Zirconium	ppb	< 100	< 50	< 10

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Brightchem Mixed Acid Etchant(MAE)

**VARIOUS GRADES AND
PACKAGING AVAILABLE**

BENEFITS

- Efficient logistics and supply
- Guarantees for a range of specifications for trace metals by in-house ICP-MS
- Multiple container sizes (25 L , 200 L , 1000 L)
- Container equipped with dip tube from AS Dusemund /CPC or other brand recommend by customer for closed system dispensing
- Own transport . Efficient logistics and supply
- Precisely control of individual acid concentration by advanced auto titration method

OVERVIEW

In the semiconductor industry, mixed acid etchants (MAEs) are crucial for etching silicon, both single and polycrystalline, and are typically composed of nitric acid (HNO₃), hydrofluoric acid (HF), phosphoric acid and acetic acid (HAc). MAEs are used for various etching applications, including doped silicon etching and isotropic etching of silicon. Determination of the acid concentration in mixed acid solutions is a critical quality control step for successful etching processes.

The type and concentration of individual acids used in MAE manufactured by Brightchem are tailored to customer specifications or specific applications

Specification	Units	Typical spec Guidelines		
		EL	VLSI	
Individual Acid Assay (wt %)	wt %	Customer Spec ± 0.5		
Color	APHA	< 10	< 10	
Bromide	ppm	< 1	< 0.5	
Chloride	ppm	< 1	< 0.5	
Phosphate	ppb	< 1000	< 500	
Sulfate	ppb	< 1000	< 500	
Sulfite	ppb	< 1000	< 500	
Aluminum	ppb	< 50	< 50	
Antimony	ppb	< 50	< 50	
Arsenic	ppb	< 10	< 10	
Barium	ppb	< 50	< 50	
Beryllium	ppb	< 100	< 50	
Bismuth	ppb	< 100	< 50	
Boron	ppb	< 100	< 50	
Cadmium	ppb	< 100	< 50	
Calcium	ppb	< 100	< 50	
Chromium	ppb	< 100	< 50	
Cobalt	ppb	< 100	< 50	
Copper	ppb	< 100	< 50	
Gallium	ppb	< 100	< 50	
Germanium	ppb	< 100	< 50	
Gold	ppb	< 100	< 50	
Iron	ppb	< 100	< 50	
Lead	ppb	< 100	< 50	
Lithium	ppb	< 100	< 50	
Magnesium	ppb	< 100	< 50	
Manganese	ppb	< 100	< 50	
Molybdenum	ppb	< 100	< 50	
Nickel	ppb	< 100	< 50	
Niobium	ppb	< 100	< 50	
Potassium	ppb	< 100	< 50	
Silver	ppb	< 100	< 50	
Sodium	ppb	< 300	< 50	
Strontium	ppb	< 100	< 50	
Tantalum	ppb	< 100	< 50	
Thallium	ppb	< 100	< 50	
Tin	ppb	< 100	< 50	
Titanium	ppb	< 100	< 50	
Vanadium	ppb	< 100	< 50	
Zinc	ppb	< 100	< 50	
Zirconium	ppb	< 100	< 50	

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