CROSSCHEM

Pure Chemistry

Purity is a fundamental strategy at CrossChem and inherent to the GlyAcid® product line. Our unique chemistry and purification process establishes a new standard and global benchmark.

GlyAcid® Technology

For more than 40 years, glycolic acid has been predominantly produced by either the carbonylation of formaldehyde or with glycolonitrile as a starting material.

CrossChem's GlyAcid® is produced using a proprietary acid saponification and purification process that does not use formaldehyde while delivering a next generation high purity glycolic acid for today's formulations and chemistries.

GlyAcid® Versatility

Glycolic acid is a unique molecule with diverse functionality. From its small molecular architecture to its ability to synthesize as long chain polymers, GlyAcid® is used to create products in personal care, biodegradable polymers and electronic materials.

GlyAcid®
GLYCOLIC ACID
FORMALDEHYDE FREE

GlyAcid® In Personal Care

Skin Care | Glycolic acid is the smallest molecule in the alpha hydroxy acid family. Due to its small molecular size, glycolic acid has proven effective in helping to release the bonds holding together the top skin cell layers. By removing these old skin cells, the body uncovers fresh, more youthful skin.

Nail & Hair Care | Glycolic acid continues to see growth in nail and hair care formulations. Nail care benefits include cuticle softening facilitating healthier looking nails. Hair care benefits include decreasing elastic modulus, increasing denaturation temperature and increasing lubricity.

GlyAcid® In Biodegradable Polymers

Glycolic acid is used in the production of polyglycolic acid (PGA) that is has several downstream applications including resorbable sutures and high barrier polyesters (HBP). The biodegradability offers a new generation of materials while improving polymer performance.

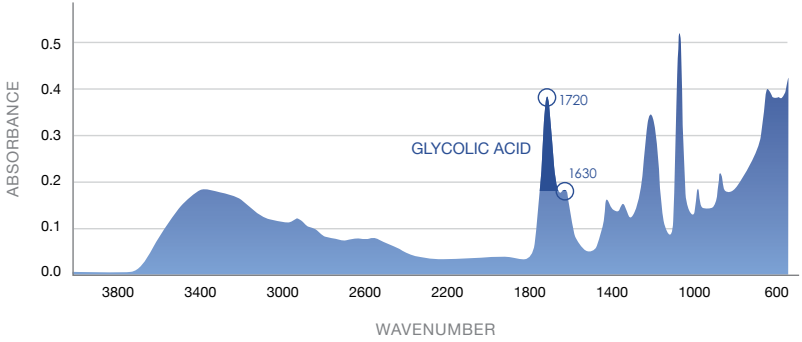
GlyAcid® In Electronic Materials

Glycolic acid is a fundamental raw material in semiconductor processing. Applications include wafer cleaning and surface preparation, front end of line cleaners (FOEL), back end of line cleaners (BEOL), chemical mechanical planarization (CMP), among several others.

FTIR Spectrum

Glycolic Acid Standard

Glycolic acid is actually an equilibrium between glycolic acid and glycolide (1,4-dioxane-2,5-dioine). This equilibrium is evident in the IR by the two peaks found in the carbonyl region at 1720 cm-1 and 1630 cm-1.



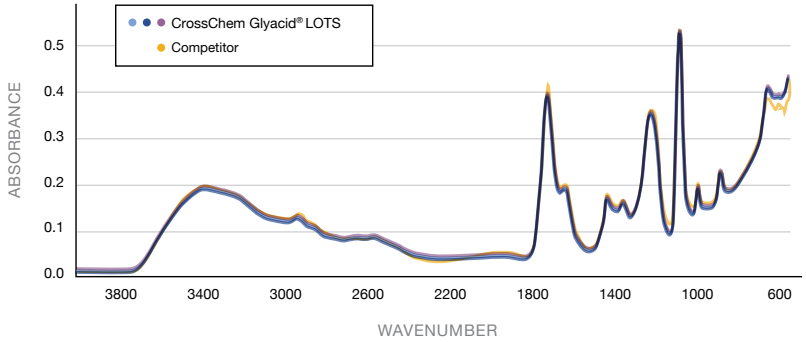
GlyAcid®
GLYCOLIC ACID
FORMALDEHYDE FREE

FTIR Spectrum

Comparative Overlay

To ensure consistency and efficacy with existing products, we compared the FTIR spectrum of three CrossChem GlyAcid® lots with a leading competitor. As shown in the overlay below, GlyAcid® possesses an identical infrared spectrum.

Upgrade to GlyAcid® with confidence and eliminate unwanted impurities in your chemistries and formulations.



GlyAcid® 70 HP

GlyAcid® 70 HP is a high purity glycolic acid in a 70% aqueous solution. It is a clear, virtually colorless liquid with a mild burnt sugar odor.

Packaging: 25 Kg Pails, 250 Kg Drums, IBC Totes, ISO Tank

70 HP SPECIFICATIONS

PROPERTY	LIMITS	TYPICAL RESULTS	ANALYTICAL METHOD
Total Acid %	70 – 72	71.1	WQTM – 13
Free Acid %	63 – 66	64.7	WQTM – 13
Color (APHA)	15 Max	8.0	WQTM – 13
Formaldehyde mg/Kg	Report	ND*	WQTM – 13
Iron PPM	3 Max	2.19	WQTM – 13

Appearance: Clear liquid

Stability: GlyAcid® 70 HP is stable when stored under normal conditions. If stored at temperatures below 14C (57F), precipitation may occur. This precipitation does not affect product quality. To re-dissolve, heat product to 40C (104F) with agitation.

***ND:** Not Detected – tests show property not detected. 5ppm detection limit.

70 HP PHYSICAL PROPERTIES

PROPERTY	VALUE
Formula	$C_2H_4O_3$
Precipitation Point, C (F)	14 (57)
Molecular Weight	76.05
pH, 25C (77F)	0.4
Density @ 15.6 (60F), lbs/gal	10.5
g/Ml (Mg/m3)	1.27

GlyAcid®
GLYCOLIC ACID
FORMALDEHYDE FREE

GlyAcid® 99 HP

GlyAcid® 99 HP is a high purity glycolic acid in 99% crystalline form. Applications include anhydrous formulations or where water is minimized.

Packaging: 20 Kg Fiber Drum

99 HP SPECIFICATIONS

PROPERTY	LIMITS	TYPICAL RESULTS	ANALYTICAL METHOD
Total Acid %	99 Min	99.3	WQTM – 14
Formaldehyde mg/Kg	Report	ND*	WQTM – 08
Iron pm	3 Max	<1	WQTM – 09

Appearance: Clear crystals

***ND:** Not Detected – tests show property not detected. 5ppm detection limit.

99 HP PHYSICAL PROPERTIES

PROPERTY	VALUE
Formula	$C_2H_4O_3$
Molecular Weight	76.05
State of Matter	Solid
Melting Point C (F)	77 (171)
pH	NA

Distributed by:

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CROSSCHEM
PURE CHEMISTRY

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