

# Hexafluorozirconic Acid, HZA

## Description

Hexafluorozirconic acid (HZA) is a colorless, odorless liquid that is highly soluble in water, and exhibits a strong acidic nature due to its ability to dissociate. HZA is known for its stability at high temperatures, enabling its use in various manufacturing processes. Furthermore, it has a strong oxidizing capability, making it a valuable compound for certain chemical reactions. Inhance Technologies is the only North American manufacturer of HZA.

Properties	Description
Chemical Name:	Hexafluorozirconic acid
CAS #:	12021-95-3
Molecular Formula:	F <sub>6</sub> H <sub>2</sub> Zr
Molecular Weight:	207.23 gram/mol
Available Concentration:	20-45% in aqueous solution
Appearance	Liquid
Other Names:	Hexafluorozirconic acid, Hydrogen hexafluorozirconate
Available Purity:	> 98%
Packaging Standard:	IBC/Poly drums

For custom packaging, please contact us.

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## Application Information

### Electroplating Solutions

HZA is used in the production of electroplating solutions, as it serves as an effective oxidizer in the preparation of metal plating. HZA facilitates the formation of a thin layer of zirconium oxide on the surfaces, enhancing the adhesion and durability of the metal coatings. HZA is utilized in the synthesis of various metal plating solutions, such as gold, nickel and chromium, for various industrial applications.

### Ceramic Materials

HZA is also used in the production of ceramic materials. It is commonly employed as a precursor for doping zirconia powders to enhance their electrical and thermal conductivity. Incorporating HZA into the manufacturing process allows for the tailoring of properties of the ceramics to meet specific requirements. HZA also acts as a catalyst during the synthesis, resulting in improved sintering and densification of the ceramic material.

### Textiles

HZA finds application in the textile industry, as a stabilizer in the printing of textiles, particularly for reactive dyes. The acidic nature of HZA helps to control the pH levels during the printing process, ensuring optimum fixation of dyes onto the fabric. Additionally, HZA acts as an anti-septic and anti-microbial agent, preventing the growth of bacteria or fungi on textile surfaces. This property makes it an ideal additive in the production of antimicrobial textiles, such as hospital linens or sportswear.

## About Inhance Technologies

Inhance Technologies is a leading provider of specialty chemicals, gases and material technologies in a wide range of industries, across four continents.

For more than 40 years, Inhance Technologies' world-class experts have been collaborating with customers globally to create customized solutions and offer exclusive technologies.