



**Granular & Bullet Product
Specification Sheet**

Product Description

The "Unicid" Granular & Bullet (pellets) acids are a formulation of organic acids enhanced by chelates, dispersants, and inhibitors through a liquid encapsulation process. The encapsulation process is designed to enhance the solubility of metal salts formed of sulfates, carbonates, and iron oxides. No additional additives are used for the pelleting process so the product remains pure.

Market Advantages

These products provide more safety than traditional sulfamic acids yet the dissolving capabilities of liquid, more dangerous acids (hydrochloric/Muriatic) for tougher scales like iron, manganese, and sulfate. The color/pH monitoring feature is unique to the industry. This allows the contractor to determine when debris is completely dissolved and when the cleaning process is complete.

Product Usage

These products dissolve mineral scale in wells and systems as a single product without corrosion to metals, i.e., well screens, casing, and water transmission pipes. It should be used in conjunction with the "Unicid" Catalyst (liquid) for treatment and removal of slime forming bacteria (iron bacteria) and the oxides created by decaying bacteria in wells, piping systems, and environmental recovery systems.

Safety Information

The formulation is patentable and we have chosen to keep the formulation a secret. The products have been used in over 24,000 wells and systems since 1991, without environmental concerns.

Safety issues in the field would include the use of safety goggles to prevent splashing in the eyes. Wash if chemicals directly contact skin but no deterioration of skin will occur. See MSDS sheets.

For safety/environmental purposes, 1. product is totally biodegradable. Degradation is 98.1% in 8 days and 85% of the remaining every 9 days thereafter. Normal environmental breakdown is common salts, calcium sulfate, silicates, carbonates, and water (carbon dioxide to atmosphere and hydrogen to water). We suggest to vacate a minimum of 8-10 times the casing volume prior to taking water samples and recommend 15 volumes to assure no chemistry is remaining in the well.

Testing residual chemistry of the "Unicid" Granular used as a single product.	
Time	Field Test Residual
Before breakdown (< 9 days or with chemistry),	phosphate *
After chemical breakdown (> 10 days)	ortho phosphate *

* You will need to know natural phosphates and ortho phosphates as a baseline. Once the pH is adjusted to 6 (dependent upon local regulations), there should be no environmental concerns for disposal. This can be safely completed with a new product called, "pH Neutralize". This information is important as concerns about hazardous ingredients and traceable elements can be crucial in sanitary/storm sewers as well as dump sites in fields, near streams and wetlands.

All products are packaged in D.O.T. approved containers and can be shipped via normal freight without hazardous labeling required under 40CFR 172.101, Hazardous Materials Table. For additional safety information, refer to the MSDS sheets.