PMP FERMENTATION PRODUCTS

CONCRETE
SODIUM GLUCONATE

Sodium gluconate is widely used in the concrete industry in several applications. One of the reasons gluconate finds favor over other materials is its uniform quality and consistent performance.

The advantages of gluconate include:

Reducing water without sacrificing workability and strength.

Retarding setting time and improving workability without increasing water addition. This will aid in difficult conditions, such as, long hauling times, hot summer days or tropical weather operations and placement of concrete in large areas.

Improved resistance to freeze-thawing.

Decreased bleeding, segregation, dry shrinkage and cracking

WATER REDUCER

As a water reducer, sodium gluconate allows better workability of the concrete mix and provides increased slump. By careful modification of the water-cement ration and the addition of sodium gluconate, adjustments can be made to increase strength of the structure or actually reduce the cement content while maintaining the original strength.

SET RETARDING

Sodium gluconate is a good retarder. Retarding admixtures are used in hot-weather concreting operations when delays in transport and handling between mixing and placing may result in early setting and loss of workability. In concreting deep bore holes where the temperature is usually higher than 90° C, retarders have to be used. In the construction of large structural units and dams the manufacture of exposed aggregate panels, retarders are incorporated into concrete. Recently, retarders have also been used to maintain concrete returned from the ready-mix concrete trucks.

% Sodium Gluconate Added Based on Weight of Cement	Time (hours) to Beginning or End of Setting, Compared with a Control Series Portland Cement 275	
	Beginning	End
0.05	0.4	0.5
0.10	1.1	1.7
0.15	3.4	3.9
0.20	6.9	8.7
0.30	16.5	17.2

CORROSION INHIBITION

Sodium gluconate is an excellent chelator and as such, provides a degree of protection against corrosion of the re-bar used in concrete. The inclusion of gluconates can modify the physical characteristics of mortar, grout and various masonry products.

Sodium gluconate and gluconic acid are non-toxic, non-corrosive, biodegradable and bio-renewable.

AVAILABILITY

Sodium Gluconate is available in solid and liquid form.

- **SODIUM GLUCONATE** is sold in 50 lb or 25 kg bags, or in **BULK** bags.
- **LIQUID GLUCONATE** is available in **DRUMS, TOTES** or in **BULK** as 60, 60LT or 70
- **S-45** is available in **DRUMS, TOTES or in BULK**
- **GLUCONIC ACID 50% FCC** is a food grade product available in **DRUMS, TOTES** or **BULK**
- **GLUCONIC ACID 50% FCC ORG** is approved for use in organic applications and is available in **DRUMS AND TOTES**.

TO ORDER: (800) 558-1031 | INQUIRIES: info@pmpinc.com

PMP
900 NE Adams St., Peoria, Illinois 61603
(309) 637-0400 www.pmpinc.com

Modeling Life Science & Technology With Nature™