

Description:

Samalayuca 1P(25) is a blend of Portland cement and natural pozzolan, specially designed for high-performance applications where enhanced strength and durability properties are required. It can also be used in general-use applications. With a reduced clinker factor, Samalayuca 1P(25) cement not only results in stronger and more durable concretes, but also helps to reduce global climate impact.

Concretes made with Samalayuca 1P(25) are stronger, less permeable, mitigate the alkali-silica reaction, are more resistant to chlorides and sulfates and are recommended for mass concretes due to its reduced heat, etc.

Uses and applications:

Samalayuca 1P(25) complies with ASTM C595 and it can be used in the construction of walls, building foundations, paving, bridges, floors, residential flatwork, soil stabilization, precast concrete products or any construction where the following properties are needed:

- Minimizing the risk of ASR (Alkali-Silica-Reaction).
- General purpose concrete.
- Lower heat of hydration.
- Reducing sulfate attack on concrete.
- Lower permeability and reduced chloride penetration.

Physicochemical properties:

Chemical requirements ASTM C595

	Method	Specification	Samalayuca 1P(25)
Magnesium oxide (%)	ASTM C114	max 6.0	<2.0
Sulfate (%)		max 4.0	<4.0
LOI (%)		max 5.0	<4.0

Physical requirements ASTM C595

	Method	Specification	Samalayuca 1P(25)
True specific gravity ((lb/ft ³))	ASTM C604	ND	184-187
Blaine (m ² /kg)	ASTM C204	ND	>480
Initial set time (min)	ASTM C191	45 - 420	95 -125
Air content mortar (%)	ASTM C185	max 12	<8
Compressive strength 3 days (psi)	ASTM C109	min 1890	>3000
Compressive strength 7 days (psi)		min 2900	>3800
Compressive strength 28 days (psi)		min 3620	>5600

Special properties ASTM C595

	Method	Specification	Samalayuca 1P(25)
Potential Alkali-Silica Reactivity (expansion @14 days) Using Placitas aggregate	ASTM C1567	max 0.10	< 0.03%

Note: Values have been obtained in controlled laboratory conditions and may vary according to the environmental conditions.

Advantages:

In fresh mixed concrete:

- Lower heat of hydration than a typical Portland cement - also peak temperatures in concrete are lower and occur at a later age. Samalayuca 1P(25) can be classified as MH cement according to ASTM C595.
- More stable mixes that keep coarse aggregates uniformly dispersed.

In hardened concrete

- Improved long-term strength than a typical Portland cement.
- Greater resistance to sulfate attack (seawater).
- Greater resistance to alkali-silica reaction.
- Denser concrete with lower permeability and lower chloride penetration.

The low permeability resulting from the presence of the pozzolan, increase the concrete's resistance to lime leaching, sulfate and seawater attacks, and chloride penetration.



Recommendations for storage:

- Cover the bags, store them in dry places and avoid long storage periods (more than 3 months).
- Place the bags preferably on pallets or clean flat surfaces.
- Avoid nails or broken pallets.
- Use the bags that have been in storage the longest.
- Arrange in piles leaving 2 inches of space inbetween each pile.

Available in:

- Bulk
- 1 short ton super Sack (2000 lbs.)

Precautions:

	ATTENTION: Causes skin irritation. May cause an allergic skin irritation or reaction. Wash with abundant water and seek medical attention.
	ATTENTION: Can be dangerous if ingested or inhaled. In case of ingestion rinse mouth and do not induce vomit.
	ATTENTION: Causes eye irritation In case of eye irritation wash with abundant water, if symptoms persist seek medical attention..



The specifications and properties of this product are not limited to the ones showed or specified on this document. If you require any special breakdown of the product's characteristics please contact GCC technical assistants to get further information.

Safety Data Sheet available at gcc.com or upon request via fax or e-mail.

Description:

Tijeras 1P(25) is a blend of Portland cement and natural pozzolan, specially designed for high-performance applications where enhanced strength and durability properties are required. It can also be used in general-use applications. With a reduced clinker factor, Tijeras 1P(25) cement not only results in stronger and more durable concretes, but also helps to reduce global climate impact. The use of Tijeras 1P(25) also contributes to the achievement of LEED (Leadership in Energy and Environmental Design) points. Concretes made with Tijeras 1P(25) are stronger, less permeable, mitigate the alkali-silica reaction, are more resistant to chlorides and sulfates and are recommended for mass concretes due to its reduced heat, etc.

Uses and applications:

Tijeras 1P (25) complies with ASTM C595 and it can be used in the construction of walls, building foundations, paving, bridges, floors, residential flatwork, soil stabilization, precast concrete products or any construction where the following properties are needed.

- Minimizing the risk of ASR (Alkali-Silica-Reaction).
- Reduced air-content variability in concrete.
- General purpose concrete.
- Lower heat of hydration.
- Reducing sulfate attack on concrete.
- Lower permeability and reduced chloride penetration.

Physicochemical properties:

Chemical requirements ASTM C595 Method Specification TJ 1P (25)

Property	Method	Specification	TJ 1P (25)
Magnesium oxide (%)	ASTM C114	max 6.0	<2.0
Sulfate (%)		max 4.0	<4.0
LOI (%)		max 5.0	<4.0

Physical requirements ASTM C595 Method Specification TJ 1P (25)

Property	Method	Specification	TJ 1P (25)
True specific gravity ((lb/ft ³))	ASTM C604	ND	184-187
Blaine (m ² /kg)	ASTM C204	ND	>500
Initial set time (min)	ASTM C191	45 - 420	>150
Air content mortar (%)	ASTM C185	max 12	<6
Compressive strength 3 days (psi)	ASTM C109	min 1890	>3000
Compressive strength 7 days (psi)		min 2900	>4000
Compressive strength 28 days (psi)		min 3620	>5800

Special properties ASTM C595 Method Specification TJ 1P (25)

Property	Method	Specification	TJ 1P (25)
Potential Alkali-Silica Reactivity (expansion @14 days)	ASTM C1567	max 0.10	< 0.02%

Note: Values have been obtained in controlled laboratory conditions and may vary according to the environmental conditions.

Advantages:

In fresh mixed concrete:

- Lower heat of hydration than a typical Portland cement - also peak temperatures in concrete are lower and occur at a later age. Tijeras 1P(25) can be classified as MH cement according to ASTM C595.

- More stable mixes that keep coarse aggregates uniformly dispersed.

In hardened concrete

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- Greater resistance to sulfate attack (seawater).
- Greater resistance to alkali-silica reaction.
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- Bulk

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