

TECHNICAL DATA SHEET
(MixConverter)

“Specially formulated additive converting normal concrete mix into extraordinary high-performance mixes”.

MixConverter – A specially formulated additive that is introduced into mix water prior to adding the Portland cement, aggregates, sands, etc.

- Provides mix water the unique ability to convert normal portland cement concrete mixes into extraordinary high-performance mixes.
- Does this through utilization of significantly higher percentages of already included Portland cement and mix water volume, at the same time.
- This utilization process significantly increases cement paste volume per cement particle significantly decreasing capillary and gel pore sizes.
- Ultimately creates a high-performance concrete that is denser, more workable, more abrasion resistant, etc.

PRODUCT DESCRIPTION – MixConverter is a cloudy-white colloidal silicate liquid which contains no VOC/VOS and odorless, non-toxic, user friendly, environmentally neutral.

BASIC USE

- MixConverter added to mix water will convert conventional mix designs to high-performance ones, generating production of concrete that is hard, dense, and impermeable.
- Causes the production of very fine-textured, extremely homogeneous, aggregate zone paste, and bulk paste, finally creating smaller

more uniform capillary and gel pore sizes, with virtually no plastic particle separation.

- MixConverter utilization in batching portland cement concrete significantly reduces concrete’s total air-void content as it greatly improves its workability, and significantly lowers excess bleed water volumes, etc.
- MixConverter, in a concrete mix provides the mix with ability to initially introduce portland cement to mix water without the usual abruptly violent actions and reactions which creates a cement potency loss, normally ascribable to water dilution and hydrolysis, which will create poor quality early produced cement paste, paste which initially coats concrete’s aggregates.
- MixConverter utilization works to ensure early, initially-produced cement paste (aggregate zone paste), immediately coating the concrete’s aggregates, is of the utmost attainable quality, ultimately and significantly improving concrete’s paste-aggregate zone and paste-to-aggregate bond quality, virtually eliminating potential for micro cracks. Also, ultimately increasing concrete’s flexural strength, and etc.
- MixConverter enhanced, hydration byproducts, i.e., calcium hydroxide quality, also sets the stage for concrete to receive a significantly greater, more efficient, calcium lamination of C-S-H’s silicate polymer particles, strands, and/or chains, an action also causing reduction in ultimate volume of

unutilized calcium hydroxide, left in concrete, which may later interfere with concrete's ability to retain its integrity, due to potential detrimental internal chemical reactions, such as, delayed ettringite formation, and etc.

- MixConverter utilization in a concrete mix results in production of significantly less permeable, more durable concrete, which are some major factors that are normally associated with the extension of concrete's useful lifespan. Also, importantly, MixConverter utilization will create, to some varying degree (6-12%), an increased utilization of each Portland cement particle, in the mix, this attribute in turn causes a significantly greater reduction in the sizes of left-over particle cores of each portland cement particle, ultimately left in the concrete, to act as aggregates. The various, smaller than normal, particle core sizes, make these unique particles an extremely valuable filler aggregate, sized somewhere between sand and normal cement particle sizes, which ultimately and integrally will provide excellent filler benefits, benefits similar to those of silica fume, resulting in denser, more impermeable, and significantly more durable concrete, that has greater resistance to pollutant/ contaminate ingress, freeze-thaw cycle damage, steel corrosion, and etc.
- MixConverter requires no special safety gear, handling, storage, finishing, or curing.
- MixConverter is introduced into mix water prior to adding REMICON mix.
- Any concrete used with high performance concrete mixes.

FEATURE AND BENEFITS

- Increase density, strength, acid/chemical resistance and surface abrasion resistance.
- Reduce bleed water volume, shrinkage and cracking, honeycombing and laitance, slab curl potential, etc.
- Converts normal mix to high performance concrete cure.
- Improve workability (quicker & easier concrete placement, increased lubricity)
- Greatly improves durability.

DIRECTION FOR USE

1. Dry Mix Batching:

- Determines volume needed at 10 fluid ounces of MixConverter per 100 pounds of portland cement (1 ounce per 10 lbs of cement).
- MixConverter can be poured into an empty rinsed out transit mixer (If transit mixer is not clean, add 90% of mix water volume prior to adding MixConverter or prior to pulling truck under batching plant for loading).
- Under batching plant, with mixer turning in its mixing mode, load a minimum of 90% of total planned mix water volume.
- Begin loading cement, aggregate (in any order).
- Follow with the remaining balance of mix water.
- Slump may be increased at site using portable water, followed by an additional 5 minutes of mixing.
- At least 110 revolutions on the transit mixer before concrete is placed at pour site or product may not work as it should.

2. Central Mixing Operations:

- Determine volume needed at 10 fluid ounces of MixConverter per 100 pounds of portland cement (1 ounce per 10 lbs of cement).
- Pour or pump the calculated volume of MixConverter into mix water premeasure tank when adding mix water.
- Batch concrete as usual. After concrete is batched extra missing time (min. 50%) is desired for best results.
- Slump may be increased at site using portable water, followed by an additional 5 minutes of mixing.

3. Continuous Mixing Operations:

- Calculate volume needed at 10 ounces of MixConverter per 100 pounds of portland cement.
- Calculate amount of mix water needed per 100 pounds of portland cement.
- This will provide your ratio of MixConverter to mix water. (For example, if calculations show that 5 gallons of mix water are required per 100 pounds of cement, then the water in the tank should be treated at the rate of 10 ounces of MixConverter per 5 gallons of water.)

TECHNICAL DATA

- Physical : Liquid
- Color : Cloudy white
- Odor : None
- pH : \pm 11.5
- Specific Gravity : 1.10
- Flash Point: None
- Flammability : None

- Toxicity : None
- Pollants : None
- Hazardous Vapors: None
- VOC/VOS Content: None
- Spill clean-up : Flush using water (sewer safe)
- Environmental Impact: None/neutral
- User Status : Friendly

PACKAGING

MixConverter is packaged in

- 5 U.S. gal (18.9 liter) pails
- 55 U.S. gal drums

PRECAUTIONS

- Don't add directly MixConverter to Ready-Mix. Only add to mix water.
- Undiluted MixConverter may etch glass or dull shiny aluminum. Once it's dried, it's very difficult to remove from the surfaces.
- For more information, refer to MSDS.