



CONCRETE

Sika[®] Rapid TECHNOLOGY

HARDENING AND STRENGTH ACCELERATING ADMIXTURE FOR SUSTAINABLE CONCRETE

BUILDING TRUST



STRENGTH ACCELERATING AND SUSTAINABLE SOLUTIONS FOR HIGH PERFORMANCE CONCRETE

STRENGTH ACCELERATING TECHNOLOGY

Sika® Rapid-1 Technology is a unique, non-chloride based hardening/strength accelerator that increases the early age strength of the concrete. Unlike conventional set accelerators, Sika® Rapid-1 Technology does not reduce slump life and has a minimal effect on the initial set time and final strength of concrete. This allows the concrete to be produced, transported, placed and finished normally. Once the concrete reaches its initial set, Sika® Rapid-1 Technology reacts with the cement and dramatically increases early strength development.



DURABILITY

Sika® Rapid-1 Technology contains no chlorides and does not initiate or promote the corrosion of reinforcing steel. Sika® Rapid-1 enhances concrete durability by providing a stronger concrete matrix at the early ages when concrete is most susceptible to internal and external stresses. These stresses can lead to localized cracks and the eventual onset of more severe concrete corrosion.

The applications where Sika® Rapid-1 can provide substantial benefits are:

- Concrete requiring increased early and late age strength development:
 - Precast/prestressed concrete
 - Cold weather construction
 - Fast-track construction
 - Bridge overlays
- Sustainable construction with reduced carbon footprint (embodied CO²) of concrete through cement reduction.

PRECAST / PRESTRESSED CONCRETE

Sika® Rapid-1 has the unique ability to avoid rapid slump loss and gain high early strength. This provides the following benefits to the precast concrete producer:

- Faster placement, easy finishing
- Increased early strengths
- Turn forms faster
- Maintain cost effective production cycles in cold weather
- Reduce or eliminate energy costs related to heat/steam curing
- Potential to replace Type III cement with Type I/II cement
- Reduce safety hazards related to curing with applied heat

COLD WEATHER CONSTRUCTION

Sika® Rapid-1 can expedite and simplify cold weather construction by reducing and/or eliminating the need for extensive cold weather curing measures such as heat or steam curing and their respective safety hazards.

SUSTAINABLE CONCRETE

Sika® Rapid-1 can offset cement demand without sacrificing early age or final concrete strengths. This reduction in cement demand directly reduces the embodied carbon (eCO²) within the concrete mix resulting in lower direct contributions to greenhouse gas emissions and global warming potential. This benefit is improved when combined with supplemental cementitious materials (SCMs) such as fly ash, slag, silica fume or metakaolin.

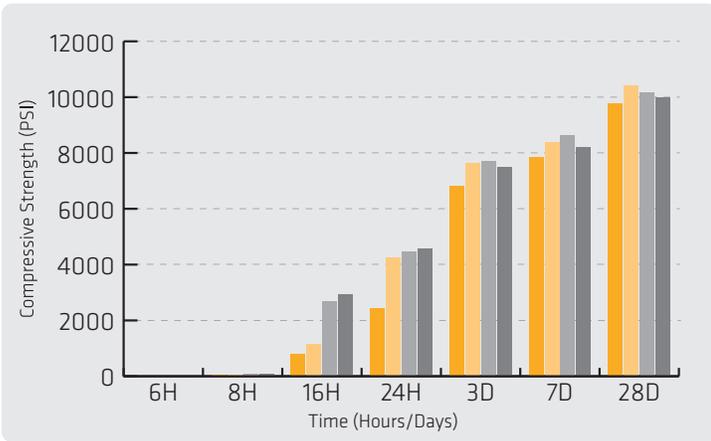


SIKA® RAPID-1 PERFORMANCE

PERFORMANCE THAT SPEAKS FOR ITSELF! SIKA® RAPID-1 OFFERS THE FASTEST STRENGTH DEVELOPMENT AND MOST STABLE SET TIMES OF ANY COMPETING PRODUCT ON THE MARKET.

CONCRETE MIX DETAILS, LABORATORY TESTING: 7-8" Slump Concrete, w/c = 0.40, No AEA concrete, Type I, 611 lbs., Sika® ViscoCrete®-2100

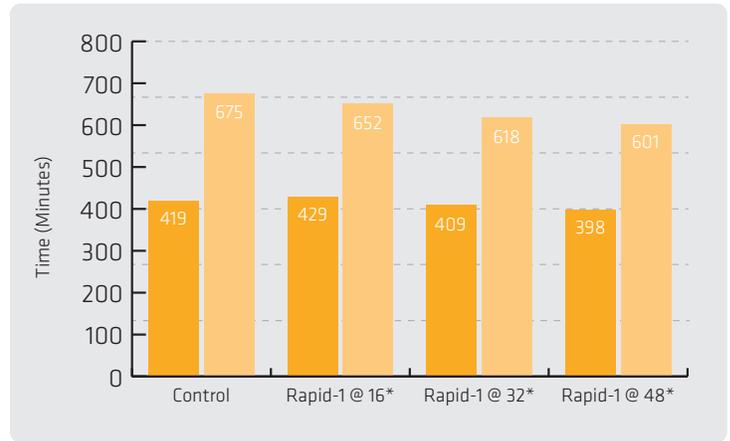
COMPRESSIVE STRENGTH DEVELOPMENT @ 50°F



Control Rapid-1 @ 16* Rapid-1 @ 32* Rapid-1 @ 48*

*Dosage is fl.oz./100 lbs of cement, as per data sheet

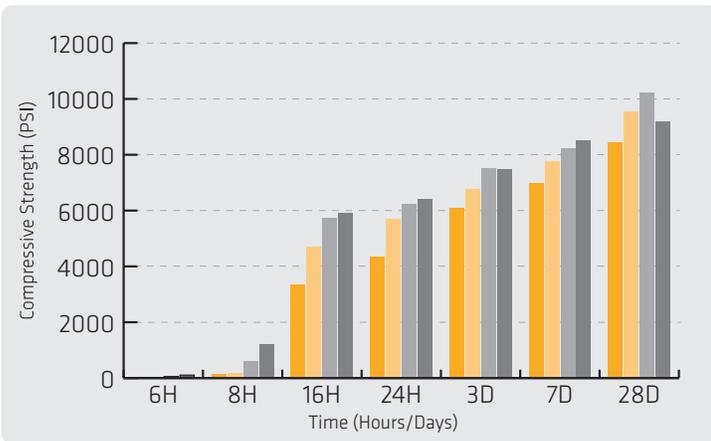
INITIAL AND FINAL SET TIMES @ 50°F



Initial Setting Time Final Setting Time

*Dosage is fl.oz./100 lbs of cement, as per data sheet

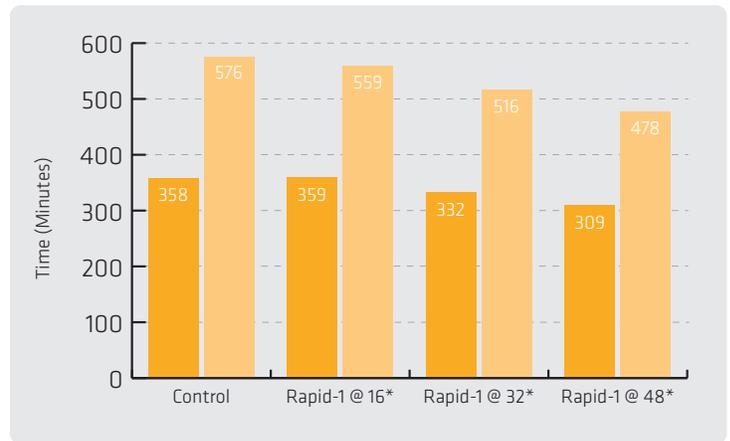
COMPRESSIVE STRENGTH DEVELOPMENT @ 70°F



Control Rapid-1 @ 16* Rapid-1 @ 32* Rapid-1 @ 48*

*Dosage is fl.oz./100 lbs of cement, as per data sheet

INITIAL AND FINAL SET TIMES @ 70°F



Initial Setting Time Final Setting Time

*Dosage is fl.oz./100 lbs of cement, as per data sheet

SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:



WATERPROOFING



CONCRETE



REFURBISHMENT



SEALING AND BONDING



FLOORING



ROOFING

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SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

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Our most current General Sales Conditions shall apply.
Please consult the Product Data Sheets prior to any use and processing.

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