

## PRODUCT DATA SHEET

# Sika® Rapid-1

### Strength/Hardening Accelerating Admixture

#### PRODUCT DESCRIPTION

Sika® Rapid-1 is a non-chloride strength/hardening accelerator formulated to increase the early strength of concrete without affecting the initial workability. Sika® Rapid-1 meets the requirements of ASTM C-494, Type C accelerating admixture.

#### USES

Sika® Rapid-1 is designed for the use in Ready Mix, Precast and Dry cast concrete applications. The applications where Sika® Rapid-1 can provide substantial benefits are:

Concrete requiring increased early age strength development:

- Precast/prestressed concrete.
- Cold weather construction.
- Fast-track construction.
- Bridge overlays.

Sustainable construction with reduced carbon footprint (embodied CO<sup>2</sup>) of concrete through cement reduction.

#### CHARACTERISTICS / ADVANTAGES

**High Early Strength Concrete:** Sika® Rapid-1 delivers excellent results in normal and hot weather conditions where very high early strengths are required.

##### ▪ Benefits

- Early stripping and re-use of forms.
- Faster finishing operations on flatwork surfaces.
- Earlier post-tensioning.
- Effective with Type I/II/III cements.
- Enhanced concrete sustainability through cement reduction and lower carbon footprint (eCO<sup>2</sup>).

**Precast Concrete:** Sika® Rapid-1 delivers excellent results for precast concrete when high early strengths are required. Curing times are significantly reduced while concrete quality is improved.

##### ▪ Benefits

- Use as a replacement for steam curing to save energy costs.
- Increase early strengths and allow faster rotation of molds to increase production per day.
- Use as a replacement for Type III cement.
- Enhanced concrete sustainability through cement reduction and lower carbon footprint (eCO<sup>2</sup>).

**Cold weather concreting:** Sika® Rapid-1 is an effective hardening accelerator where high early strength concrete is desired and the use of calcium chloride is prohibited.

▪ **Benefits**

- Insulation and heating costs for curing time can be reduced.
- Earlier stripping and reuse of forms increases labor productivity.
- Accelerated strength gain allows earlier structural use and speeds completion time.
- Enhanced concrete sustainability through cement reduction and lower carbon footprint (eCO<sup>2</sup>).

Sika® Rapid-1 does not contain calcium chloride or any other intentionally added chlorides and will not initiate or promote the corrosion of reinforcing steel present in the concrete.

**Placing concrete in freezing conditions:** When used at Sika recommended dosage rates, Sika® Rapid-1 may reduce the need for cold weather concreting practices as specified in ACI 306-Standard Specification for Cold Weather Concreting. Field evaluations should be carried out when concrete is to be placed in freezing conditions to determine the minimum ambient and concrete temperatures required, and the optimum dosage for the desired setting time and strength performance. Sika strongly recommends that appropriate sound curing practices be used to protect fresh concrete from excessive heat loss in extreme weather conditions.

## PRODUCT INFORMATION

<b>Packaging</b>	Sika® Rapid-1 is available in 55 gallon drums (208 liters), 275 gallon totes (1040 liters) and bulk delivery.
<b>Appearance / Color</b>	Reddish/Violet liquid. Color may change upon continuous exposure to UV light.
<b>Shelf Life</b>	Shelf life when stored in dry warehouse conditions between 50 °F and 80 °F (10–27 °C) is 1 year.
<b>Storage Conditions</b>	Sika® Rapid-1 should be stored at above 40 °F (5 °C). If frozen, thaw and agitate thoroughly to return to normal state.
<b>Specific gravity</b>	Approx. 1.17

## APPLICATION INFORMATION

**Recommended Dosage** To promote high early strength Sika® Rapid-1 may be used at the rate of 8–48 fl.oz. per 100 lbs. (520– 3120 ml/100 kg) cement. When used to protect concrete from freezing, dosage will vary with different brands of cement and ambient temperatures and higher dosages may be necessary. Adjust water content accordingly when used at dosage of 16 fl.oz/100 (1040 ml/100 kg) cementitious or higher. Sika recommends that trial mixes be performed to determine the most efficient dosage. Please contact your local Sika regional office or Sika technical service department at 1-800-933-7452 for further information and assistance.

**Mixing** Add correct amount of Sika® Rapid-1 at the concrete plant or into ready mix truck at the job site. The admixture may be added manually or by automated dispenser directly into the sand or into the water line at the batch plant. When used in combination with other admixtures care must be taken to dispense each admixture separately into the mix. Do not mix with dry cement.

**Use With Other Admixtures:** Sika® Rapid-1 performs well in combination with other admixtures such as non-retarding water reducers, high range water reducers and air entraining agents. Do not mix Sika® Rapid-1 with expansion agents or shrinkage compensating agents.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at [usa.sika.com](http://usa.sika.com) or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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 the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

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