



PRODUCT DATA SHEET K-35



Product Overview K-35

Benchmark K-35 is an innovative Portland cement based self-leveling underlayment designed to address out of level or old damaged floors in residential, commercial, institutional and renovation environments. K-35 dries to a smooth hard surface that facilitates rapid application of flooring goods in as little as 24 hours. Benchmark K-35 has exceptional dimensional stability and bonding characteristics. Suitable for application over clean, sound substrates including properly prepared concrete, wood and other sound stable substrates meeting min 200 psi bond strength and greater than L360. K-35 is optimized for installation from 1" to 2" NEAT in a single lift, in climate-controlled interior environments. Benchmark K-35 is quick setting, self drying underlayment engineered for superior results. K 35 can be used from 1/8 inch to 2 inch and is compatible with most flooring adhesives without additional prep or primers.

Uses

For out of level or damaged substrates in residential, commercial and industrial applications.

Features:

- Engineered with latest cements technology for exceptional outcomes.
- Offers exceedingly low potential for cracks.
- Requires minimal control joints for most applications.
- Offers compressive strengths exceeding 4000 psi in 28 days.
- Provides exceptional resistance to wheel tracking.
- Compatible with the majority of today's flooring adhesives.
- Suitable for electric and hydronic under-floor heating systems.
- Facilitates placement of finished floor goods including wood, vinyl, LVT, carpet and ceramic in as little as 24 hours.
- Breathable Flooring Systems at 0" – 2" depth require 24 hour drying time.
- Non-breathable Flooring Systems at 0" - 2" depth require 36 hours drying time.

HIGHLIGHTS

- Flooring-ready surface in 24 hours* when properly installed.
- Exceptionally low crack potential.
- Minimal control joints required for most applications.
- Compressive strength exceeding 4,000 psi
- (28 MPa) in 28 days.
- Rapid cure allows return to construction traffic in as little as 18 hours*.
- Facilitates fast track service times.

Properties

(Typical when tested at 73°F or 21°C using approved sand and verified mix ratios)

Compressive strength (ASTM C 109 M)

24 hours > 1,500 psi

7 days > 3,000 psi

28 days > 4,000 psi

Placement time 15-20 minutes

Time to foot traffic 12-18 hours

Time to flooring: Breathable flooring

Wait 24 hours

Non-breathable flooring: Wait 48 hours

Temperature to application

Adjust temperature 50 F to 90 F (material and ambient) of material by using warm or cold water for mixing.

Density: 135-140 lbs/cu ft.

Flammability

Flame spread: 0

Fuel contribution: 0

Smoke development: 0

Yield: 50 lbs - 0.47 cu ft.

Coverage : 50 lbs. - Approx. 23.5 sq ft. @ ¼"

Water per 50 lb. unit 4.5 – 5.5 US qts per

50 lbs : 4.25 L – 5.0 L per 22.7 kg

Packaging : 50 lbs. (22.7 kg)

Shelf life

- 12 months when unopened and stored per instructions.

*Typical results are -0.02% to -0.10%



Application Procedures: For Professional Use Only

Reference the floor covering and adhesive manufacturer's documentation to verify suitability of K-35 as a subfloor for the flooring system, noting that any adhesive used for concrete is generally compatible with Benchmark K-35 cement technology. Follow the flooring and adhesive manufacturers' directions to determine the maximum allowable moisture content (RH) or Moisture Vapor Emission Rate (MVER) of the substrate. If the RH or MVER of the substrate exceeds the requirements of the flooring system, utilize an approved moisture vapour mitigator prior to installation of K-35.

Honour all moving joints. Complete crack and substrate repairs prior to installation. Maintain a minimum of 50F during the pour and for 72 hours afterwards. Acclimate the material to a minimum of 50F prior to mixing. To maximize flowability and working time, use cool water when temperatures exceed 85F.

For installations over hydronic heating systems, use a minimum 1.5" of material, ensuring $\frac{3}{4}$ " material above the hydronic tubes. Apply K-35 to a maximum depth of 2" NEAT monolithically, and 3" NEAT in isolated areas.

For larger areas: Extend K-35 with aggregate in applications that exceed 2" deep. When extending, utilize $\frac{1}{4}$ "-3/8" clean washed SSD pea gravel up to 50% by weight. Ensure pea gravel is thoroughly encapsulated with K-35. Do not add additional water.

Surface Preparation

Substrates must be sound, clean, dry and free of contaminants that may interfere with adhesion. Areas that do not exhibit a tensile pull strength > 150 psi are not suitable and must be mechanically removed prior to application of K-35. Ensure the prepared substrate is compatible with specified primer. Remove all bond breakers prior to priming. Vacuum all dust and debris prior to priming.

Remove all adhesives, leaving a clean sound and stable substrate.

Prior to removal, verify adhesive does not contain asbestos. Follow all local and federal laws for removal and disposal of adhesive or flooring materials containing asbestos. Note K-35 is not suitable for encapsulating hazardous materials.

Satisfy local building codes when installing K-35 over wood floors. Utilize exterior-grade plywood, suitable OSB or other resistant to water. Due to high material strength of K-35, ensure deflection of wood does not exceed L/360. If deflection is greater, wood substrates may require lath.

Substrate Priming

All substrates must be primed. Ensure primer is applied as described in its Technical Data Sheet (TDS).

Seal all voids and penetrations to prevent K-35 from flowing through.

Mixing

Recommended water range: 4.5 – 5.0 L per 50 lbs. (22.7 kg).

Mix time: 2 minutes with minimum 850 rpm drill or through approved mixer/pump.

Always stay within the recommended water range. Over-watering and/or failing to generate adequate shear by under-mixing will result in weak, chalky surfaces which compromises compressive strength.

Add properly measured, clean, potable water to a clean mixing barrel. While mixing, add the powder and mix at recommended speed for 2 minutes. Ensure all material is homogeneous such that no dry lumps/unmixed material remains.

During mixing, ensure paddle stays below the surface to avoid introducing excess air. Immediately pour onto substrate to maximize material flow and placement time.

Pumping

K-35 may be mixed and/or pumped with most standard batch or inline mixing/pumping equipment. Contact Benchmark Technical Services for pump questions.

Material Application

Immediately after mixing, pour mix onto substrate and rake to required depth, smoothing with appropriate tools. Ensure wet edge when placing mixed material, always pouring back into the leading edge of previous placement.

Drying Time

To assist drying, avoid forced air. Provide adequate air ventilation and circulation. Note temperature, humidity and air-flow will impact drying time.

As K-35 is self-drying, avoid wet curing and using curing/sealing compounds.

Wait 24 hours for K-35 to harden before accepting light foot traffic. Avoid construction traffic for a minimum of 36 hours. The following are general drying guidelines prior to installing flooring, assuming ambient temperatures of 70F with proper air circulation:

Published technical data and instructions are subject to change without notice.

Please see www.benchmarkcements.com for the last TDS and safety data sheet.



THE FUTURE IN FLOORING

Limited Warranty

www.benchmarkcements.com ("the Company") stands behind the quality and performance of its products. This Limited Warranty guarantees that the goods supplied by Benchmark Cements, are free from defects in material and workmanship under normal use and service conditions for a period of one year from the date of shipment.

Scope of Warranty

The warranty covers only the initial purchaser of the goods.

It applies solely to defects arising from material or workmanship, as determined by Benchmark Cements.

The warranty is valid only if the product is used in accordance with the Company's published guidelines, technical data sheets, and installation instructions.

FOR FULL WARRANTY DETAILS AVAILABLE UPON REQUEST

CONTACT US

For questions or assistance, contact
BenchMark Cements Technical
Services:

www.benchmarkcements.com

Technical Support

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instructions are subject to change
without notice.

Refer to the latest TDS and SDS at
www.benchmarkcements.com

LEED Certification

BenchMark Cements may contribute
points towards LEED certification:

Indoor Environmental Quality
(EQ 4.2): Low-emitting materials
(0g/L VOC).

Building Reuse (MR 1.1, MR 1.2):
Provides new pristine subfloor.

Materials and Resources
(MR 4.1–4.2, 5.1–5.2):

