

# KEY #302-LI+ DENSIFIER

Product Data Sheet



## DESCRIPTION

**KEY #302-LI+ DENSIFIER** is a water-based, clear lithium silicate solution formulated to densify, seal and dustproof concrete floor slabs. **KEY #302-LI+** absorbs and chemically reacts with calcium silicate hydrate (CSH) in the concrete pores, providing a very hard and dense surface with improved durability and resistance to water and mild chemicals. **KEY #302-LI+** can be used to seal many types of concrete floors, including manufacturing plant and warehouse floors, distribution center floors, transportation terminal floors, commercial and retail floors, institutional floors, and numerous other uses. For a gloss finish or to provide added stain resistance and UV protection for colored or dyed concrete, apply **KEY #303 UV GUARD SEALER** after all grinding/polishing work is completed, refer to product data sheet for additional details.

## KEY ADVANTAGES

- Densifies, seals and dustproofs concrete
- Waterborne, low odor suitable for use in occupied areas
- Meets USGBC LEED criteria for low VOC
- Treated concrete is more dense and durable
- Easier to clean and maintain vs. untreated concrete
- Permanent treatment that never peels off
- Improved abrasion resistance vs. untreated concrete

## KEY CONSIDERATIONS

- Substrate temperature must be a minimum of 40°F
- Substrate must be free of dirt, waxes, curing agents, and other foreign materials
- Protect metal, glass, wood, paint or brick from contact with **KEY #302-LI+**, if oversprayed clean immediately
- Protect **KEY #302-LI+** from freezing
- Do not allow excess **KEY #302-LI+** to puddle and dry or white residue may form requiring immediate removal with scrubbing within 24 hours of application

## COLOR SELECTION

Clear only. Material is 'water clear' in the pail.

## COVERAGE

250-800 ft<sup>2</sup> per gallon depending on surface porosity and texture of the concrete surface.

## CURE/DRY TIME

Light Foot Traffic Service      4-6 hours @ 75°F, 50% RH

## APPLICATION

**KEY #302-LI+** is used directly from the container and requires no dilution or pre-mixing. Work must be performed by trained or experienced contractors or maintenance personnel. The **Key Resin Technical Service Department** is available to answer any questions.

**Surface Preparation (New/Fresh Concrete):** Cure the concrete by a wet or sheet cure method in accordance with ASTM C171, or with a curing compound that meets the requirements of ASTM C309, a dissipating curing compound is recommended. To maximize strength and other physical properties of the concrete slab, new concrete should cure seven days or longer before application of **KEY #302-LI+**. For fast track projects, the cure time may be reduced at the discretion of the project engineer. If a curing compound is used, it must be completely removed before application of **KEY #302-LI+**. After the curing method is removed, allow the slab to air dry a minimum of 24 hours prior to application. Insufficient drying of the concrete will prevent full penetration of **KEY #302-LI+**, reducing its effectiveness.

**Surface Preparation (Old Concrete):** Concrete must be clean and free of any materials that could prevent penetration of **KEY #302-LI+**, such as curing compounds or cure & seal treatments, paints, coatings, dirt/oil, waxes, etc. If necessary, use a chemical cleaner/stripper to remove these contaminants before applying **KEY #302-LI+**.

**Application (New or Old Concrete):** Air temperature during application must be between 40°F and 100°F (5°C and 38°C) for proper chemical reaction of the **KEY #302-LI+**. Apply a single coat of **KEY #302-LI+** using a low pressure sprayer equipped with a 0.5 gal/min (1.9 L/min) spray tip. Apply at a coverage rate that results in a uniformly wet surface without puddles. While **KEY #302-LI+** is still wet, use a soft-bristle broom or microfiber pad to redistribute and evenly spread out the material. Do not continue to brush or spread out **KEY #302-LI+** once the product begins to dry. Keep the floor wet with **KEY #302-LI+** for 5-10 minutes. Do not allow excess **KEY #302-LI+** to puddle and dry on the floor. This may result in a white residue that must be removed immediately with scrubbing.

If immediate surface sheen is desired, dry buff or burnish the floor with a polishing pad appropriate for the desired end gloss result.

**Floor Joints:** If the floor joints are to be filled after **KEY #302-LI+** has been applied, they must be thoroughly cleaned before installation of joint filler. Cleaning joints by circular concrete saw or a grinder equipped with a wire wheel is recommended.

**Clean-Up/Safety:** Clean brushes, tools, equipment and flush sprayer with clean potable water immediately after use. Consult Safety Data Sheet (SDS) for safety and health precautions.

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## TECHNICAL DATA

Mixing Ratio	Single Component
Solids Content	15% Solids
Volatile Organic Content (VOC) (EPA Method 24)	5 g/L, compliant to low VOC Rule 1113 in all 50 states
pH	11.7
Shelf Life	2 years, unopened container
Weight per gallon	9.2 lbs/gal
Thinning	No thinning is required. Apply at packaged consistency.

## AVAILABILITY

Key Resin materials are available throughout the United States and a number of other countries. Contact the **Key Resin Representative** in your area for details.

## WARRANTY

Key Resin Company ("Key") warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of Key. If any product fails to meet this warranty, the liability of Key will be limited to replacement of any non-conforming material if notice of such non-conformity is given to Key within (1) one year of delivery of materials. Key may in its discretion refund the price received by Key in lieu of replacing the material. No customer, distributor, or representative of Key is authorized to change or modify the published specifications of this warranty in any way. No one is authorized to make oral warranties on behalf of Key. In order to obtain replacement or refund the customer must provide written notice containing full details of the non-conformity. Key reserves the right to inspect the non-conforming material prior to replacement. EXCEPT FOR THE EXPRESSED WARRANTY STATED ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. KEY'S OBLIGATION SHALL NOT EXTEND BEYOND THE OBLIGATIONS EXPRESSLY UNDERTAKEN ABOVE AND KEY SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO THE PURCHASER OR ANY THIRD PARTY FOR ANY LOSS, COST, EXPENSE, DAMAGE OR LIABILITY, WHETHER DIRECT OR INDIRECT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

## MAINTENANCE

After completing the application of **KEY #302-LI+**, the installer should provide the owner with maintenance instructions. Concrete treated with **KEY #302-LI+** is easily cleaned with neutral soaps or detergents, variable depending on surface porosity and texture. Refer to **Key Resin Technical Bulletin #3** and **#3A** for additional recommendations.

## TECHNICAL SERVICE

Key Resin Company provides services and consultations on material selection, specification, troubleshooting, and other information on the proper repair and protection of concrete surfaces. **Key Resin Sales/Technical Representatives** are available to assist you. Telephone 888.943.4532 or visit [www.keyresin.com](http://www.keyresin.com).

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