



RIO-DENSE

CONCRETE DENSIFIER DUEL APPLICATION CONCENTRATED

PRODUCT DESCRIPTION

RIO-DENSE fortifies concrete slabs with a concentrated proprietary formula that penetrates to increase surface density and hardness. RIO-DENSE can be applied at the time of placement as well as to older fully cured slabs to eliminate dusting and reduce porosity. RIO FLOORING RIO-DENSE is especially effective to protect concrete floors subjected to steel wheel and forklift traffic.

RIO-DENSE densifier is made of amorphous colloidal silica which we manufacture in house under the trade name "NanoPOUR" in fact, we do not know of any other densifier manufacturer that actually manufactures their own silica nano particles from raw materials. This allows us to do more things with densifiers than competition. a good example of this is the fact our densifier can be frozen, thawed and applied without causing any damage to the material. Our proprietary formula also increases hydration rates while lowering porosity. RIO-DENSE also increases the primary strength component (C-S-H) Calcium Silicate Hydrate gel and (C-S-H) mechanical properties.

RIO FLOORING RIO-DENSE is a zero voc formula that is also non-toxic and non-flammable. RIO-DENSE reduces efflorescence, dusting and (ASR) Alkali-silica-reaction. RIO-DENSE does not require scrubbing in or hazardous residue disposal and will not leave discoloring mineral salt deposits.

FEATURES AND BENEFITS

- Ideal for Concrete Polishing
- Auto Scrubber or Pump Sprayer Application
- Fortified with NanoPOUR™ Densifier Technology
- Low Ph - Colloidal Silica Formulation
- Freeze/Thaw/Use Resistant Chemistry
- Concentrated 3:1 Formula
- Reduces Porosity
- Eliminates Dusting
- Extends the Service Life of the Slab
- Excellent Performance on Cementitious Overlays
- Cannot be over applied and will not leave mineral salt discoloration
- No VOC's, Non-Hazardous and non-Flammable
- Compatible with All RIO Systems

MATERIAL PACKAGING OPTIONS

1 Gallon Bottle / 3.78 Liters

5 Gallon Pail / 19 Liters

55 Gallon Drum / 208 Liters

275 Gallon Tote / 1021 Liters

Note: This is a concentrated product and will yield 4 times the volume when mixed 3:1 with clean potable water

COVERAGE RATES

1. Auto scrubber application method RIO-DENSE's proprietary formula was designed to be applied to high & medium density concrete as well as high porosity and hard concrete.

Application rate: 375 square feet per gallon with auto scrubber set at full flow.

- 15 Gallon tank fill will densify 5,675 square feet of concrete slab

- 30 gallon tank fill will densify 11,350 square feet of concrete slab

2. Pump Sprayer Application Method

- 375 - 400 square feet per gallon.

STORAGE AND SHELF LIFE

We recommend storing RIO-DENSE densifiers in original containers with the lid fastened tightly. RIO-DENSE has a shelf life of 24 months from the date of manufacture. Please keep RIO-DENSE in a dry place within ambient conditions of 40-100 degrees Fahrenheit.

Note: Freezing will not impact RIO-DENSE's performance. just thaw and use.

MIXING AND APPLICATION

Dilution: Mix Ratio for both auto scrubber and pump sprayer application: 3:1

1. Open package concentrate

2. Mix 3 parts clean potable water to 1 part RIO-DENSE densifier

3. Mix can either be within the auto scrubber or pump sprayer
15 gallon auto scrubber tank - 3.75 Gallons RIO-DENSE
30 gallon auto scrubber tank - 7.5 Gallons RIO-DENSE

Pump Sprayer ratios depend on pump sprayer size

Note: To facilitate mixing and agitation, place RIO-DENSE into the mixing vessel first and then fill with clean potable water.

EQUIPMENT

Apply RIO-DENSE using a mechanical auto scrubber or pump sprayer. For pump sprayer application, use either a fan tip or cone tip to ensure even spraying.

PRE-APPLICATION

While the Auto Scrubber application method does mitigate overspray, its still best practice to cover all area, surface and objects with plastic sheeting. please be aware of capillary absorption if wood or drywall is present and protect as needed. we recommend using RIO FLOORING RIO-CLEAN to clean and prepare the slab for the densification process. slab must be clean and free from oils, dust and other surface contaminants. Do not use acidic detergents when cleaning before or after application.

Measure square footage of project area (Square feet / Square Meter)

1/2

Mix the appropriate amount of RIO-DENSE for the job size based on 375 square feet per gallon.

APPLICATION INSTRUCTIONS

A. Auto Scrubber Application Process - RIO-DENSE CONCRETE DENSIFIER

Empty Auto Scrubber tanks and mix RIO-DENSE, adding one part RIO-DENSE to 3 parts water. Coverage rate is 375 sq. ft./ gal. Apply RIO-DENSE solution at full flow scrubbing with 400 grit red fiber pads at full down pressure and squeegee up. Scrub in a north/south, east/west pattern. Once completed, turn off the flow setting and continue scrubbing RIO-DENSE solution to work it in for 45 minutes. Allow the surface to dry at least two hours after scrubbing. Note: For projects less than 1500 sq. ft., pail mix hardener solution and pour onto slab, spreading with a flat squeegee before scrubbing. WATER RINSE WITH SCRUBBER Empty scrubber tanks, rinse and fill with clean water. Travel at a medium walking pace in a north/south, east/west pattern with rinse water at full flow. Scrub with 800 grit white diamond pads at full down pressure and squeegee down. Edges and corners should be cleaned with a mop and wet vac to remove hardener residue. Allow floor to dry completely. for optional shine burnish the entire floor with a quality high speed heat style burnishing pad.

B. Pump Sprayer application Process - RIO-DENSE Concrete Densifier

Pour RIO-DENSE concentrate into a pump sprayer and fill with clean potable water at a ratio of 3:1. Keep sprayer pressurized per the manufacturers specifications to allow even distribution to the concrete surface. Spray RIO-DENSE Densifier while holding the spray tip 12 -24 inches above the surface. move the wand in a figure 8 motion to achieve even distribution. spray enough to form an even sheen and avoid puddling. Apply additional RIO-DENSE as needed. Allow surface to dry completely

DIAMOND GRINDING AND POLISHING

RIO-DENSE densifier is typically applied after the initial cutting stages and prior to the higher levels of diamond polishing. in most cases its used after 200 grit application, remove RIO-DENSE residue with next grinding step.

LIMITATIONS

RIO-DENSE densifiers harden and densify concrete, but do not seal or prevent staining. to seal and protect we recommend top coating with RIO-GUARD (ISG) Integrated Stain Guard

- Do not clean with acidic or abrasive cleaning products. We recommend cleaning with RIO-CLEAN.
- Treated surface will be slippery so please use extreme caution when walking.

HEALTH AND SAFETY

WARNING: FOR PROFESSIONAL USE ONLY.

Before using product, read product SAFETY DATA SHEET (SDS) and instructions on packaging. ALKALINE CONCENTRATE: Contact can damage eyes, skin, and other body tissues. HANDLE WITH CARE. Eye and skin irritant. Digestive tract irritant; DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. Spray mist is respiratory tract irritant. Use only with adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, clothing. Observe appropriate safety and jobsite controls. Wear appropriate protection including eye protection and chemicalresistant gloves. Ensure fresh air-flow during application and until dry. If you experience headaches, dizziness, eye watering, or if air monitoring shows vapor/mist levels above applicable limits, wear a properly fitted P100/organic vapor respirator (NIOSH TC-84A approved), used according to manufacturer's directions, during application and drying. SLIP/FALL DANGER: During application of RIO FLOORING Products and until dry, treated surface will be slippery.

First Aid

Ingestion: Not expected to be toxic. Never give an unconscious person anything to ingest. If swallowed, immediately give two glasses of water, seek medical attention if ill effects develop. Inhalation: May cause irritation. Remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if irritation persists. Eye Contact: Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists. Skin Contact: May cause irritation. Wash affected area with soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

PHYSICAL PROPERTIES

PHYSICAL STATE Liquid

ODOR None

DENSITY 9.6 – 11.0 lb/gal

pH (100 %) 2.6 - 3.2

FREEZING POINT 32 °F / 0 °C

APPEARANCE Opaque White

SPECIFIC GRAVITY 1.15 - 1.19 @ 77 °F / 25 °C

SOLUBILITY IN WATER Complete

VISCOSITY 15 cps @ 77 °F / 25 °C

VOC CONTENT 0.00 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

Warranty: RIO FLOORING products are warranted to be of uniform quality, within manufacturing tolerances. The manufacturer has no control over the use of this product, therefore, no warranty, expressed or simplified, is or can be made either as to the effects or results of such use. In any case, the manufacturer's obligations shall be limited to refunding the purchase price or replacing RIO FLOORING



SCAN ME FOR
SDS

24 HOUR EMERGENCY: CHEMTREC® 1-800-424-9300

Published technical data & instructions are subject to change without notice. Please contact Rio Flooring Systems for the most current technical data, safety data & application instructions.



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