

## SURFACE CHEMICAL HARDENER

# Reisformula®

### PRODUCT

Surface chemical hardener, compound of sodium silicate and lithium silicate with catalytic agents; for concrete (Freshly Finished Concrete (NEW) or Existing Concrete (OLD)), and mortar; that prevents the floors against abrasion and dust.

**Reisformula®** was developed to increase the hardness of concrete floors in situations of heavy traffic creating an increase of endurance abrasion up to 40% in comparison with untreated concrete. After the application, the result is an extremely hard surface without dust, which is very easy to clean.

**Reisformula®** when is applied on a cementitious based floor, causes a chemical reaction with alkali and free lime, attaching strongly the loosen particles and filling gaps (pores), by crystallization, forming an unique and solid mass.

**Reisformula®** can be applied after the floor is finished, not altering the texture and on a polished floor, it will develop a natural shine similar to granite in a period of 4 to 9 months.

**Reisformula®** glazes and penetrates up to ¼ inch (6 mm) depending on concrete porosity.

### USES

**CURE:** does not allow fast evaporation of water from the concrete, if applied Reisformula® promptly after the finishing loss of 83% moisture in untreated samples, was observed.

**SEAL:** Seals concrete and other materials, so they become a solid mass, decreasing the natural porosity, protecting against humidity, and providing easy cleaning.

**HARDEN:** increases strength against abrasion up to 40% compared to untreated concrete. After application, the concrete will continue to harden gradually. Abrasion test: Taber CS-17 1000 g loading for 1000 cycles.

**ADHERE:** The floor gets prepared to receive floor adhesives and coatings, also providing higher durability for these materials.

**DUSTPROOF:** because of its combination with salts and alkaline concrete, fills the pores with crystals, becoming an integral and permanent part of the concrete structure.

### SURFACE PREPARATION

• Freshly Finished Concrete (NEW) floors: do not require preparation if **Reisformula®** is applied promptly, after the finishing operation is concluded.

\* Existing Concrete (OLD) floors: should be washed with clean water to remove dust. If the floor is contaminated with grease or fuel, wash with water and degreaser with Ph neutral, however times are required, in order for the application of the **Reisformula®** can be done.

\* Floors with chemical compounds as curing agents, resins or coating, must be removed mechanically, before the application.

### APPLICATION IN SMOOTH FLOORS

Saturate the surface of the floor with **Reisformula®** spread it by at least 40 minutes with fine-bristled brooms. When the surface is slippery, applying water and spread for 30 minutes more, in order to help the penetration.

When Reis FORMULA® begins to dry and becomes slippery again, rinse the surface with clean water, remove the excess.

### APPLICATION ROUGH FLOOR

Saturate the surface of the floor with **Reisformula®** spread it by at least 40 minutes with fine-bristled brooms without removing the excess.

Note: If you want to apply **Reisformula®** removing excess, wash the surface with clean water

### PHYSICAL PROPERTIES:

CHARACTERISTICS	RESULTS
Appearance / Odor	Clear and odorless liquid
Flame point	No – existent
Flammability Limit	No – existent
Vapor and gas emission	No – existent
Abrasion Resistance	30% to 40% Taber CS-17
Adhesion (ASTM D 3359)	17% (Epoxic) no changes on
Schmidt hammer impact test (ASTM C 805)	Increase 31% compared to untreated concrete
Compression Test (ASTM C 42) (NBR NM33/98)	Increase 26% compared to untreated concrete
Weathering	Is not affected by UV rays
Vitrification / Penetration	¼ inch (varies with the porosity of concrete)

### CHARACTERISTICS AND PERFORMANCE:

Chemical composition	Sodium silicate and lithium silicate
Physical State	Liquid
Packing	Bucket: 5 gallons, Drum: 55 gallons
Coverage	1000 meters with 55 gallon unit
Drying Time	1 or 2 hours, depending on temperature and job conditions. Freshly Finished Concrete (NEW) floors must wait for the time of normal hardening.

### WARRANTY

After the appropriate application of **Reisformula®** the concrete surface will be structurally solid, sealed, dustproof and hardened by 20 years. 20 years \* with emission of Warranty Certified issued REIS E REIS. The guarantee is restricted only against dust formation caused by the wear of the concrete surface due to traffic.

\* The guarantee described here does not refer to the structural part of concrete; it refers only to surface protection.

### STORAGE

**VALIDITY:** Indeterminate

**CAUTION:** Avoid contact of Reisformula® with glass

**CLEANING:** All equipment need to be clean with abundant water, after use.