

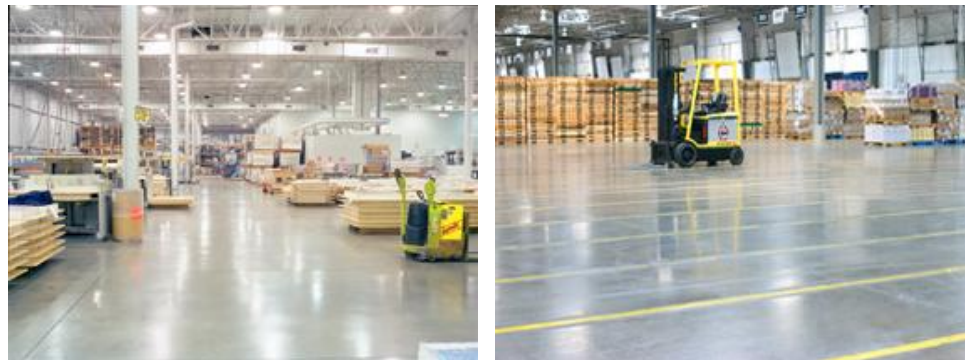
## IDEAL HARD

**Silicate densifier, hardener and sealer for concrete surfaces.**

### DESCRIPTION

IDEAL HARD is a proprietary, colourless chemical solution that increases the wear surface strength of concrete floors that are subjected to pedestrian and vehicle traffic. IDEAL HARD deeply penetrates concrete surfaces to seal, harden, increase density and waterproof them. IDEAL HARD floors last longer, cost less to maintain, are safe to use, and are guaranteed to resist dusting for years to come. It is VOC-compliant, odourless, environmentally safe and simple to apply.

Ideal Hard **increases impact and abrasion resistance of +127%** compared to untreated concrete surface



Through a chemical-ion exchange process, IDEAL HARD develops internal bonds which densify the concrete substrate into a hardened, chemically-cured, homogeneous concrete mass, which resists abrasion, oil contamination and water. This chemical-ion exchange process begins immediately after treatment and continues throughout the initial six months following application.

**IDEAL HARD is safe to use.** Its odourless formula allows its use in employee-occupied areas without concern. It can be applied in close proximity to foodstuffs without fear of contamination. The deeply penetrating chemical action leaves no film and will not alter the natural non-slip texture of the concrete floor.



IDEAL HARD treated floors provide a significant **saving in maintenance costs** compared to conventional acrylic, epoxy and urethane sealers. IDEAL HARD will not yellow, discolour, chip, peel or show unsightly wear patterns with use. IDEAL HARD will not tyre mark and in fact, the more an IDEAL HARD floor is used and matures, the better it generally looks.

## BENEFITS

### IMMEDIATE BENEFITS

It helps concrete to mature in the proper way

It reduces micro-pits

Prevents the surface getting dirty during the next working phases.

Floors are ready to use after the application of Ideal Hard.

### FUTURE BENEFITS

It increases impact and abrasion resistance

It reduces oil and water penetration

Dust protection to high traffic

Floors are easy to clean

Ideal hard floors will polish over time with regular easy maintenance

## USES AND REFERENCES

IDEAL HARD is recommended for use in areas subjected to medium-to-heavy fork lift and tow motor traffic: warehouses, distribution centres, manufacturing plants, textile mills, bottling plants, coolers and freezers, food processing plants, canning factories, breweries, bakeries, meat and poultry processing plants, service garages, grocery stores, discount retail stores, hub transfer facilities. Other uses include concrete floors subjected to heavy pedestrian traffic, such as: civic centres, sports arenas, stadiums, hospitals, airports, museums, schools and grocery stores; as well as areas subjected to mild chemical attack: parking decks, silage storage silos, sewage treatment plants, dairies, fish processing plants, refineries and water treatment plants.

### References:

BOEING,  
CATERPILLAR,  
CHRYSLER,  
FORD,  
MERCEDES,  
COCA COLA,  
PEPSI-COLA,  
FLEMING FOODS,  
DELTA AIRLINES,  
FEDERAL EXPRESS  
AEREOPORTI DI MIAMI e SAN FRANCISCO  
DHL, ROADWAY EXPRESS  
K-MART, XEROX DE BRASIL  
LEVI'S, WRANGLER JEANS  
HP, INTEL, KODAK  
ESSELUNGA,  
GOLDEN LADY,  
IKEA,  
BRETON spa,



## TECHNICAL DATA

Solids:	13%
Type	Alkaline Siliconates
Flash Point, °F	None
Specific Gravity	1.15±.02
VOC (gm/litre):	0.0
Reduction of Wear	- 56%
Abrasion Resistance, ASTM-C779 Increase of abrasion resistance	
Skid Resistance, ASTM-C-303	Good
Odour:	None

## HOW IT WORKS

The Near-surface wear zone is the point of maximum wear, aprox 3 - 4 mm at the very top of the concrete. Made of a high percentage of cement paste, this critical area is most vulnerable to wear and the microscopic voids known as **micropits**.



Hydrated cement paste contains microscopic particles of calcium hydroxide, which are by-products of the hydration process. Calcium hydroxide is a comparatively soft material which can be eroded away very quickly by a modest amount of abrasion, leaving microscopic pits (micro-pits) in the surface of the concrete. The edges of these micro-pits are very susceptible to abrasion, in much the same way as a hole in the road. The hole may start small but soon becomes larger as its edges wear away.

Ideal Hard converts the soft calcium hydroxide particles into very hard and dense calcium silicate hydrate. This is the same crystalline structure that is formed when cement hydrates. When calcium hydroxide is transformed into calcium silicate hydrate, the cement paste becomes more uniformly hard. Upon exposure to wear the concrete surface no longer micropits but polishes to a noticeable sheen. By using Ideal Hard to densify the cement paste more calcium silicate hydrate is produced, giving the cement paste greater aggregate holding power.

## APPLICATION ON NEW CONCRETE

### New Concrete Surface Preparation

After final troweling and the surface water glaze has dissipated, moist cure concrete or apply clear, non-residual curing compound. Plastic sheeting may be used, but care should be taken to prevent objectionable stains. Allow concrete to cure for a minimum of seven (7) days. Clean the concrete of any dirt, debris or residual curing compound before installing IDEAL HARD.

**Application:**

Apply, directly from container, one undiluted, uniform coat at the rate of 5m<sup>2</sup>/L (200 g/m<sup>2</sup>). Aggressively scrub into surfaces with a mechanical scrubber or bristle broom. This scrubbing will help achieve maximum penetration and will begin to polish hard-trowelled floors.

Keep surfaces wet with IDEAL HARD for a minimum of 30 minutes and continue scrubbing and/or brooming. When product begins to thicken, sprinkle with water and scrub another 5 to 15 minutes. At this stage, thoroughly flush excess IDEAL HARD with clean water and remove all solution from the floor by squeegee and wet vacuum. This residue solution is non-toxic and can be emptied into a sanitary sewer.

**Warning**

Failure to thoroughly wash and remove all excess material from floor surfaces may result in unsightly white stains.

Normally, one coat of IDEAL HARD is all that is required. However, under certain conditions an application of two coats is recommended; namely, on porous, rough-textured, or broom finished surfaces; concrete that has been poorly finished or is under-strength; and in conditions where maximum protection from oil and other contaminate penetration is desired. The second application can be installed 2-4 hours following the first coat, or anytime thereafter. Floors are immediately available for occupancy after removal of the rinse residue.

**APPLICATION ON OLD EXISTING CONCRETE****Old (Existing) Concrete Surfaces Preparation**

Surfaces must be clean and structurally sound. Remove all residue, oil, sealers, contaminants, and laitance in order to ensure maximum penetration and chemical reaction. Repair all holes, cracks and deteriorated areas. Avoid acid etching and mechanical abrasion if possible. Environmentally safe SGRASSANTE is recommended for heavy-duty cleaning and for the removal of resin-based and acrylic curing compound products and unsightly black tyre rubber markings.

**Note:** IDEAL HARD is a colourless solution that will not alter the appearance of the concrete surfaces. It will, therefore, not hide serious staining or excessive wear.

**Application**

Follow the same application procedures as found under New Concrete. Depending on surface porosity, application rate may range from 3-5m<sup>2</sup>/L (200 g/m<sup>2</sup>). In addition, a second coat may be required in some situations due to porosity or extreme dusting.

Application Temperature Limitations: 5°C to 40°C.

Drying Time: 2 to 4 hours.

**PRECAUTIONS**

In hot weather, pre-dampen surfaces with water to cool. After standing water has dissipated, apply IDEAL HARD. Immediately wash off over-spray from glass, aluminium, or highly-polished surfaces with water to avoid etching of surfaces. Flush equipment with water to clean.

Do not allow IDEAL HARD to dry before flushing excess from surfaces.

## PACKAGING AND STORAGE

IDEAL HARD is readily available in 25 L, 208 L and 1.000 L containers.

## MAINTENANCE

Good housekeeping practices, such as regular and frequent mechanical scrubbing, washing, wet mopping and sweeping, are to be followed in order to maximise densification and to make sure it results in the stated life expectancy of IDEAL HARD on treated surfaces.

### IMPORTANT:

All information contained in this data-sheet is based on the best practical and laboratory expertise. The customer is responsible for checking the product is suitable for use. The producer does not accept any responsibility arising from wrong applications. We recommend testing the products on small surfaces before use. This data-sheet replaces and annuls the previous ones. Data might be changed anytime. We also remind you that Ideal Work products are for professional use and Ideal Work provides customers with training opportunities upon request. Whoever uses these products without authorisation, shall take full personal responsibility and at their own risk.  
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