AKSID
CONSULTANCY

HEAVY DUTY

INDUSTRIAL FLOOR SOLUTION

AKSID
BUILDING THE NATION

Sika
BUILDING TRUST




AKSID
ENGINEERING DEPARTMENT

AKSID Corporation Limited, an industry leader in construction, is headquartered in Dhaka, Bangladesh and has been developing the construction sector for over 10 years. Our adaptable, professional teams bring added value to our clients' businesses through our expertise and knowledge.

Highlights:

200+ Employees.
Country Distributor of Sika, World's Largest Construction Chemical Company.
Handling Infrastructure and Mega Projects all over Bangladesh.
Clients include Japanese, Thai, Russian, Korean and the largest groups of companies of Bangladesh.

AKSID provides construction solutions and services to all types - large scale infrastructure to industrial developments to local level construction at site. We have professional skilled manpower, tools, and solutions to help all levels of construction all over Bangladesh.

AKSID is the Country Distributor of Sika, a Switzerland based construction chemical company and the largest manufacturer of construction chemicals. Sika is world renowned and has been producing construction solutions since 1912. Through a successful partnership through Sika, AKSID has grown to be the largest supplier of construction chemicals in the entire country.

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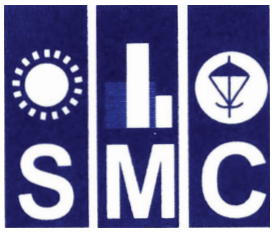
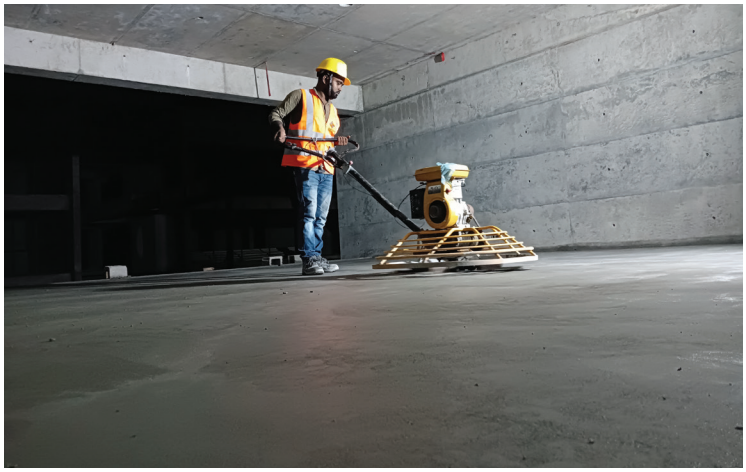
OUR VALUABLE CLIENTS





WHAT IS FLOOR HARDENER

A liquid or dry mixture of chemicals, minerals, metals, and/or other synthetic materials which produces a dense wear resistant and/or nonslip and/or colored surface on concrete floors

A surface hardener is a formulated chemical compound (silicate liquid) that is used after pouring concrete to increase the concrete's hardness, reduce the concrete's permeability and to dustproof the concrete as it solidifies.

WHY NEED FLOOR HARDENER

Dry shake aggregate floor hardeners are commonly applied to the surface of freshly placed concrete to improve wear resistance and occasionally to color a concrete surface.

There are numerous things to consider before using a concrete hardener. If the concrete floor is being used in an industrial setting or warehouse building, or even a heavy traffic retail environment, a hardener is recommended. When flooring works hard, there is a substantial risk of damage. This occurs when equipment and vehicular wheels come in contact with concrete flooring, pedestrian traffic is constant, or a combination of the two. Different concrete hardeners are specified based on light, medium, or heavy-duty usage.

At a **Glance**

01 - 02

Sika® Chapdur

Non-metallic Mineral Dry Shake Floor Hardener

03 - 04

Sikafloor® CureHard-24

Sodium silicate based transparent surface hardener, dust proofer, sealing and curing compound for concrete.

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SIKA® CHAPDUR

Sika® Chapdur (IN) is a one part, preblended, coloured mineral dry shake hardener for concrete comprising of cement, specially selected natural mineral aggregates, admixtures and pigments. Sika® Chapdur (IN) provides a extremely hard wearing and abrasion resistant topping for monolithic floors. When sprinkled and trowelled into fresh wet concrete floors, it forms a coloured, dense and wear resistant smooth surface.

WORKABLE AREA

- Warehouses
- Factories
- Shopping malls
- Public areas
- Restaurants
- Museums
- Parking lots
- Garages and Service stations

ADVANTAGES

- Ready to use
- Good wear resistance
- High impact resistance
- Cost effective surface hardener
- Makes floor dust proof
- Non metallic and rust free
- Easy to clean
- Increased resistance to oils and grease
- Quality assured factory blending
- Suppresses superficial fibres in concrete

TECHNICAL INFORMATION

Abrasion Resistance ~1.70 mm wear loss (IS:1237)

Surface Hardness Between 8 and 9 (Moh's scale) (IS:13630 Part 13)

Compressive Strength ~70 N/mm2 (IS:4031 Part 6)

Consumption

Application	Product	Consumption
Heavy duty	Sika® Chapdur (IN)	5.5 to 6.0 kg/m^2
Medium duty	Sika® Chapdur (IN)	4.5 to 6.0 kg/m^2
Light duty	Sika® Chapdur (IN)	3.5 to 6.0 kg/m^2

Layer Thickness 2.5 to 3.0 mm at dosage of ~ 5.0 kg/m^2

Applied Product Ready For Use

Foot Traffic	Fully Serviceable
~72 hours	~7 days

The above values are at substrate temperature of +27 °C and dependent upon the concrete reaching its design strength for serviceability and will be affected by changing ambient conditions, particularly temperature and relative humidity.

APPLICATION PROCEDURE

Broad casting of Sika® Chapdur (IN) premix: The concrete slab is ready for the Sika® Chapdur (IN) cement coating when a thumb pressed hard onto the surface only leaves a print of about 3-5 mm depth. Sprinkle 60% of Sika® Chapdur (IN) onto the screed concrete evenly by hand or with suitable device.

Compaction: Wait until the Sika® Chapdur (IN) has been evenly moistened by the water in the concrete, Use a low rpm mechanical trowel, held perfectly flat.

Note : *If parts of the surface come loose or if the laitance rises, this means the concrete is still too fresh.*

Smoothing: As soon as the plasticity or initial set allows, perform preliminary smoothing with the same machine running at low speed but equipped with metal smoothing blades, set at minimum angle. Sprinkle remaining 40% of Sika® Chapdur (IN) onto the screed concrete evenly by hand or with suitable device and 2nd stage of compaction has to done. Any final smoothing required should be performed later with the machine running at high speed.

SIKAFLOOR® CUREHARD-24

Sodium silicate based transparent surface hardener, dust proofer, sealing and curing compound for concrete.

Sikafloor® CureHard-24 is a high solids, one part, clear sodium silicate based liquid to cure, harden and seal fresh or hardened concrete.

WORKABLE AREA

- Warehouses
- Factories
- Shopping malls
- Public areas
- Restaurants
- Museums
- Service stations
- Corporate Office
- Hospital

ADVANTAGES

- Ready to use
- Easy to apply
- Improved chemical and abrasion resistance compared to untreated concrete
- Reduced dusting of concrete floors
- Slightly reduces loss of water of new concrete while setting
- Improves cleanability
- Non-yellowing
- Good penetration
- Solvent free
- Colourless and odourless

TECHNICAL INFORMATION

Chemical Base	Sodium silicate
Packaging	10 kg x 1 container
Appearance	Clear liquid
Density	~1.15 kg/l (at +27 °C)
Abrasion Resistance	50 mg or 81.5 % increase in abrasion resistance compared to untreated sample (C(0,70) concrete according to EN 1766) (Taber Abraser, H-22 Wheel, 1000 g / 1000 cycles) (EN 5740-1)
Penetration Depth	5.5 mm (Sample (MC(0,70) concrete according to EN 1766) (EN 1504-2)
Water Absorption	w = 0.03 kg/m2×h0.5 (on a substrate w > 1 kg/m2 h0.5) (EN 1062-3)
Consumption	0.15–0.25 kg/m2/coat. This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variations in level and wastage etc.
Drying Time	The surface is touch-dry after 2 hours at +20 °C. Maximum sealing and hardening effect achieved after ~7 days at +20 °C.

APPLICATION PROCEDURE

Fresh Concrete

Apply in a continuous film using a high volume low pressure spray unit as soon as the surface is firm enough to walk on and in sufficient quantity to keep the surface damp for at least 30 minutes. After about 30 to 45 minutes, the material begins to gel and becomes slippery. Wet the material slightly with a water spray to reduce slipperiness and rework into the surface for 10 to 20 minutes with a soft bristle broom or floor-scrubbing machine. After about 20 minutes, the material will return to a gel. Rinse the floor and remove any excess material using a squeegee, wet vacuum or mop.

Hardened Concrete

Apply in a continuous film using a high volume low pressure spray unit. To ensure maximum penetration, scrub material into the surface with a soft bristle broom or floor-scrubbing machine (min. 30 minutes), until the material begins to gel and becomes slippery. Wet the material slightly with a water spray and rework it into the surface for another 10 to 20 minutes. After this process, rinse the floor and remove any excess material using a squeegee, wet vacuum or mop. On porous, rough-textured or broom-finished surfaces, a second coat may be required. For large surfaces and higher placing rates, mechanical equipment such as ride-on cleaning machines can be Product Data Sheet Sikafloor® CureHard-24 September 2019, Version 01.02 020815010110000001 also used to place, brush in and remove the excess material from the surface. Thanks to proceeding chemical reaction the rate of water-tightness increases gradually, whereas maximum sealing and hardening effect occurs earliest after 7 days. Gloss of the surface gradually increases during 30 to 90 days depending upon cleaning frequency. The product can be used in combination with Sikafloor®-CureHard GL.

FAQ'S

When should I use the dry shake floor hardener?
Dry shake aggregate floor hardeners are commonly applied to the surface of freshly placed concrete to improve wear resistance and occasionally to color a concrete surface.

For what kind of duty do I need to use a dry shake floor hardener?
For light to heavy duty, you need to use a dry shake floor hardener. Because, it protects your floor against damage caused by impact, punching, scraping, and abrasion.

Can all concrete floor be polished?
Almost all concrete floor made out of stone chips, whether new or old, can be polished. However, there are some exceptions, for example with new floors no special mix design is required to achieve good results – although the floor should be in place at least 21 days before polishing begins to ensure adequate curing.

How long will a polished concrete floor last?
It depends on the strength of the existing concrete. If cleaning and wiping are done properly and regularly, it will last till the expected lifetime of existing concrete.

Is all concrete polishing the same?
No, definitely not. Good repair chemical compound, good surface hardener, machinery, techniques and a wealth of knowledge is the key to an unbeatable high-end finish. If you want your floor to carry its shine year after year then it is important that steps are not skipped in the polishing process.

Does your floor grinding and polishing solution include any additional benefits for concrete floor?
Yes, our floor grinding and polishing solution include a modified silicate-based transparent surface hardener, dust proofer, sealing, and curing compound for concrete. As a result, you get a more hardened floor surface after polishing.

For what kind of duty do I need floor polishing?
Horizontal old or new concrete surfaces, where a hard surface with light to moderate abrasion resistance is required e.g., warehouses, industrial plants, stores, shopping malls, parking structures, service stations, hangars etc.

OUR OTHER SOLTIONS

Concrete Repair

Concrete Injection

Grinding & Polishing

Grouting

PU Flooring

Roofing

Waterproofing

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