



## ARMADILLO K+

### DESCRIPTION

ARMADILLO K+ is a proprietary blend of silica (Si) polymers which penetrate concrete surfaces providing an increase in abrasion resistance and a reduction in the surface absorption of liquids.

The silicate and silicate compounds present in ARMADILLO K+ each play a unique role in densifying and sealing concrete.

The silicate in ARMADILLO K+ chemically reacts with calcium hydroxide (also known as portlandite) in the surface to produce calcium silicate hydrate (CSH) – the primary strength-providing portion of concrete paste.

Portlandite is a soft, porous mineral that is subject to carbonation and chemical attack, so replacing it with the much stronger CSH is a major benefit of ARMADILLO K+.

The silicate in ARMADILLO K+ also reacts with the concrete to form a hydrophobic polymer within the pores and on the concrete surface.

The ultimate result is a concrete floor that is exceptionally dense and liquid-repellent, which equals long-lasting protection and durability.

ARMADILLO K+ is water based. It generally dries tack free in 2 to 4 hours at 21C @ 50% RH.

### PRIMARY APPLICATIONS

- Interior or exterior
- Warehouse floors
- Commercial floors
- Manufacturing plants
- Residential garages and basements
- Distribution centers

### ADVANTAGES OF USE

- Reduces porosity and increases hardness of the concrete surface.
- Combines with the concrete becoming part of the matrix and lasts the lifetime of the substrate.
- VOC Compliance with GREEN STAR - OFFICE DESIGN V3 IEQ-13.
- Resists penetration of oil and many chemicals.
- Reduces the ingress of carbon dioxide and resulting carbonation (degradation of the substrate).
- Minimizes tyre marks and enables them to be more easily removed.
- Equipment can be cleaned with water.
- Can be applied to fresh, new or existing concrete.
- Low sheen enhances the appearance of concrete surface.
- Will not blush.
- Buffable.
- Compatible with bond breakers for tilt-up projects.

### TECHNICAL INFORMATION

Typical Performance

Drying Time:

Light Foot Traffic.....4-6 hours

Wheel Traffic.....24 hours

Shelf Life: 2 years in original, unopened package.

### CHEMICAL HOUSE

#### Headquarters

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## ARMADILLO K+

### APPEARANCE

ARMADILLO K+ is a clear liquid which dries transparent.

After placing, the color of the concrete may initially appear darker than the surrounding concrete.

As the sealer cures and dries out, the treated concrete will gradually increase in tightness with a subsequent increase in gloss.

If additional immediate gloss is desired, the floor may be dry buffed with a buffing pad after the sealer has cured for 24 hours. See attached image #1

### COVERAGE

One litre of ARMADILLO K+ will cover 4-5 m<sup>2</sup> /litre) of steel troweled surface depending on the porosity of that surface.

When ARMADILLO K+ is used as final treatment on a metallic or mineral aggregate hardened surface, the coverage may be greater than indicated above.

For other concrete floors coverage is still dependent upon the final surface texture.

### NEW CONCRETE

Surface Preparation - Cure the concrete using by Surface Cure R from CHEMICAL HOUSE Pty Ltd a curing compound complying with AS3799.

For fast track projects, new concrete should cure seven (7) days minimum and adherence to Surface Cure R data sheet for removal.

No residue of Surface Cure R should be present as its presence will reduce the effectiveness of the treatment.

Allow concrete to air dry a minimum of 24 hours prior to application of ARMADILLO K+.

Insufficient drying of the concrete will prevent full penetration of ARMADILLO K+, reducing its effectiveness.

### APPLICATION (NEW SLAB)

Apply ARMADILLO K+ at the suggested rate (5m<sup>2</sup>/L) by broom or low-pressure sprayer.

Keep the entire surface of the concrete wet with ARMADILLO K+ for a minimum of 30 minutes.

The material may be broomed around on the surface to ensure good coverage.

As the ARMADILLO K+ begins to thicken and gel (but no more than 60 minutes after initial application) broom and squeegee the excess material on to the adjacent floor area next to be treated.

If necessary, lightly sprinkle water on the surface to aid in removal.

Continue until the entire floor has been treated.

Vacuum or squeegee to remove any excess material.

When the owner is ready to take occupancy of the building, but before equipment is placed on the floor, an additional application of ARMADILLO K+ may be applied to increase the chemical and wear resistance of the concrete surface.

Soft-Cut Saw Joints-If the floor joints will be cut using the Soft-Cut saw method, treat the floor surface with ARMADILLO K+ (including flooding the joints) after the saw cutting operation.

The applicator should be sure the excess cement dust remaining after saw cutting has been removed from the concrete surface prior to application of ARMADILLO K+.

After the slab has cured the appropriate number of days, the joints may then be cleaned a final time and the joint filler applied.

### EXISTING CONCRETE

Surface Preparation-The concrete surface must be clean, dry, and free of any contaminant or coating.

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### APPLICATION (EXISTING SLAB)

For best results ARMADILLO K+ should be applied and scrubbed in using mechanical scrubbers.

Select the section of floor for the initial application.

Apply ARMADILLO K+ to the concrete surface in a continuous operation at a rate of approximately 5m<sup>2</sup> /litre) on steel troweled surfaces.

The liquid should be scrubbed into the surface with a mechanical scrubber.

For smaller areas and along the perimeter of the slab, a bristle broom may be used.

The scrubbing action assists ARMADILLO K+ in penetrating the surface.

Keep the surface wet with ARMADILLO K+ at all times during the application process.

When the product thickens (but no more than 60 minutes after initial application) the surface should then be squeegeed on to the adjacent floor area next to be treated.

Continue until the entire floor area has been treated. Vacuum to remove all excess liquid.

The surface may be flushed with water to aid in removal of the excess material.

### CLEAN-UP

Clean brooms, tools and all equipment and sprayers with potable water immediately after use.

The residue from application and clean-up process is non-toxic.

### LIMITATIONS

Allow the product to dry a minimum of 4-6 hours before exposure to traffic.

Protect ARMADILLO K+ from freezing.

In the event of freezing, thaw and stir or agitate before using.

Do not leave any ARMADILLO K+ residue on the treated concrete surface.

Excess hardened material must be removed with a grinder.

ARMADILLO K+ is not recommended for use as a curing compound.

It does not meet the requirements of ASTM C-309, ASTM C-1315 or AS3799.

Protect metals, glass, wood, paint or brick from contact with ARMADILLO K+ .

if accidentally over sprayed, wash surface with potable water IMMEDIATELY.

### FIRST AID, SAFETY & STORAGE

Refer to Material Safety Data sheet.

### PACKS

5L,20L, 200L, 1000L

### ARMADILLO K+ - PDS July 2020

This Product Data Sheet (PDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this PDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Chemical House does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether in accordance with any advice, specification, recommendation, or information given by it.

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