PRODUCT DESCRIPTION

SODIUM DENSIFIER 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 compounds present in SODIUM DENSIFIER each play a unique role in densifying concrete.

The silicates in SODIUM DENSIFIER chemically react 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 SODIUM DENSIFIER.

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

PRIMARY APPLICATIONS

- Dustproofing
- Repair of rain damaged surfaces
- Repair/reinstatement of weak mortar
- Repair/restoration old, carbonated concrete
- Interior / exterior
- Warehouse /Commercial floors
- Manufacturing plants
- Residential garages and basements

TYPICAL APPLICATIONS

- Industrial and warehouse floors
- Polished concrete systems
- Commercial and retail flooring
- Car parks and trafficable areas
- Precast and tilt-up concrete
- Infrastructure and civil concrete
- Basements and below-grade structures
- Concrete slabs (new and existing)

APPLICATION SPECIFICATIONS FOR SODIUM DENSIFIER

INSTRUCTIONS FOR FRESHLY FINISHED CONCRETE

A. SURFACE PREPARATION

Freshly finished concrete surfaces require no surface preparation if SODIUM DENSIFIER is to be applied immediately after the finishing operation as a curing agent.

On areas where forms are recently removed, all form oil and breaking compound residue must be removed so as not to inhibit the penetration of the SODIUM DENSIFIER into the surface.

B. APPLICATION INSTRUCTIONS

Step 1. Immediately following the trowelling operation, and as soon as the slab is safe to walk on, saturate the surface with SODIUM DENSIFIER at approximately 4.5-5m2/L using a low-pressure, high-volume sprayer.

SODIUM DENSIFIER may also be applied by pouring directly on the surface and spreading evenly with soft-bristled broom.

Note: Sodium densifier is a penetrant, not a membrane.

Enough material needs to be on the surface to allow SODIUM DENSIFIER to thoroughly soak in.

As a guideline, there should be enough sodium densifier on the floor to "fill in" a footprint within several seconds of taking a step.

This is often referred to as a "flood coat" or "wet coat." once a wet coat has been achieved, sodium densifier into the concrete surface with soft-bristled brooms.

This step breaks surface tension and aids penetration.

Keep the surface wet with SODIUM DENSIFIER for a minimum of 30 minutes and then wait for the sodium densifier to become slippery and gel-like under foot.

In extremely cool, windless conditions, SODIUM DENSIFIER can take up to an hour or longer to become slippery.

In extremely hot conditions the sodium densifier may begin to become slippery before the full thirty-minute soak in period.

Additional SODIUM DENSIFIER must be applied to the concrete to keep all areas of the concrete surface wet for at least fifteen to twenty minutes before becoming slippery.

Note: No spot or area on the slab should be allowed to become dry during the soak in period.

It is best to avoid dry areas by either brooming excess SODIUM DENSIFIER over the more absorbent spots, or by applying more densifier.

Pay attention to porous areas and slab edges, as these tend to dry out more quickly.

Step 2. Immediately after SODIUM DENSIFIER becomes slippery, lightly mist the surface with water.

This can be done either with a low-pressure sprayer or with a hose and nozzle (nozzle should be adjusted to create a mist).

This step will resolubilise SODIUM DENSIFIER so that it is no longer slippery or gel-like.

Agitate with a broom to aid the penetration, wait for the surface to become slippery or gel-like a second time.

Step 3. At this point, thoroughly flush the surface with water.

During the flushing process, the floor should be agitated with brooms to help loosen and remove excess SODIUM DENSIFIER from the surface.

Step 4. Thoroughly squeegee the slab dry by pushing the water ahead of you off the slab edge.

At this point, the floor should look like bare concrete with nothing on it.

Note: During the squeegee process, there may be some slippery patches.

This is an indication that excess SODIUM DENSIFIER is still on the surface.

These areas should be re-flushed and squeegeed again until the entire surface is dry.

NOTES

1) In extreme or unusual weather conditions, hot, cold, windy, or otherwise, please consult with our local technical representative.

2) Saw cutting may be done before or after SODIUM DENSIFIER is applied, depending on the immediate need for curing.

It is critical in either case that the dust or slurry from cutting be immediately and thoroughly removed from the slab.

3) On concrete that is abnormally porous or soft, additional applications of the SODIUM DENSIFIER may be required.

This also applies to surfaces with open finishes, such as broom finished or scarified floors.

II. INSTRUCTIONS FOR EXTERIOR CONCRETE

Step 1. Saturate the surface with SODIUM DENSIFIER using a low-pressure, high-volume sprayer.

Keep the entire surface glistening wet for 30 minutes.

Step 2. After the 30-minute application period, use a broom or mop to remove any puddles or concentrations of any residue of the SODIUM DENSIFIER from the slab.

TIP: A wide, fine bristle push broom works well to disperse the SODIUM DENSIFIER on textured surfaces.

III. INSTRUCTIONS FOR EXISTING CONCRETE

It is not recommended that SODIUM DENSIFIER be applied to existing concrete without first consulting with a technical representative.

Existing floors require entirely different procedures than do freshly placed floors.

It is for this reason that qualified technicians be consulted before applying SODIUM DENSIFIER to any existing surface.

In some instances, the floor may need to be stripped.

In other cases, it may simply need to be thoroughly cleaned, in other cases neutralized.

The proper regimen for floor preparation can only be undertaken by qualified personnel.

IV. INSTRUCTIONS FOR TILT-WALL APPLICATION

Tilt-wall application when the SODIUM DENSIFIER is used to cure the casting bed.

When the SODIUM DENSIFIER is used to cure the casting bed, follow above instructions for FRESHLY FINISHED CONCRETE.

It is essential that particular care be given to the following guidelines:

1) Ensure that all residue of the SODIUM DENSIFIER has been removed from the surface of the casting bed during the flush and squeegee procedure.

If certain areas are still slick during the squeegee operation, it is necessary to re-flush and re-squeegee until entire slab free of any residue of the SODIUM DENSIFIER.

The concrete should appear as though there is nothing on it.

2) Follow the bond-breaker manufacturer's application instructions.

Also, follow manufacturer's prescribed testing procedures for ensuring that enough bond-breaker has been applied for a sufficient period.

Tilt-wall application when SODIUM DENSIFIER is not used to cure the casting bed.

It is critical that any substance used previously to cure the slab be completely stripped and/or removed from the surface of the concrete prior to the application.

Bond breakers and/or curing agents, if left on the floor surface, will inhibit the penetration of the SODIUM DENSIFIER and cause whiting.

These substances are designed to dissipate from the floor surface but may not do so completely. The SODIUM DENSIFIER must be applied on clean, bare concrete.

Qualified floor technicians must do floor preparation.

V. VERTICAL SURFACE APPLICATION

Step 1. Apply the SODIUM DENSIFIER to the surface of the wall with a low-pressure sprayer or roller, starting at the top and working your way along the wall.

Apply sufficient material to thoroughly wet the surface without allowing excessive amounts to run down the wall.

Step 2. As you work your way along the wall, if any previously sprayed areas appear to be fully absorbing the SODIUM DENSIFIER, re-spray those areas so that the entire wall is kept damp for 30 minutes.

Step 3. Allow the treated surface to dry.

If the treated surface is to be coated or painted or the natural appearance is to be preserved, thoroughly flush the vertical surface with water 10 minutes after the initial 30-minute application period.

VI. GENERAL CAUTIONS FOR SODIUM DENSIFIER APPLICATIONS

Apply with low-pressure sprayer only.

Do not use airless sprayers, as they atomize the material, allowing inhalation.

May cause eye and mucous membrane damage.

Avoid contact with eyes and mucous membranes.

If contact occurs, flush with water for 15 minutes.

If SWALLOWED, do not induce vomiting.

Drink large amounts of milk or water. CONSULT A PHYSICIAN IMMEDIATELY.

Surfaces treated with the SODIUM DENSIFIER temporarily become slippery during application.

Exercise care and caution to avoid falls.

Avoid contact with glass, aluminium, or other glazed or finished surfaces.

Where contact occurs, immediately wipe with a damp cloth or flush with water.

When applying near windows, mask the glass.

Protect from freezing. If frozen, thaw and agitate before using. Do not use on cinder block or other highly porous material, which contains holes or air pockets.

When used near blacktop, the SODIUM DENSIFIER must be flushed away with water to eliminate any white discoloration that may appear when surface is dry.

TECHNICAL DATA

COVERAGE	5m2 per litre (0.2L/m2) as supplied
CLEAN UP	Water cleanup
FIRST AID, SAFETY & STORAGE	Refer to Material Safety Data sheet.
PACKS	5l, 20L, 200L, 1000 (IBC)

CHEMICAL HOUSE
9 Production Avenue, Molendinar
Queensland, 4214 Australia
Ph: +61 7 5594 0344