

# SILPRO

## C-21 ALL ACRYLIC

Admix/Internal Bonding Agent — Primer  
Improves Adhesion and Abrasion Resistance  
Increases Tensile and Flexural Strengths  
Outdoors and Indoors

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Silpro C-21 All Acrylic is a 100% acrylic latex that can be used as an admix/internal bonding agent or primer.

### APPLICATIONS AS AN ADMIX/INTERNAL BONDING AGENT CEMENT MODIFIER

C-21 All Acrylic is a water-based, cement modifier admix/internal bonding agent that enhances the performance properties of cementitious mortars and coatings. And when you add it to the mix, it forms a plastic matrix, or film, that helps retain water and promotes cement hydration, resulting in improved compression (crushing) strength without wet curing.

It gives Portland cement and gypsum mixes greatly improved tensile and flexural strength, flexibility, and maximum adhesion to old or new concrete surfaces for patching, grouting, or coating. C-21 All Acrylic increases the abrasion, chemical, and water resistance of these mixes making them ideal for application on floors, ramps, sidewalks, masonry walls, etc. It is classified as a non-reemulsifiable bonding admixture.

C-21 All Acrylic is an essential component of Silpro Masco, Fasco and Mascrete. It may also be used in Silpro California Stucco, Concrete Finish, Seal Cote and Easy Patch. Please see individual product data sheets.

### C-21 ALL ACRYLIC MODIFIED CEMENT MIXES:

- Bond to old and new concrete, brick, concrete block, wood, stone, tile, and clean steel
- Thin overlays to repair, pitch, or level existing floors
- Bedding mortars for tile, flagstone, brick, etc.
- Pointing mortars
- Slurries for anti-rust sealing and cold joint bondings
- Tank, pipe and pool linings
- Terrazzo
- Treads and landings on steel stairs

### ADVANTAGES — C-21 MODIFIED MORTARS AND COATINGS

- Increased adhesive bond strength
- Improved flexural and tensile strengths
- Improved abrasion resistance
- Reduced shrinkage
- Improved crack and chip resistance
- Improved water resistance
- Can be totally submerged after curing
- Resists staining and discoloration
- Resists lifting, spalling or crumbling after repeated freeze-thaw cycles
- Does not yellow or break down in sunlight
- Does not require damp curing

### TEST DATA — ADMIX

#### Standard mortar mix (3 sand: 1 cement)

Test	Water only damp cured	C-21 air cured
Compression	ASTM C-109 4690 psi	4820 psi
Tensile	ASTM C-190 490 psi	795 psi
Flexural	ASTM C-348 540 psi	1110 psi
Weight loss by abrasion (Taber Abrader)	6.8%	2.0%

#### Bonding Agent

C-21 All Acrylic is recommended as a bonding agent and meets the requirements of ASTM C-1059 when tested according to ASTM C-1042.

	Type I Redispersible	Type II Non-redispersible
C-21 All Acrylic	1050 psi	1970 psi
Required by ASTM C-1059	400 minimum	1250 minimum

### SURFACE PREPARATION — ADMIX

The surface to be coated must be clean and sound. Remove all curing compounds, waxes, oils, paints, grease, form-release agents, dirt, mildew, water-soluble adhesives, friable materials, deteriorating concrete, loose material, and all foreign matter.

On horizontal surfaces, where structural overlays or repairs are to be made, mechanically clean by either shot-blasting or scarifying. The surface to be coated may be dry or damp but must be free of flowing or standing water.

**Cutback and Adhesives:** For thin-layer patching or skim coating scrape off the adhesives and wet scrape cutback adhesives leaving only a residue down in the pores of the floor. For deep repairs mechanically remove all cutback and adhesives.

To confirm the suitability of the surface for adhesion of the coating, and that the final appearance and function will be as the owner, architect, and contractor expect, install a 10' x 10' test patch at the maximum designed thickness anticipated on the project and subject it to anticipated service conditions before beginning the entire job.

### MIXING/APPLYING — ADMIX

Stir C-21 All Acrylic well, or turn container over twice gently but do not shake vigorously. Blend the C-21 All Acrylic and clean, potable water (where applicable) together first. Place some of this mixing solution in a clean container, add the dry mix, then add the rest of the mixing solution. Mix thoroughly by hand or with a power mixer, but only until material is uniform and free of lumps. Do not overmix. Too much mixing will entrap air reducing strength and adhesion. Place immediately. Please refer to data sheets for Silpro product mixing instructions.

For Customer Service, Call Silpro at 1-800-343-1501

## MIXING/APPLYING — ADMIX (CONT.)

**Clean Up:** Wash hands and equipment with water immediately after use. Remove any excess mix or liquid from surfaces adjacent to work area by wiping with a damp towel and then a clean, dry towel.

### MIXING SOLUTION PROPORTIONS

For cement-sand mortars and coatings	Use one gallon of <b>C-21</b> for each 20 pounds of cement in the mix.
For <b>Masco, Fasco, Mascrete</b> , floor patching and resurfacing, or anywhere maximum bond is needed	Use full strength. Do not dilute.
For floor overlays	Use undiluted <b>C-21</b> .
For <b>Concrete Finish, California Stucco</b> , mortars, trowel-applied wall coatings, vertical and overhead surfaces:	
Over poured concrete, other smooth surfaces	1 part <b>C-21</b> : 1 part water
Over block, brick, cement plaster	1 part <b>C-21</b> : 1 part water
For <b>Seal Cote</b> , other brush-applied coatings	1 part <b>C-21</b> : 3 parts water

## CURING — ADMIX

**C-21 All Acrylic** in the mix helps to hold in the water of hydration for a stronger finished product. Damp curing is not recommended under ordinary conditions. Under hot, dry, or windy conditions, however, ultimate strength and bonding will be improved by covering the coating, after it has dried for an hour or two and is hard to the touch, with paper or sheet plastic to protect the surface from drying out too fast. Remove covering when conditions cool down to allow coating to air cure.

## APPLICATIONS AS A PRIMER FOR POLYMER-MODIFIED CEMENT COATINGS

When applying cement plasters, stucco, and cement-based coatings to masonry and concrete, highly absorbent surfaces will be easier to work and yield a better bond if they are primed with **C-21 All Acrylic** just prior to the application of cement coatings to insure an exceptionally strong bond between the surface and coating or patch.

## SURFACE PREPARATION

Please see information on Surface Preparation and installing a test patch under **Admix** section above.

## PRIMING SOLUTION PROPORTIONS

**Walls, ceilings, concrete, block, brick:** Apply a solution of 1 part **C-21 All Acrylic** : 1 part clean, potable water by brush, roller, or spray.

**Over concrete floors:** For optimum performance prime concrete surfaces with undiluted **Silpro C-21 All Acrylic**.

**Over wood (interior only)** — A primer coat of 1 part **C-21 All Acrylic**: 1 part clean, potable water should be applied directly to wooden surfaces and allowed to dry. Re-prime with undiluted **C-21 All Acrylic** just prior to placing topping material.

**Note:** Use only new plywood decking as a substrate.

## PRIMING SOLUTION PROPORTIONS (CONT.)

Prime the surface just prior to applying coatings. Coatings may be applied while the surface is either tacky or dry.

**When used in a cement slurry coat:** Mix approximately 4 gallons of **C-21 All Acrylic** into 1 bag (94 pounds) of Portland cement. Mix until free of lumps. If mixing with a drill, do not overmix as that may entrap air. Let mix stand for 10 minutes and remix (for 15 seconds if using a drill).

A properly proportioned slurry is the consistency of a thick milkshake. Using a stiff brush, scrub this slurry into the surface of the area that will receive the coating. Place the coating before the slurry dries (10-20 minutes depending upon conditions).

## LIMITATIONS

- **C-21 All Acrylic** modified coatings should be applied only when the temperature of the air, surface and material is above 50°F. (10°C.) and will not fall below that for 48 hours after application. Then keep coated surfaces above 32° F. (0° C.) for a total of 7 days.
- Protect **C-21 All Acrylic** modified coatings from strong winds and/or direct sun during placement and finishing. It is best to work in the shade whenever possible.
- Do not apply to frozen surfaces.
- Do not use with air-entraining admixtures or air-entrained cements.
- Do not use damp sand to make concrete mixes.
- Keep **C-21 All Acrylic** from freezing.

## PACKAGE SIZE

1 Gallon Jug (3.79 Liters)  
5 Gallon Pail (18.93 Liters)  
55 Gallon Drum (208.23 Liters)

## COVERAGE

Concrete or dense masonry 250 – 300 sq. ft./gal  
Concrete block or brick 150 – 200 sq. ft./gal

## SHELF LIFE

1 year, when stored in unopened containers at 50°F. – 80°F.

## CAUTION!

Contains acrylic emulsion. Avoid contact with eyes and skin. In case of such contact, rinse eyes thoroughly with water and wash skin with soap and water. If irritation persists, contact a physician. If swallowed do not induce vomiting and contact physician immediately.

**See Material Safety Data Sheet for detailed information.**

Use adequate ventilation. The use of a NIOSH/MSA approved respirator, safety goggles, and protective gloves is recommended.

**FOR COMMERCIAL USE ONLY.  
NOT FOR INTERNAL CONSUMPTION.  
KEEP OUT OF REACH OF CHILDREN.**

**Spills and Disposal:** Absorb with cat litter, saw dust, or other absorbent material. Place in covered container and dispose of in accordance with local, state, and federal regulations.

In case of a medical emergency call INFOTRAC: 800-535-5053.

## GUARANTEE

Please call Silpro Corporation for copy of guarantee.

Made in the USA 3/07

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