

# S-1100 Liquid Concentrate™

TECHNICAL DATA SHEET

## DESCRIPTION

S-1100 Liquid Concentrate™ is a multi-purpose product formulated for use as a modifying agent for Portland cement. When S-1100 Liquid Concentrate is added to Portland cement, various sized aggregates and water, in accordance with **S-1000 Liquid Concentrate Mixing Ratio Chart** (page 3), it will provide superior adhesion and flexibility and allow the user to apply cement-based repairs at any depth or thickness. S-1100 Liquid Concentrate is used for structural repairs as well as thin-set resurfacing. S-1100 Liquid Concentrate gives Portland cement unique properties that are unattainable by any other bonding agent, admixture or Portland cement modifier. S-1100 Liquid Concentrate contains proprietary components which induce cross-linking in the presence of Portland cement, producing a co-adhesive bond. It is non-re-emulsifiable and will waterproof and seal from both positive and negative side of substrates. S-1100 Liquid Concentrate is an excellent primer or bond coat for other coatings and systems when diluted with clean water at a ratio of 1 part S-1100 Liquid Concentrate to 2 parts clean water.

## USES

Concrete Repairs  
Bonding Agent  
Structural Repairs  
Vertical / Overhead  
Plastering  
Interior / Exterior  
Renovations  
Cement Additive  
Concrete Additive  
Anywhere a permanent, cement-based repair is desired.

Swimming Pool Repairs  
Bridges  
Dams  
Primer Coat  
Re-Grading  
Re-Leveling  
Waterproofing  
Decorative Overlays



## ADVANTAGES

Non-Re-Emulsifiable  
Superior Strength  
Non-Corrosive  
Concrete Additive

Co-Adhesive Bonding  
Multi-Purpose  
Easy to Use  
Versatile

## CSI RELATED SECTIONS

03 01 00 - Maintenance of Concrete  
03 05 00 - Common Work Results for Concrete  
07 16 00 - Polymer Modified Cement Waterproofing  
32 01 19.62 - Patching of Rigid Paving

32 01 26.74 - Concrete Overlays  
32 01 29.61 - Partial Depth Patching of Rigid Paving  
32 18 00 - Athletic and Recreational Surfacing

## SURFACE PREPARATION

Before any Super-Krete products are applied over concrete, the slab must be free of sealers, any type of curing compounds and bond-breakers. Always refer to the **Super-Krete Products Surface Preparation Guide** for surface testing, cleaning, preparation and porosity requirements prior to applying Liquid Concentrate mixtures to any surface. Refer to Super-Krete Liquid Concentrate Mixing Ratio Chart.

**Arizona Polymer Flooring recommends that all Super-Krete cementitious overlay product applications, over concrete, first be treated with S-1300 Pene-Krete.**

Super-Krete® Products is a Division of Arizona Polymer Flooring, Inc.

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## MIXING

Mix Liquid Concentrate with clean water thoroughly, using a drill and paddle mixer attachment according to Mixing Ratio Chart. Add cement and sand to pre-mixed Liquid Concentrate and water mixture. Mix sand and cement in accordance with ratios below. Additional water may be added after mixing to achieve desired consistency. **DO NOT** add additional S-1100 Liquid Concentrate mixture unless product is over diluted with water.

**For Use as a Bonding Agent / Primer:** Mix 1 part S-1100 Liquid Concentrate with 2 parts clean water thoroughly using a drill and paddle mixer attachment and prime surface by brush or broom.

**For Use as an Admixture:** Mix well using a drill and paddle mixer attachment, then add desired amount of S-1100 Liquid Concentrate and clean water to cement and sand mixture (stone aggregate may be used depending on the depth of the patch or fill required).

**For Resurfacing:** Mix well using a drill and paddle mixer attachment. Add Liquid Concentrate and clean water to cementitious mixture until desired consistency is reached. Refer to Liquid Concentrate Mixing Ratio Chart.

## Coverage Rate

Coverage rates cannot be estimated because Liquid Concentrate is a multi-purpose product. Applications and use will vary considerably depending on substrate, method of preparation, surface profile, surface porosity, mixing ratio and environmental conditions.

**Shelf Life** 1 year when properly stored.

**Storage** Store in a cool, dry place. Keep away from moisture and freezing.

## Tools Required

Stiff-bristled broom	Brush
Mortar mixer or concrete mixer	5 gallon pails
Drill with paddle mixer	Trowel(s)
Squeegee	

**Freezing Point** 32°F

**Boiling Point** 212°F

## Appearance

Heavy, milky white liquid

## Odor

None to Sweet

## V.O.C. Content

< 50 g/liter

## Packaging

5 gallon pails / 36 per pallet  
55 gallon drums / 4 per pallet  
275 gallon Tote

## pH

4.0 to 5.5

## GHS Classification

Non-hazardous

## CAUTION

Keep away from children. Do not take internally. Always use safety gloves, the appropriate eye protection, and appropriate OSHA/NIOSH approved respirator in areas with poor ventilation and when exposed to spray mist, both indoors and outdoors. If ingested, seek medical attention immediately.

## TEST DATA

The following tests were conducted by Construction Testing and Engineering, Inc., Escondido, CA in accordance with ASTM 39 requirements for Compressive Strengths and ASTM C882 for Slant Shear Strengths.

<b>Compressive Strength:</b>	ASTM C 39	8,500 psi at 7 days
<b>Slant Shear Strength:</b>	ASTM C 882	3,000 psi at 7 days

The following tests were conducted by Construction Technology Laboratories, Inc., Skokie, IL in accordance with ASTM C-66-90 "Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing".

**Result after 320 cycles:** Passed

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S-1100 LIQUID CONCENTRATE MIXING RATIO CHART - ( # ) Silica Sand is represented as the required sieve/mesh size.

Types of Application	S-K S-1100 Liquid Concentrate PARTS	Clean Water PARTS	Portland Cement (White or Gray) PARTS	#12 Silica Sand PARTS	#16 Silica Sand PARTS	#20 Silica Sand PARTS	#30 Silica Sand PARTS	#60 Silica Sand PARTS	#90 Silica Sand PARTS	Calcium Carbonate (Marble Dust) PARTS
Spray Textures (Pool Texture)	1	3	1				1	1		
Thin-Set Resurfacing / 1/8" Overlay	1	3	1					2	1	
Overlayment up to 1/4"	1	3	1		2	1	1	1		
Anti-Skid to 1/8"	1	3	1				1	1		
Re-grading To 0" (Any Depth)	1	3	2	4	4	2	2	2		
Structural Repairs (Dry Slump Vertical)	1	3	2	4	4	2	2	2		
Wall Plastering Base Coat (Water Resistant)	1	3	2			2	2	2		
Wall Plastering Finish Coat (Water Resistant)	1	3	2						2	
Micro-Finishing From 0" – 1/64"	1	3	1							2

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Deep Structural Applications	S-K S-1100 Liquid Concentrate PARTS	Clean Water PARTS	Portland Cement (White or Gray) PARTS	#1 or #2 Dry Plaster Sand PARTS	1/4" or 3/8" Washed Aggregate PARTS
Structural Repairs up to 1"	1	3	1	3	
Structural Repairs to 3" or greater	1	3	2	3	3

**NOTE:** Additional water may be added after mixing to achieve desired consistency.

**DO NOT** add additional Liquid Concentrate to mixture unless product is over diluted with water.

## LIMITATIONS:

Super-Krete Products are to be applied only when surface temperatures are above 55°F and rising and not to exceed 100°F. Super-Krete Products are not to be applied when precipitation is expected within 24 hours following completion of application. Do not allow materials to freeze. Each Super-Krete product acts as an inherent part of a proven system. Super-Krete Products are professional, contractor grade products. Training in the use of these products is available. Consult a Super-Krete Products representative for information and assistance locating approved contractors in your area or for training class dates.

## MOISTURE VAPOR EMISSIONS PRECAUTIONS:

All concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride testing in compliance with ASTM F1869, or relative humidity probe testing in compliance with ASTM-F2170, to determine if excessive levels of vapor emissions are present before applying any coatings. Arizona Polymer Flooring offers **S-1300 Pene-Krete®** for cementitious overlay products and **VaporSolve® Moisture Remediation** systems for resinous floor coatings. Consult our technical service department. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

## WARRANTY:

Arizona Polymer Flooring guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.