

# Liquid Steel™ 1550 & 2200

**USE:**

The *ICT Liquid Steel™* products are designed to be injected into concrete cracks to repair and prep a cement surface for decorative coatings such as *ICT Texture Krete* systems. *Liquid Steel™ 1550* is a self-leveling, high strength, low viscosity, fast set epoxy resin that is best suited to repair hairline cracks in horizontal surfaces. *Liquid Steel™ 2200 GEL* is a non-sag, high viscosity, fast set epoxy resin that is best for larger cracks (> 1/4" in width), vertical walls, or for doweling or anchoring objects into concrete. Either product forms a permanent weld with concrete and is a great tool to begin the resurfacing of an old slab. In addition, *2200 GEL* also works great for the following applications:

Concrete Construction	Crack Repair	Tanks
New to old concrete	Bridges	Culverts
Wood, steel, fiberglass adhesive	Grout Bolts & dowels	

**DESCRIPTION:**

*ICT Liquid Steel™ 1550* and *Liquid Steel™ 2200 GEL* are both two-component epoxy resins, packaged in a side by side cartridge that provides point-of-use application to save time, material and minimize health hazards. They have been specifically designed for crack injection, which is convenient, quick and easy to use, and affords the contractor maximum efficiency. Both cartridges are designed to be used with a side by side, dual epoxy applicator gun that is adaptable to both the *1550 & 2200* cartridges. Each cartridge comes with mixing tips through which the two parts combine to form the strong bonding epoxy that will fill and weld concrete cracks, as well as suit other construction site uses.

**FEATURES & BENEFITS:**

- HIGH STRENGTH, FAST SET EPOXY RESIN
- MOISTURE INSENSITIVE: May be used on dry or damp surfaces
- PAINTABLE SURFACE WHEN DRY (8 HOURS) AND SANDED
- DOT TESTED
- FORMS A PERMANENT WELD

**SURFACE PREPARATION:**

When using *Liquid Steel™ 1550*, open crack with 1/8" diamond blade. Opening should be made approximately 1/2" deep. Thoroughly clean area. When repairing larger cracks using *Liquid Steel™ 2200 GEL*, grind loose edges if necessary. If edges are not sound, crack may need to be widened. Concrete substrates must be sound, clean, free from dust, curing compounds, oils, waxes or foreign particles. Substrate must not be below 40°F. Area may be damp or dry when applying either of the *Liquid Steel™* products.

**APPLICATION:**

- Load cartridge into dual cartridge gun.
  - Hold cartridge and gun at 45 degree angle (cartridge threaded end up)
  - Remove protective nose caps from cartridge (keep nose caps for reuse)
  - Attach static mixing tip and hand tighten down lock nut (avoid over tightening)
- (cont'd on reverse...)*

**CHARACTERISTICS AND TECHNICAL DATA**

***Liquid Steel™ 1550***

Consistency.....	fluid
Heat deflection temperature.....	133°F
Gel time, 77°F.....	20 min.
Dry time....	24 hrs.
Water absorption (24 hrs).....	0.4 %
Compressive strength, 72 hrs....	9,540 psi
Direct tensile strength.....	5,660 psi
Diagonal shear strength,....	6,505 psi
Pot life in tip, 72°F.....	15 min.
Viscosity....	180 cps.
Color (dry)....	Clear
Shelf Life (unopened)....	2 yrs
Shelf Life (opened)...	6 mos.

***Liquid Steel™ 2200 GEL***

Consistency: sag.....	0.0 in.
Deflection temperature.....	121°F
Gel time, 77°F.....	30 min.
Dry time....	24 hrs.
Water absorption.....	0.2 %
Compressive strength, 72 hr....	8320 psi
Direct tensile strength.....	8500 psi
Diagonal shear strength,....	6365 psi
Pot life in tip, 72°F.....	20-35 min.
Viscosity....	Thixotropic gel
Color (mixed/dry)....	Gray
Shelf Life (unopened)....	2 yrs
Shelf Life (opened)...	6 mos.

**ICT Corporation**

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All Innovative Concrete Technology Corp. products are manufactured with the finest raw materials. Shelf life is 2 years from the date of manufacturing when maintained in protected storage of 50°F to 90°F. It is the applicator's responsibility to determine the appropriate use of the product. All recommendations and suggestions are made without warranty, express or implied, since conditions of use are beyond ICT's control. ICT Corp. disclaims any liability incurred in connection with the use of these data or suggestions.

# Liquid Steel™

## 1550 & 2200

**APPLICATION (cont'd):**

- Activate trigger to equalize pistons. Discard approximately 10 cc's of material until no air is apparent in either cartridge
- Activate trigger to dispense *Liquid Steel™* material. If crack extends to edge of slab, place a form against the edge to eliminate loss of material.
- After 5-10 minutes check first injection of *Liquid Steel™*. If needed dispense a second injection to fill crack just below surface level. *Liquid Steel™ 1550* self levels, therefore, multiple applications may be necessary to fill to appropriate level. *Liquid Steel™ 2200 GEL* is thick and typically only needs one application.
- Replace nose caps and fasten plastic lock nut or leave mixing tip in cartridge after use to provide a seal.
- Fill crack to surface with dry 20/30 silica sand over *Liquid Steel™* after completing final injection of crack, while material is still tacky. (This will ensure a rough profile for maximum mechanical bond for overlay material., such as the *ICT Texture-Krete* system and/or *Color Seal™H2O*.)

**NOTE:**

To ensure maximum success, a new expansion joint should be placed near or through crack weld repair area. (Saw cut should be made a minimum of 3-4 inches deep.) The correct expansion joints will aid in keeping cracks controlled and less noticeable.

**COVERAGE:**

*Liquid Steel™ 1550:* 450 ml cartridge  
27.45 cu. inches/cartridge

*Liquid Steel™ 2200 GEL:* 600 ml cartridge  
36.6 cu. inches/cartridge

**Tables:**

Lineal feet per container  
Joint depth & width in inches

		Width			
		1/32"	1/16"	1/8"	1/4"
Depth	1/4"	292.8	146.4	73.2	36.6
	1/2"	146.4	73.2	36.6	18.3
	3/4"	97.6	48.8	24.4	12.2
	1"	73.2	36.6	18.3	9.15
	2"	36.6	18.3	9.15	4.575

*Liquid Steel™ 1550*

		Width			
		1/2"	1"	1 1/4"	1 1/2"
Depth	1/2"	12.2			
	1"	6	3	2.4	
	1 1/2"	4	1.9	1.5	1.25
	2"	3	1.4	1.3	.9
	3"	1.9	.9	.75	.6

*Liquid Steel™ 2200 GEL*

**LIMITATIONS:**

Do not apply *Liquid Steel™* when surface temperatures are below 40°F. *Liquid Steel™* products produce a vapor barrier. Do not apply to surfaces where vapor can condense and freeze beneath adhesive. The *1550* has a pot life in tip of approximately 10-15 minutes. The *2200* has a "tip" life of 20-25 minutes. Once material hardens, it will become necessary to change tips. Note: Do not force material through a dried tip, as doing so may cause the cartridge seams to burst with pressure.

**CLEAN UP & STORAGE:**

Clean tools and equipment with xylene to remove uncured and/or cured material. (\*Tip: Spraying the applicator with WD40® prior to use may facilitate the cleaning process.) Store inside in secure containers at moderate temperatures. Avoid overheating and freezing. Opened containers should be sealed quickly to prevent moisture contamination.

**PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES. DO NOT BREATHE VAPORS. DO NOT TAKE INTERNALLY. WARNING! Improper cartridge pressure may force material out of rear of cartridge! Use safety eye wear!



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