ULTRA-FAST ANCHORING ADHESIVE

Two-Component, High Strength Vinyl Ester, Styrene-Free Structural Adhesive

PRODUCT DATASHEET

DESCRIPTION: Rapid Set® ULTRA-FAST ANCHORING ADHESIVE is a two-component, high strength vinyl ester, styrene-free structural adhesive designed to develop a strong, durable bond to concrete and masonry materials. The high-performance mechanical bond strength, pull-out strength and heat deflection temperature make it ideal for use as a rigid structural, chemical anchor adhesive in a wide range of temperatures.

USES: Use ULTRA-FAST ANCHORING ADHESIVE on properly prepared concrete and masonry substrates. It has a high chemical resistance for use in environments such as swimming pools with chlorine or near salt water. It is ideal for anchoring bolts, dowels, rebar, and wall ties to concrete, concrete blocks, stone, and other masonry substrates. It is also ideal for adhering metal profiles, wood and roofing. Do not apply into porous or reconstituted stone. This material is not intended for use as a cosmetic or decorative product. The resin may cause staining in certain materials.

SURFACE PREPARATION: Ensure the substrate is clean, sound and free of bond inhibitors, such as grease, oil, mold, coatings and sealers. Do not install anchor in delaminated or weak substrates. Follow the Technical Installation Procedures for Anchoring, at www.CTScement.com, to properly prepare the anchor hole.

APPLICATION: The minimum application temperature is 14°F (-10°C) and rising. The maximum application temperature is 104°F (40°C). The cartridge temperature must be conditioned to between 41°F and 95°F (5°C - 35°C). For best results, place adhesive when the ambient temperature is between 68°F and 77°F (20°C and 25°C). Ensure surface, personnel and equipment are ready before application. Unscrew top and screw on the provided nozzle onto the mouth of the cartridge. Insert the cartridge into a quality extrusion gun with a minimum of 18:1 thrust ratio. Extrude material with three full pumps until an even gray color, without streaks, flows out. Refer to the Ultra-Fast Anchoring Adhesive ESR-4473 Installation Instruction Card.

CURING: At 70°F (21°C), working time is 6 minutes and is load bearing ready in 45 minutes.

Substrate Temperature	Gel & Working Time	Cure Time Dry Substrate	Cure Time Wet Substrate
*14°F (-10°C)	90 min	24 hours	48 hours
*23°F (-5°C)	90 min	14 hours	28 hours
32°F (0°C)	45 min	7 hours	14 hours
41°F (5°C)	25 min	2 hours	4 hours
50°F (10°C)	15 min	80 min	160 min
70°F (21°C)	6 min	45 min	90 min
86°F (30°C)	4 min	25 min	50 min
95°F (35°C)	2 min	20 min	40 min

*For installations in base material temperature between 14°F and 23°F (-10°C and -5°C). The cartridge temperature must be conditioned to between 60°F and 95°F (16°C - 35°C).

COLD WEATHER: Installation in low temperatures will extend cure times of the ULTRA-FAST ANCHORING ADHESIVE. To ease flow and placement in cold conditions, warm the cartridge between 60°F and 95°F (16°C and 35°C) for 24 hours prior to installation.

OVERVIEW

Highlights:

- Cure time 45 minutes at 70°F (21°C)
- Bonds in water-filled anchor holes
- High heat deflection temperature
- Ideal in cold temperatures
- Use on cracked or uncracked concrete
- High chemical resistance; suitable in marine environments

Certified:

- ICC ES ESR-4473
- NSF Standard 61(Certified for drinking water applications)
- Fire Resistance test report: 3290/0966
- City of Los Angeles Building Code (LABC) 2017
- City of Los Angeles Residential Code (LARC) 2017
- International Building Code (IBC) 2017
- International Residential Code (IRC) 2017
- Florida Building Code 2017 and 2014
- Florida Residential Code 2017 and 2014

MasterFormat® 2016

Division: 03 00 00	Concrete
Section: 03 16 00	Concrete Anchors
Division: 05 00 00	Metals
Section: 05 05 19	Post-Installed Concrete Anchors

Manufacturer:

CTS Cement Manufacturing Corp.
12442 Knott St.
Garden Grove, CA 92841
Tel: 800-929-3030 | Fax: 714-379-8270
Web: www.CTScement.com
E-mail: info@CTScement.com

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Remove dew, frost or ice from the substrate with acetone on a clean cloth, then place adhesive immediately.

WARM WEATHER: Installation in warmer temperatures at 80°F (27°C) and above will not adversely affect adhesive performance. Warmer temperatures will decrease viscosity, working and cure time.

CLEAN-UP: Clean up with acetone and disposable rags before it hardens on placement tools and surfaces. Dispose of waste material in compliance with local regulations.

PACKAGING: ULTRA-FAST ANCHORING ADHESIVE is available in a 9.5 fl. oz. (281 mL) cartridge.

SHELF LIFE: When stored correctly, the shelf life is 18 months from the date of manufacture.

STORAGE: Store upright in original, unopened container, in a cool, dry area. Protect unopened container from water, heat and direct sunlight. Store at 41°F to 85°F (5°C to 29°C). Elevated temperatures will reduce shelf life.

LIMITATIONS: Not for use in delaminated or weak substrates. The allowable temperature range for the base material, after full curing, is from -40°F to 248°F (-40°C to 120°C). Consult a design professional prior to use. The design professional on the job is ultimately responsible for the interpretation of the data provided above and potential safety hazards.

For specific information on tension loads, anchor size, steel failure, pullout and concrete cone failure, concrete breakout, and concrete edge failure, consult the Technical Performance Sheet for Ultra-Fast Anchoring at www.CTScement.com.

USER RESPONSIBILITY: Before using, read current technical data sheets, bulletins, product labels and safety data sheets. It is the user's responsibility to review the instructions and warnings for any CTS products prior to use. Wear chemical resistant gloves and protect eyes and skin during use. Do not attempt to force adhesive out of a hardened mixing nozzle. Use a new mixer nozzle to avoid rupturing the container. If a leak should develop, discontinue use immediately and use a new cartridge. While all reasonable care is taken in compiling technical data on the company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the company. It is the responsibility of the customer to confirm that the product is fit for the purpose for which it is intended to be used.

WARNING: DO NOT BREATHE VAPORS. AVOID CONTACT WITH SKIN AND EYE. Use product in well ventilated areas. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators are recommended in confined areas, or when conditions (such as heated polymer, sanding) may cause high vapor concentrations. Do not weld on, burn or torch any vinylester material. Hazardous vapor is released when vinylester is burned. For additional information refer to the precautionary statement on the Safety Data Sheet.

Please refer to the SDS and www.CTScement.com for additional safety information regarding this material.

LIMITED WARRANTY: CTS Cement Manufacturing Corp. (CTS) warrants its materials to be of good quality, and at its option, within 18 months from date of manufacture, will replace material proven defective or refund purchase price thereof, and such replacement or refund shall be the limit of CTS' responsibility. Except for the foregoing, all warranties, expressed or implied, including merchantability and fitness for a particular purpose, are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials.

⚠ **WARNING**

CANCER and REPRODUCTIVE HARM - www.P65Warnings.ca.gov

TYPICAL PHYSICAL DATA

Color (when mixed)	Gray
Gel Time	6 min
Bond Strength ASTM C882	1230 psi (8.5 MPa) (2 day cure)
	2320 psi (16 MPa) (14 day cure)
Compressive Strength ASTM D695	11,160 psi (77 MPa) (7 days)
Compressive Modulus ASTM D695	714,760 psi (4928 MPa)
E Modulus EN 196	2,031,930 psi (14009.7 MPa)
Flexural Strength EN 196	2170 psi (15.0 MPa)
Heat Deflection TEMPERATURE (HDT) ASTM D648	Short Term: 176°F (80°C)
	Long Term: 248° F (120°C)
Volatile Organic COMPOUNDS (VOC) ASTM D2369	70 g/L

Note: ASTM Standards are current unless otherwise stated.
Data obtained at 73°F (23°C)

VOC Compliance

Meets U.S EPA 40 CFR 59 Subpart C & D; CARB: California Air Resource Board; LADCO: Lake Michigan Air Directors Consortium (Illinois, Indiana, Michigan, Wisconsin); MRPO: Midwest Regional Planning Organization (Illinois, Indiana, Michigan, Ohio, Wisconsin); SCAQMD: South Coast Air Quality Management District (Los Angeles, Orange, Riverside, San Bernardino Counties); and CEPA/EC: Canada Environmental Protection Agency/Environment.