

HydroPhase™

C150 SL

Self-Leveling Cement



Proprietary phased cement hydration technology developed to combine zero shrinkage, high flow, and superior surface smoothness for the most durable, robust leveling systems on the market.

DESCRIPTION

HydroPhase™ C150 SL - Proprietary phased hydration hydraulic cement technology developed to provide superior surface smoothness for the most durable, robust leveling systems on the market.

Zero shrinkage means no mechanical surface prep, allowing you to simply clean, prime, and pour. C150 SL is mixed and applied using manufacturer-approved, locally sourced sand, lowering costs while delivering superior performance. Based on a unique cement composition, HydroPhase delivers a repeatable worry-free performance in a variety of construction settings.

CHARACTERISTICS

- Engineered multi-component blended cement, containing polymer modified hydraulic cements.
- Fast setting; light trade traffic in 4 hours, normal traffic in 24 hours.
- Recommended thickness 1/8" to 1 1/2" in a single lift.
- Requires no mechanical surface prep: clean substrate, prime, and pour.*
- Ideal for smoothing out of level, old, or damaged concrete substrates.
- Dense, smooth, and abrasion and crack resistant surface.
- HydroPhase™ C150 SL achieves 5000 psi in 28 days (ASTM C109M).

SURFACE PREPARATION

- If moisture vapor conditions exist, test to ensure proper MVER limits as communicated by the manufacturers of the final floor covering.
- All sand used during the application must be pre-approved by HydroPhase™ Technical Service.
- Do not use oil-based floor sweeps, as the remaining residue prohibits proper adhesion of the underlayment to the subfloor or finished floor covering.
- All loose or weak material on the substrate must be mechanically removed before installation to ensure a stable and structurally sound supporting surface.
- Clean and remove all foreign matter from the surface, including any oils, waxes, grease, dirt, or other foreign material that prohibits proper adhesion of primer and leveler to the substrate.
- Gypsum substrates must be sound, stable, and chalk free.

LIMITATIONS

FOR PROFESSIONAL USE ONLY

- Do not install HydroPhase™ C150 SL over any substrate containing asbestos.
- Pour depth of 1/8" to 1.5" - Contact technical services for depths greater than 1.5".
- Do not install HydroPhase™ C150 SL in any exterior applications.
- Do not install at temperatures below 40°F.
- Do not use neat.
- Do not re-temper.
- Mechanical profiling is not required in foot traffic or light rubber wheeled traffic use.
- Surface profile is required when installing in areas with heavy traffic or loading over the surface.
- This product is an underlayment, and must be protected by a floor covering.
- MVER / Slab RH requirements are dictated by floor covering manufacturer.

Low-Prep

Excellent Workability

Zero Shrink

AT A GLANCE

- Approved for use over most structurally sound substrates
- Approved for use in most residential, commercial, and institutional applications
- Most applications require no surface prep
- Mix onsite with approved bulk sand
- Pour 1/16-1 1/2" in a single lift
- Compressive Strength ASTM C109M:
 - 24 hour compressive > 2000 psi *
 - 7 day compressive > 4000 psi *
 - 28 day compressive > 5000 psi *

MIXING GUIDELINES

 Powder (Polvo)	 Sand (Arena)	 Water (Agua)
C150 (50 lbs)	50 lbs	9.5-11 qts (8.9 - 10.4 liters)

RECOMMENDED USAGE

HydroPhase™ C150 SL is approved for use over fully cured or existing concrete, wood, or other clean structurally sound properly primed substrates meeting L/360 deflection criteria.

HydroPhase™ C150 SL is recommended and approved for use over most properly primed substrates including:

- Institutional
- High-rise residential
- Commercial office space
- Renovation of old structurally sound wood frame or concrete structure
- Retail
- Single-family homes
- Multifamily renovations
- 60 psi EPS board (contact HydroPhase™ for install bulletin)
- HydroPhase™ C150 SL can be installed from 1/8" to 1 1/2" in a single lift.
- HydroPhase™ C150 SL is compatible with most tile stone installation mortars, floor covering adhesives, urethane adhesives, and epoxy adhesives and with most epoxy flooring installations, confirmed by on site mock-up. Contact a HydroPhase™ Representative before use in these applications.
- Compatible with Treadstone® Brand rigid technology sound attenuation mats. C150 SL may be used over non-water soluble, scraped adhesive residues.

PRIMER

All surfaces must be primed prior to the application of C150 SL. Carefully review the Formulated Materials data sheets selecting the correct primer and application method. Adhesion of primer to substrate must exceed 175 psi tensile pull. Choose either Formulated APS Advanced Primer Sealer or Formulated TP1. Both APS and TP1 should be diluted over porous substrates and undiluted over non-porous. Before material mixing and application, seal all voids around pipe or conduit intrusion (plumbing and electrical penetrations), walls, and otherwise with a rapid setting patch or foam insulation. HydroPhase™ C150 SL is very low viscosity and will flow through any open voids. Place a bond breaker on vertical surfaces that will contact C150 SL. When applying over wood substrates, utilize reinforcing lath stapled to the wood floor after primer application. Consult HydroPhase™ technical services for more information.

MIXING INSTRUCTIONS

C150 SL is to be mixed on-site using approved dry sand. Sand to Leveler ratio is 1:1, and water must be 20-22% of content by weight. Water usage outside of this range must be approved by Formulated Materials, verified in our lab with your sand, and provided to you in writing.

Mix Ratio: 50 lbs of C150 SL / 50 lbs approved sand / 9.5 quarts to 11 quarts (9 to 10.5 liters) of water

Proper flow and mixing can be confirmed on-site using a standard slump test utilizing a 2" diameter piece of PVC pipe cut to 4" in length and released onto plexiglass or a similarly smooth, non-porous surface. For optimal results, the measured slump

size should be 11" – 12" in diameter. Do not exceed 13" slump diameter.

Short mixing times will result in a higher water requirement to facilitate proper flow and result in poor performance.

Barrel Mixing: Use the mixing ratios defined in the mixing guidelines. Mix using a high-speed drill equipped with a suitable "egg-beater paddle" set to >900 rpm, ensuring all materials are fully incorporated. There should be no lumps or dry clumps when pouring. Mix each batch for 90 seconds.

APPLICATION

1. Before application, test C150 SL with an on-site mock-up of leveler and approved primer on a portion of the prepared substrate to assure proper bond is maintained after application.
2. The surface must be dry before application. Ensure that doors and windows are adjusted to maintain proper temperature (40°F (7°C) and 90°F (32°C)) and humidity levels during the pour and curing process.
3. The substrate and ambient room temperatures must be between 40°F (7°C) and 90°F (32°C) during the application and maintained for a minimum of 48 hours after the application.
5. C150 SL may be applied using most commercially available batch mix pumps.
6. C150 SL has an approximate work time of 20 minutes while maintaining its self-leveling properties. Work time can be affected by temperature and humidity at the location site.
7. Always pour new material into a wet edge and plan your pour, crew size, and equipment accordingly. If assistance is needed when planning, please feel free to contact your HydroPhase™ Representative for assistance.
8. Immediately after applying the material,

distribute the material using a gauge rake and steel smoother.

CONTROL JOINTS

Expansion and control joints should be provided throughout the pour as specified by the engineer. Existing expansion joints in the substrate should be honored throughout the pour. Abutting dissimilar materials and existing control joints should never be bridged during the application of C150 SL or the primer before application. Refer to ASTM F710 for detail.

CURING

C150 SL is self-curing and does not require any sealants or curing compounds. Primers or sealers may be applied to increase the bond of some low adhesion materials or to increase the abrasion resistance in heavily trafficked or areas exposed to occasional moisture. Maintain recommended temperature and humidity levels during the first 48 hours after the pour. Do not use forced air drying during the first 8 hours of cure. Avoid foot traffic for 12 hours after the pour. Return to trade traffic the following day.

CLEAN UP

Wash all tools with water promptly after finishing while material is still wet. Wash hands with water immediately after application. Cured material will require mechanical removal.

LEED CREDITS

HydroPhase C150 SL may contribute to LEED certification of projects as follows:

- Indoor Environmental Quality EQ 4.2 Low Emitting Materials VOC content 0g/l (calculated)
- Compliance tested to California Department of Public Health (CDPH/EHLB/ Standard Method) V 1.2 - 2017
- Building Reuse - Maintain MR 1.1 , MR 1.2 Provides new subfloor
- Materials and Resources MR 4.1 - 4.2, 5.1, 5.2 Regional Manufactured OK, FL NJ Regional Materials >50%
- 03 54 00 Cast Underlayment
- 03 54 16 Hydraulic Cement Underlayment

ASTM REFERENCES

ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride

ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes

ASTM F-710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring

ASTM C1708 Standard Test Methods for Self-leveling Mortars Containing Hydraulic Cements

PHYSICAL PROPERTIES

Physical State	Dry Powder
Color	Gray
Flammability	Flame Spread 0; Fuel Contribution 0; Smoke Development 0

MIXED PRODUCT

Mixing Ratio	1 50 lb bag of Powder 1 50 lb bag of Sand 9.5-11 qt water
Yield With Sand (100 lbs mixed material)	46-48 sq. ft at 1/4" depth
Dry Density	110 lb./cu. ft.
Compressive Strength	ASTM C109M 24 hour compressive > 2000 psi * 7 day compressive > 4000 psi * 28 day compressive > 5000 psi *
Recommended Thickness	1/16" - 1 1/2" in a single lift

* when using clean quality approved sand

Available in 50 lb Bags and 2960lb Super Sacks