



PRODUCT DESCRIPTION

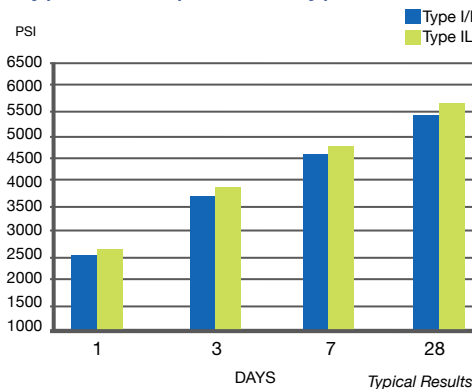
Lehigh EcoCemPLC™ is portland limestone cement (PLC) manufactured by Lehigh Cement Company to comply with all applicable requirements of Type IL under AASHTO M240, ASTM C595 and also meet requirements for ASTM C1157 performance cements. EcoCemPLC is a hydraulic interground or blended portland cement containing between 5% and 15% limestone that has the performance equivalent to ASTM Type I Portland cement in strength and durability. It has the same qualities as ordinary portland cement while producing less greenhouse gases. Request current material certificate from a Lehigh representative.

APPLICATIONS

Using EcoCemPLC™ is an environmentally responsible choice. Production of this earth-friendly cement generates about 10% less CO₂ than other portland cements, while still delivering the consistency, versatility and performance Lehigh customers expect. EcoCemPLC™ can be used in any application where portland cement Type I is normally used and it allows for the production of a more sustainable concrete product for owners and designers. The ACI 318 building code references ASTM C595 Type IL cement.

ASTM C595 Type IL is equivalent to ASTM C150 Type I hydraulic cement in compressive and flexural strength, durability and it is allowed in non-sulfate exposure class S0 (ACI 318 Table 19.3.2.1), the same as ASTM C150 Type I cements. ASTM C595 Type IL hydraulic cement is a cost-effective, basic building material that is suitable for use in a wide range of concrete applications including: cast-in-place, pre-cast, tilt-up, tanks, bridges, pavements, concrete masonry units, prestressed concrete members, masonry mortars and grouts. ASTM C595 Type IL hydraulic cement is approved by the FAA for use in airfield pavements. It is also approved by many state DOT agencies. The AASHTO M240 has been harmonized with ASTM C595.

Type IL compared to Type I/II cement



KEY FEATURES/BENEFITS

- Improved concrete workability
- Better concrete finishing properties
- Reduced slab bleeding
- May increase durability
- Equivalent performance
- Environmentally sensible use of natural resources

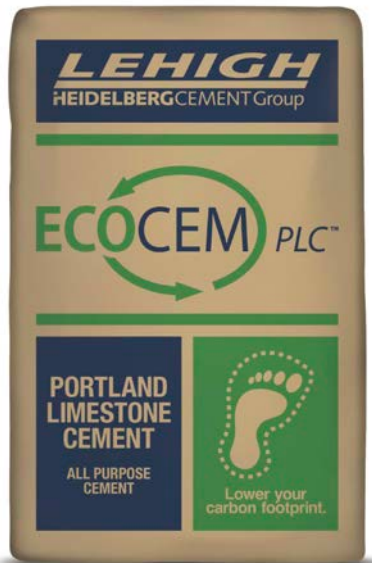


LEHIGH
HEIDELBERGCEMENT Group

EcoCemPLC™ is suitable for use with a wide range of additives and admixtures to extend the properties and uses of concrete. Chemical admixtures (ASTM C494 & C260) behave similarly in use and dosage as with ASTM C150 Type I cements. Setting characteristics of EcoCemPLC™ are also comparable to typical portland cements.

EcoCemPLC™ is compatible with supplementary cementitious materials ASTM C618 fly ash, both Class F and Class C, as well as ASTM C989 slag cements at equal replacement levels to C150 portland cements. In many concrete mixes using SCMs such as slag or class C ash, you will find a synergistic effect with our interground limestone cement and achieve a slightly higher concrete strength. Studies have shown that concrete containing portland limestone cement along with the use of fly ash or slag cement will produce denser concrete with more desirable (lower) C1202 (Concrete Ability to Resist Chloride Ion Penetration) test results.

When EcoCem™PLC is used to make concrete with the proper design, it can significantly improve the workability, pumpability, and overall finishability of concrete – resulting in easier handling and placing of the concrete, either by hand or machine.



CONCRETE: COLOR

Concrete produced with EcoCemPLC™ may be lighter in color.

DELIVERY/STORAGE

Shipped, handled and stored similar to other portland cements, EcoCemPLC™ is a moisture sensitive material that must be kept dry in order to retain its quality. Bulk EcoCemPLC™ should be stored in a weather-tight bin or silo. Product is also available in multi-walled bags in select markets.

HISTORY

EcoCemPLC™ is new to North America; however, it is not a new product. Portland limestone cements have been around for decades in Europe. Lehigh's parent company, HeidelbergCement, developed cement with 20% limestone content for special applications in 1965. Today, in Europe, the standards allow up to 35% limestone and portland limestone cement is used regularly. As a result of the work of standards groups in Canada and the United States, cement with up to 15% limestone and equivalent performance to ordinary or general use cement is being used throughout North America.



CAUTION

Portland Cement when dry is non-hazardous. When in contact with water (such as in eyes or skin) or when mixed with water to make fresh portland cement concrete, mortar or grout, it becomes highly alkaline and can irritate or burn the skin and injure the eyes when not properly handled. Direct contact should be avoided and if it does occur, the affected area should be washed with water immediately. If fresh portland cement concrete or portland cement gets into the eyes, rinse them thoroughly with water and seek medical attention. Inhalation of dry portland cement can irritate the upper respiratory system. For additional safety information please reference our Safety Data Sheets (SDS) available online at www.lehighhanson.com

WARRANTY

The information and statements herein are believed to be reliable, but are not to be construed as the warranty or representation for which we assume legal responsibility. Lehigh portland and slag cements shall conform to the current standard specification for portland cement or ASTM C595 or ASTM C989 and no other warranty, representation or condition of any kind, expressed or implied, or (including no warranty of merchantability or fitness for a particular purpose) shall apply. Having no control over the use of cement, seller will not guarantee finished work, nor shall seller be liable for consequential damages.