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This specification utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*, *SectionFormat* and *PageFormat*. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate product model numbers, styles and types are used in Specifier Notes and in the specification text

This specification identifies a concrete additive of lightweight synthetic particles (LSP) that provide lighter weight and enhanced durability in structural and non-structural concrete as manufactured by SYNTHEON Inc. Revise specification section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 03 30 00 CAST-IN-PLACE CONCRETE

PART 1 GENERAL

SUMMARY

- A. Section Includes: This Section specifies a concrete additive of lightweight synthetic particles (LSP) that provide lighter weight and enhanced durability in structural and non-structural concrete.

REFERENCES

Specifier Note: Paragraph below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Paragraph when specifying products and installation by an industry reference standard. List retained standard(s) referenced in this section alphabetically. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Contract Conditions Section 01 42 00 - References may establish the edition date of standards. This Paragraph does not require compliance with standard(s). It is a listing of all references used in this section. Only include here standards that are referenced in the body of the specification in PARTS 1, 2 and/or 3. Do not include references to building codes at any level.

- B. Reference Standards:
1. 2012 International Building Code (IBC)
 - a. UL ER25733-01
 2. Underwriters Laboratories, Inc. (UL):
 - a. ANSI/UL 263 Fire Tests of Building Construction and Materials.
 3. Underwriters Laboratories of Canada Inc. (CAN/ULC):
 - a. CAN/ULC S-101 Standard Methods of Fire Endurance Tests of Building Construction and Materials.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Contract Conditions and Section 01 33 00 - Submittal Procedures.

ACTION SUBMITTALS

- C. General: Submit listed submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures].
- D. Product Data: Submit specified products as follows:

1. Manufacturer's product data, including manufacturer's technical data sheet.

2. Material Safety Data Sheets (MSDS).

INFORMATION SUBMITTALS

Specifier Note: Specify submittal of test reports or evaluation service reports intended to document required tests without repeating the test requirements specified in Division 01.

A. General: Submit listed submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures].

B. Test and Evaluation Reports:

1. Certified test reports showing compliance with specified performance characteristics and physical properties.

Specifier Note: Specify submittals intended to document manufacturer installation, storage and other instructions.

C. Manufacturer's Instructions: Submit manufacturer's instructions for use.

D. Source Quality Control: Submit documentation verifying that components and materials specified in this Section are from single manufacturer.

QUALITY ASSURANCE

E. Qualifications:

1. Manufacturer:

a. [5] years of experience manufacturing components similar to or exceeding requirements of project.

Specifier Note: Retain the following Paragraph when certification related to sustainability submittals is a project requirement.

F. Sustainability Standards Certification: Provide certification for [_____] materials certified by [certification organization's name] in accordance with [certification organizations standard].

PART 2 PRODUCTS

Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal," "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 CONCRETE ADDITIVES

A. Manufacturer: SYNTHEON

1. Contact: 25 Avenue A, Leetsdale, PA 15056; Telephone: (412) 749-0442; Fax: (412) 749-0446;
E-mail: info@syntheoninc.com ; Website: www.syntheoninc.com.

Specifier Note: Substitution procedures must either be in the Contract Conditions or in Section 01 25 00 - Substitution Procedures. Do not include substitution procedures here.

1. Single Source Responsibility: Provide components and materials specified in this section from a single manufacturer.

2. Substitution Limitations:

a. Substitutions: [In accordance with [Contract Conditions] [Section 01 25 00 - Substitution Procedures]]
[No substitutions permitted].

Specifier Note: Include an overall description of the system, assembly, product or material. Include required properties or characteristics that do not obviously belong under other titles. Examples: Configuration, size and color.

B. Description:

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Contract Conditions and Section 01 41 00 - Regulatory Requirements. Repetitive statements should be avoided.

1. Regulatory Requirements:

In accordance with Section [01 41 00 - Regulatory Requirements].
[_____].

2. Sustainability Characteristics:

a. [_____].

3. Compatibility:

a. Ensure components and materials are compatible with specified accessories and adjacent materials.

C. Design Criteria:

1. General: Comply with UL ER25733-01

Specifier Note: Retain below if additive is used in fire resistance rated concrete.

2. Fire Resistance Rated Concrete: Meets requirements for classification as a concrete additive [in the UL Fire Resistance Directory in accordance with ANSI/UL 263] [and] [in the ULC Fire Resistance Directory in accordance with CAN/ULC S-101].

D. Elemix: Lightweight synthetic particle additive.

Specifier Note: Type XE is grey. Retain one or both as needed to comply with project requirements.

1. Product: [Type XE]

2.02 SOURCE QUALITY CONTROL

Specifier Note: Describe each test to be conducted. Include test method, sampling requirements, observation by independent authorities (if any) and reporting requirements. Describe each inspection to be conducted, including method, personnel and reporting requirements.

A. Tests and Inspections:

Specifier Note: Describe specific requirements for coordinating special inspections, such as providing access to authorities having jurisdiction or other third parties.

1. Manufacturer Services:

a. [_____].

PART 3 EXECUTION - NOT USED

END OF SECTION