9290000 POZZOLANS AND SLAG
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Art Berger
414-5368

Comments: (10-25-17, Internal)
The first sentence is not really a sentence.

> → **929-2.4 Exceptions Natural Pozzolans (Class N):** Raw or calcined natural pozzolans that comply with the applicable requirements for the class as given herein, such as some diatomaceous earths; opaline cherts and shales; tuffs and volcanic ashes or pumicites, volcanic rocks, calcined or uncalcined; and various materials requiring calcination to induce satisfactory properties, such as some clays and shales. When natural pozzolans are used in concrete, the test

Response: This will be corrected prior to Industry Review.
Change made.

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Comments: (11-30-17)
The requirements for ground glass are not sufficient to ensure successful and consistent performance in concrete. There is currently a proposed standard specification for ground glass being balloted at ASTM. Although there are still a large number of negative votes on this ballot item, this ASTM standard would include additional protections for material performance beyond what is in the proposed FDOT specification. For example, the current version of the ASTM standard has stricter requirements on fineness and amorphous content, which helps to ensure that the silica in glass does not results in ASR. The ASR research has been done using ASTM C1293 and C1260, which were developed for evaluating potentially reactive aggregates and may not correlate to long-term concrete performance when ground glass is used (e.g. exposure blocks). There are stricter requirements on strength activity index, SO3, and usage rates in the proposed ASTM standard. Therefore, FDOT should increase requirements or wait until the ASTM standard is complete to ensure successful performance of these materials. For natural pozzolans, the acceptance criteria for each test method needs to be clarified. For example, replacement rates, test ages, mix design (class IV), etc. need to be clarified.

Response:

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