1.0 General

1.1 WORK INCLUDED

1.1.1 Provide a concrete admixture Multiguard IW+(MIWP) that when added to the plastic mix will waterproof, and water reduce the green concrete by way of chemically promoting the hydration and generating millions of crystals thus plugging all capillaries and pores in the concrete and plaster inside the mass.

1.1.2 Provide all written materials, concrete mix design and site services necessary to complete the installation as herein specified.

1.1.3 The concrete waterproofing admixture shall be tested in accordance with the general recommendations of the latest IS 2645:2003, water-reducing, set retarding and strength-increasing admixtures for concrete.

1.2 RELATED SECTIONS

1.2.1 Section 00000 - Cast-in-Place Concrete.

1.3 QUALIFICATIONS

1.3.1 Provide Multiguard IW+ waterproofing admixture as manufactured by Multichem Group 2, Matoshree Kunj, M.D. Keni Marg Bhandup (E), Mumbai-42, India or equivalent.

1.3.2 The addition of Multiguard IW+ to the pre-approved mix design shall be by a concrete ready-mix supplier approved by the manufacturer or by a non-approved ready-mix supplier or contractor (including local site mixing) under direct supervision of an independent materials engineering company.

1.4 SUBMITTALS

1.4.1 Certificates of Conformance or Compliance: before delivery of the materials a copy of the manufacturer's certificates, attesting that materials meet the requirements specified, shall be submitted to and approved by the contracting officer.

1.4.2 Descriptive Product Literature: Manufacturer's descriptive product literature shall be submitted and shall consist of detail specifications, available performance test data and instructions for additive addition.

1.4.3 Certified Laboratory Test Reports: Before delivery of materials copies of the reports of all tests specified herein or in reference publications shall be submitted to and approved by the contracting officer. Test reports shall be accompanied by certificates from the manufacturer certifying that the previously tested material is of the same type, quality, manufacturer and make as that proposed for this project.

1.5 DELIVERY AND STORAGE

1.5.1 Deliver materials in unbroken original packages bearing the manufacturer's name and brand designation, batch number and date of manufacture. Store in a dry storage area to avoid contact with moisture.

2.0 Products

2.1 CONCRETE WATERPROOFING SYSTEM

2.1.1 System Components: The system shall consist of the waterproofing chemical admixture, Multiguard IW+ and the cementitious waterproofing waterstop system for construction joints, MULTIGUARD WATERSTOP as per Multichem Specification #3, which consists of the cementitious waterproofing compound, MITA and the construction joint waterstop cap material, MIM.

2.1.2 Multiguard IW+ admixture shall consist of proprietary additives and other chemicals which promote the formation of crystal growth in the complete mass of plaster and concrete. The admixture shall be free of oils, , chlorides and sodium based products. Manufacturer must certify, in writing, the absence of these materials.

2.1.3 Multiguard IW+ admixture shall impart permeability reduction to less than half of the permeability of similar specifiman prepared without admixture.

2.1.4 Waterstop slurry shall consist of a cementitious powder containing high-growth organic and inorganic producing chemicals with the ability to grow and penetrate to a minimum depth of four inches in both directions from the coated surface.

2.1.5 Grouting mortar, MIM for the cold joint or cracks shall be compatible with the cementitious crystal producing chemicals and contain no chlorides or artificial accelerators. Grouting material shall be non-shrink, non-toxic, fast setting (initial 25 minutes) and contain high growth organic and inorganic chemicals.

3.0 Execution

3.1 GENERAL

3.1.1 Safety precautions shall conform to the manufacturer's MSDS printed literature..

3.1.2 Construction joints (cold joints and slab joints) shall be brush coated with the MITA SLURRY at a rate of 1 kg per square metre in such a manner as to produce an even film of uniform thickness. Edges, corners and crevices shall receive an adequate thickness of MITA SLURRY coating.

3.1.3 Construction joint design (Multichem Waterstop System): Construction joints will be treated with a coat of MITA SLURRY at the specified rate. Multichem Waterstop block out shall be installed using wood spacers to the required size of 45mm x 45mm (tapering to 35 mm). At the time that the forms are removed, the block out strip will be removed and filled with a dry mix of MIM.

3.1.4 Admixture: Concrete shall be designed in accordance with the standard recommended practices for selecting proportions for concrete, Multiguard IW+ shall be added to the pre-approved plastic mix design at a rate of 200ml per 50 kg of the cementitious content (cement + pozzolana) at the ready-mix plant or added at the job site. Multiguard IW+ admixture shall be in addition to the total weight of the cementitious content. Multiguard IW+ shall be mixed for a minimum of six minutes. Multiguard IW+ shall be strictly added as per manufacturer's written instructions.

end of section