

Part 1 General**1.1 Summary**

- .1 Unless otherwise indicated, follow the standards below when specifying concrete work. These standards are not intended to restrict or replace professional judgment.

1.2 Design Requirements

- .1 Supported Slabs:
 - .1 Design slabs at least 140 mm thick, unless otherwise required by code or expected live loads. Do not use thinner slabs even if structurally feasible, without the approval of the Project Manager.
- .2 Flat Slabs on Grade:
 - .1 A vapour barrier is usually required. The practice of perforating vapour barriers to avoid the phenomenon of “slab curling” is not acceptable.
 - .2 Design the slabs on grade with the following thickness:
 - .1 General: 4 inches, or greater if required by expected live load.
 - .2 Mechanical rooms: 5 inches, or greater if required by expected live load.
 - .3 Strength: As required, but not less than 35MPa (5500psi) at 28 days.
- .3 Concrete base (for equipment):
 - .1 Strength as required according to Structural Engineer’s recommendation.
- .4 Finishes
 - .1 Specify the finish recommended for the floor finishes.
- .5 Specify that a written declaration that components used are compatible and will not adversely affect finished flooring products and their installation adhesives.
- .6 Exterior slabs on grade and sidewalks: as required, but not less than 45MPa (6500psi) at 28 days.
- .7 For concrete slabs, the maximum tolerance in level difference shall be 3 mm per 3 m.
- .8 Each exterior concrete step must have a minimal slope of 0.5% towards the next step below to allow for sufficient water drainage and to prevent ice formation.
- .9 Levelling of existing interior slabs:
 - .1 Patching less than 2 m diameters: use “Planipatch” as manufactured by Mapei, or approved equivalent.
 - .2 Surface levelling differences from 1 mm to 50 mm, use: “Duocrete” as manufactured by Duochem, or approved equivalent.

Part 2 Products**2.1 Preferred Products**

.1 Concrete sealant "Anti-graffiti":

.1 Shall be Duroplast 901AG as manufactured by Duochem, or approved equivalent.



.2 For sealants with low VOC emissions that may contribute to LEED® v4 EQ Credit Low-Emitting Materials, refer to:

.1 SCS Global Services www.scsglobalservices.com/certified-green-products-guide

.2 UL Environment <http://productguide.ulenvironment.com>



.3 For sealants with health product declarations (HPDs) and/or manufacturer inventories that meet the requirements for LEED® v4 MR Credit Building Product Disclosure and Optimization – Material Ingredients, refer to:

.1 Declare Product Database www.living-future.org/declare-products

.2 HPD Library <http://hpd.smithgroupjir.org/>



.4 Materials that are locally sourced (extracted, manufactured, and purchased) within 160 km (100 miles) are preferred and will increase cost values for credit calculations in the Materials and Resources Building Product Disclosure and Optimization credits.

END OF SECTION