

Contents

1 Silicate construction materials	6
2 Description of microstructure evolution	7
2.1 Volumetric representation	7
2.2 Discrete hydration model CEMHYD3D	8
3 Micromechanical analysis	9
3.1 Elasticity	10
3.1.1 Extension to the level of concrete	13
3.2 Identification of C-S-H creep	15
4 Conclusions	16
References	17
Curriculum Vitae	19