

# Properties of real-crete vs lab-crete

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# Concrete mix

- Strength C30
- Environmental class XS1
  - Cement CEM III/B 370 kg
  - Lime stone powder
  - Steelfibres
    - Bekaert Dramix 4D 65/35 15kg
    - Bekaert Dramix 5D 65/60 35 kg

# Results compressive strength

Age	Air	Water	Modelcode 2010
7	26	30,5	
28	36	43	37
56	39	48	

# Results E-modulus [Mpa]

Age	Air	Water	Model code
28	12000	29000	33600
56	11000	34000	
90	13000	--	

# Results tensile strength [MPa]

Age	Air	Water	Modelcode 2010
28	2,7	4,4	2,9

# Differance between lab and reality [%]

properties	reality/lab	Air/ modelcode
compressive	- 20	-3
Tensile	- 39	-7
E-modulus	- 60	-65

# Conclusion

Only if concrete is cured under water you find the properties used in the codes

Depending on the curing conditions the toplayer of the construction will be at least 20% less durable

In a worst case 60% less

Thank you for your attention