

Name and formula

Reference code: 00-033-0306

PDF index name: Calcium Silicate Hydrate

Chemical formula: $\text{Ca}_{1.5}\text{SiO}_{3.5} \cdot x\text{H}_2\text{O}$

Second chemical formula: $1.5\text{CaO} \cdot \text{SiO}_2 \cdot x\text{H}_2\text{O}$

Crystallographic parameters

Crystal system: Unknown

RIR: -

Subfiles and Quality

Subfiles: Inorganic
Cement and Hydration Product

Quality: Doubtful (O)

Comments

General comments: Microdensitometer trace of Guinier film.
Paste of b- Ca_2SiO_4 , water:solid=0.45, hydrated for 21 years at 25 C.
"C-S-H Gel": almost amorphous product of reaction of Portland Cement, Ca_3SiO_5 or b- Ca_2SiO_4 with water in pastes at normal temperatures. Variable composition: Ca/Si 1.3-2.0.
Peaks or bands from C-S-H gel occur at 3.2-2.6, 1.82 and (?) 1.56 angstroms, with low angle scattering but no other definite peaks between 15 and 1.3 angstroms. $\text{CH}=\text{Ca}(\text{OH})_2$.

Sample source: Specimen from Portland Cement Association; Ca/Si=1.41.

References

Primary reference: Mohan, K., Taylor, University of Aberdeen, Old Aberdeen, Scotland., *ICDD Grant-in-Aid* (1980)

Peak list

No.	h	k	l	d [Å]	2Theta[deg]	I [%]
1				3.04000	29.356	100.0
2				2.79000	32.054	60.0
3				1.82000	50.079	60.0

Stick Pattern

