

OIL WELL CEMENT CLASS G HIGH SULFATE RESISTANT

TECHNICAL
DATA SHEET

Related Standard

API spec 10 24th edition
API Specification 10A
ISO 10426-1:2009

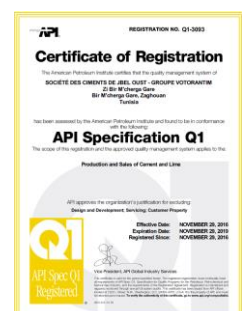
Composition

Clinker 100%
Calcium sulfate setting regulator

Recommended Application

- Oil wells construction
- Water wells
- Gas wells
- Pipelines
- Foundation works on offshore platform support bases.

Given the complexity of the application and the extreme conditions of temperature and pressure, well cement HSR class G has to fulfill demanding requirements, such as a **predictable thickening time** (set time), **high sulfate resistance**, **long term performance**, **fluid loss control**, **low viscosity**, and **mechanical resistance**.



Physical properties

Physical properties	API Spec 10A requirements	Actual Values (Class G-HSR)
Free fluid content	≤ 5.9%	3.5
Compressive strength:		
8h, 38°C B19	≥ 2.1 Mpa	4.6
8h, 60°C	≥ 10.3 Mpa	13.5
Thickening time	≥ 90 and ≥ 120 min	106
Max consistency (15-30 min)	≤ 30.0 Bc	17
Mix water (% of the weight of cement)	44.0	44



Chemical properties	API Spec 10A requirements	Actual Values (Class G-HSR)
Loss on ignition	≤ 3.0%	1.53
Insoluble residue	≤ 0.75%	0.56
Magnesium oxide (MgO)	≤ 6.0%	1.23
Sulfur trioxide (SO ₃)	≤ 3.0%	2.6
Tricalcium silicate (C ₃ S)	≥ 48% and ≤ 65%	59.2
Tricalcium aluminate (C ₃ A)	≤ 3%	2.12
Tetracalcium aluminoferrite plus twice tricalcium aluminate (C ₄ AF + 2*C ₃ A)	≤ 24%	18.41
Total alkali content expressed as sodium oxide (Na ₂ O equivalent)	≤ 0.75%	0.56
SiO ₂ [%]	no	*
Al ₂ O ₃ [%]	no	*
Fe ₂ O ₃ [%]	no	*
CaO [%]	no	*
C ₂ S [%]	no	*
C ₄ AF [%]	no	