



**7781 FM 1102, New Braunfels, Texas 78132
Hunter Cement**

Class H Oil Well Cement

Date: March 20, 2023

HSR

Production Period: March 2023

Silo 2 Lot # 186

CHEMICAL

API Specification 10A (ASTM C114)

Item	Spec. Limit	Test Result
MgO (%)	6.0 max	0.9
SO ₃ (%)	3.0 max	2.7
Ignition loss (%)	3.0 max	1.8
Insoluble residue (%)	0.75 max	0.13
2(C ₃ A) + C ₄ AF	24% Max	18
Tricalcium Silicate (C ₃ S) %	65% max, 48% min	57
Dicalcium Silicate (C ₂ S) %	NA	19
Tricalcium Aluminate (C ₃ A) %	3 max	1
Tetracalcium Aluminoferrite (C ₄ AF) %	NA	16
Free Calcium (FL)	NA	0.26
Total Alkalies (Na ₂ O equivalent) %	0.75 max	0.29

PHYSICAL

Item	Spec. Limit	Test Result
Blaine fineness (m ² /kg)	NA	255
-325 Mesh	NA	82.0
Compressive strength psi(MPA)		
8 Hour Curing 38° C psi	300 (2.1) min	501
8 Hour Curing 60 C psi	1500 (10.3) min	2200
Thickening time	90 min, 120 max	106
Maximum consistency (15 min to 30 min stirring period)	30 max	18
Free Fluid Content %	5.9 max	4.9

This cement meets the testing specification: API Specification 10A, Class H Oil Well Cement, High Sulfate Resistance.

Signature:

Kevin Hanna

Area Quality Control Manager