



HYDRAULIC CONCRETE REPORT

GRAFENE-002

28 days

Project:	ANALYSIS OF CONCRETE MIXTURES WITH GRAPHENE		
Place:	MEXICALI, BAJA CALIFORNIA		
Company:	HGI IT PREMIER	Date:	5th of April, 2024

Sample Number	1	Temperature (NMX/C/435)	26 °C (Max. 32)
Poured Structure:	VERIFICATION TESTS	Air Content (NMX-C-157)	-----
Location:		Project f'c:	250 kg/cm ³
Type of Concrete:	MADE IN LABORATORY	Project Slump:	14 cm
Supplied by:		Added T.M.:	20 mm
Remission		Vibrated:	Yes

Test Number	Date of Pouring	Age, days	Date of Test	Slump (cm)	Diameter (cm)	Area (cm ²)	Max. Load (kgf)	Strength (kg/cm)	% of Strength
1 no graphene	22-Mar-2024	7	29-Mar-2024	14	15.0	176.7	32,650	184.8	73.9
4 with graphene	22-Mar-2024	7	29-Mar-2024	14	15.0	176.7	38,601	218.4	87.4
2 no graphene	22-Mar-2024	14	05-Apr-2024	14	15.0	176.7	32,900	186.2	74.5
6 with graphene	22-Mar-2024	14	05-Apr-2024	14	15.0	176.7	44,230	250.3	100.1
3 no graphene	22-Mar-2024	28	19-Apr-2024	14	15.0	176.7	41,200	233.1	93.3
5 with graphene	22-Mar-2024	28	19-Apr-2024	14	15.0	176.7	54,650	309.3	123.7

Comments and sketch

AT 28 DAYS, MIXTURES WITH GRAPHENE SHOW UP TO 32% GREATER STRENGTH EVOLUTION THAN A CONVENTIONAL MIXTURE

Accredited Methods:

NMX-C-161-ONNCCE-2006, NMX-C-156-ONNCCE-2010, NMX-C-435-ONNCCE-2010, NMX-C-159-ONNCCE-2006
NMX-C-109-ONNCCE-2013, NMX-C-083-ONNCCE-2014, NMX-C-162-ONNCCE-2014, NMX-C-157-ONNCCE-2007

Unaccredited Methods Applied: NMX-C-469-ONNCCE-2013

Conformity Declarations (see 7.8.6 quality manual)

The exhibition, publication, dissemination, exchange, disclosure to third parties without payment is strictly prohibited, and this infringement will be subject to the provisions of articles 117, 210, 211, 211 bis, and 243 of the Federal Penal Code, in addition to being subject to payment of damages to those who infringe this confidentiality duty.

The exhibition, publication, dissemination, exchange, disclosure to third parties of this test report is prohibited while BAJA CALIFORNIA TEST S. DE R.L. DE C.V. is owed payment for its preparation.

The values of the expanded uncertainties of each parameter reported in this report are available upon request.

This test report may not be reproduced in whole or in part without the authorization of the laboratory through documented means.