

API RP19B - SECTION II

Testing Company: ETASA (Argentina) SA
 Date(s) of Testing: 21-Jul-2025 - 21-Jul-2025
 FM-3064, Rev 3

Charge Name: 39g HMX EXTRA II
 Manufacturer Part Number: TC47H EXTRA II
 Explosive Type / Gram Wt.: HMX / 39
 Simulated Gun System: 4.5/8"
 Comments: Also available for 4", 4 1/2", 7" RDX version as TC47R EXTRA II

Test Configuration: Standard Conditions Special Test Conditions
 Casing: 0.5 inch 4140 Mill HT 18-22 Rockwell
 Cement: 0.75 inch Class A, Type I or II Portland
 Fluid Clearance: 0.75 inch Liquid (OMS or Water)
 Overburden Pressures: 1500 5500 9500 psi

Target Properties: Berrea Sandstone
 Target Type: OMS
 Bedding Plane Orientation: Parallel
 Saturating Fluid: UCS Measurement Method: Plug Sampling

Measurements	1,500 psi				5,500 psi				9,500 psi						
	1	2	3	4	avg	1	2	3	4	avg	1	2	3	4	avg
Casing Through Hole, minor, in.	0.41	0.43	0.49	0.45	0.45	0.45	0.43	0.43	0.45	0.44	0.47	0.43	0.42	0.45	0.44
Casing Through Hole, major, in.	0.53	0.49	0.51	0.47	0.50	0.51	0.49	0.49	0.48	0.49	0.49	0.45	0.42	0.48	0.46
Casing Through Hole Average, in.	0.47	0.46	0.50	0.46		0.48	0.47	0.47	0.46		0.48	0.44	0.42	0.47	
Total Core Penetration, in.	18.00	26.75	25.50	26.00	24.06	24.50	23.75	21.75	19.50	22.38	21.25	22.88	18.00	20.88	20.75
Total Target Penetration, in.	19.25	28.00	26.75	27.25	25.31	25.75	25.00	23.00	20.75	23.63	22.50	24.13	19.25	22.13	22.00
Target UCS, psi	6232	6622	7048	6531	6608	6596	6291	6601	6434	6481	6765	6547	6541	6880	6883
Target Porosity, %	18.9%	18.5%	19.2%	19.7%	19.1%	19.7%	19.3%	19.3%	18.9%	19.3%	18.7%	19.5%	19.9%	20.3%	19.6%

Witnessed by: Herrick Lopez Date of Witness: July 21st 2025
 Refer to the API Perforator Section II Witness Instructions at www.api.org/perforator for specific details on the activities that are mandatory to witness. The API representative may not witness but confirms that the following data has been filled out by the manufacturer: Target properties, Target UCS and Target Porosity in the Published Data Sheet form and Saturation Fluid, Pre-Test Measurements and Core Requirements sections in the Test Series forms. API does not certify or endorse the results in any way and the manufacturer remains solely responsible for submitting all information to the sheet and the accuracy and completeness of the data provided.

Manufacturer's Certification
 I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, Third Edition, July, 2021. All of the shaped charges and detonating cord used in these tests are standard equipment with our company and were not changed in any manner for the test. Furthermore, the shaped charges and detonating cord are substantially the same as would be furnished to perform a well for any operator. The results of this test are intended to be used to assist users in predicting downhole penetration and hole size. The penetrations reported do not represent the actual performance that may be produced in any given well application. API neither endorses these test results nor recommends the use of the perforator system described.
 Certified by: Dario Lattanzio Technology VP
 Recertified by: [Signature] Company Official Signature
 Name of test as it should appear on website: TC47H EXTRA II
 Name of test as it appears on application and application date: TC47H EXTRA II 39 grams HMX SDP, May 19th 2025