

**PlasmaNit®**

Tratamientos Térmicos Avanzados SA de CV  
Martín de Zavala Sur 220 Monterrey, Nuevo León  
México CP 64000 Tel: 818342 4864 / 818344 6261  
ttamty@ttavanzados.com  
http://www.ttavanzados.com

**Su Aliado para el Óptimo  
Rendimiento.**

**SURFACE HARDNESS CERTIFICATE : 4065**

Fecha de Entrega: 28/Oct/2021

No. Ciclo: 80PlasmaNit50H

**CUSTOMER** FORJA DE MONTERREY, S.A. DE C.V.  
**STREET:** Carretera Monterrey-Colombia Km 6.5 S/N  
**COLONY:** Gral. Escobedo Centro  
**CITY:** General Escobedo, Nuevo León, México, C.P. 66050  
**RFC:** FMO9608275B3  
**CONTACT:** A Quien Corresponda TELEFONO: 83050000; EMAIL:

No. CLIENTE: CLT271

Documento Relacionado: #

Code	Amount	Measure	Description/ Service PlasmaNIT	Base HRC	Surface HRC
FORJAMTYUSD1	1186	KILOGRAMOS	Dobladoras y Matrices Orden de Salida 41294 1 pza Matriz 18002 1X Sup #59 (385 kgrs) 1 pza Matriz 18002 1X Inf #59 (385 kgrs) Maquinados AEME 8 pzas Matriz (416 kgrs)	46-52	67.1

Observaciones:

Final Visual Conditions: Approved

Control de Calidad  
Sergio Bolado Moreno

Notes: Internationals Standar Used on Test: ASTM E18

1. With this document we state that the pieces mentioned above were treated with PlasmaNit process in a standard cycle for maximum surface and diffusion hardness, taking just inside the technical requirements, procedures and specifications established by the SAE.

2. To determine the surface hardness by sampling was used the tester Krautkramer Branson portable surface hardness MIC 10 for tests on metals by the UCI method (Ultrasonic Contact Impedance) with test load 5 kgf.

3. The Surface hardness and diffusion values obtained depend on the chemical composition of the material and previous heat treatment.

Estimated hardness and diffusion for standard cycle PlasmaNit 50H on material:

Carbon Steel ( 30 to 45 HRC ) ( 0.002" to 0.010" )

Machinery Grade Steel ( 50 TO 62 HRC ) ( 0.015" to 0.025" )

Tool grade steel ( 55 TO 70 HRC ) ( 0.005" to 0.010" )

Stainless steel (55 TO 68 HRC ) ( 0.001" to 0.005" )

4. The Base Material Hardness is a reference value measured before the PlasmaNit treatment, may vary after PlasmaNit treatment depending on tempering temperatures of previous heat treatment.

5. At the same load of said parts a segments of known material and heat treatment is introduced to the charge to ratify and evidence proper PlasmaNit treatment. (Expected Surfaces hardness range; 88-91 HR-15N)

Términos y Condiciones: <http://www.ttavanzados.com/doc/terminosycondiciones.pdf>

MARTIN DE ZAVALA SUR # 220 COL. MONTERREY CENTRO, MONTERREY, N.L., MÉXICO, C.P. 64000

TELS: (81) 8342-4864, (81) 8344-6261 FAX: (81) 8344-6261, ttamty@ttavanzados.com / www.ttavanzados.com

Hoja 1