DEACERO®

EXCELENCIA EN CALIDAD

Acería Celaya
Carretera 45 Panamericana Km 64.8 Poblado el Chinaco
C.P./ZIP 38260 MPIO. VILLAGRAN, GUANAJUATO
Tel/Phone (+52) 01 818 368 1111
MX 01 800 021 3322, USA 1800 332 2376

DECLARACIÓN DE CONFORMIDAD DE BARRAS CORRUGADAS DE BAJA ALEACIÓN, PARA REFUERZOS DE CONCRETO /

No. Certificado / Certificate No:	18918 - 24475684 - 7
Fecha / Date:	22/04/2023

Hecho en México / Made in Mexico

Análisis Químico / Chemical Analysis (% Peso / Weight)

Colada / Heat	Secuencia / Sequence	Clave / Code	Producto / Description of Goods	% C AVG	% Mn AVG	% Si AVG	% P AVG	% S AVG	% Cu AVG	% Cr AVG	% Ni AVG	% Mo AVG	% V AVG	% Nb AVG	CE AVG
140920	154397	23832	VARILLA DA- NTC 2289 G60 C2 3/4" 12.0 m P41 R	0.277	0.980	0.138	0.007	0.025	0.267	0.102	0.086	0.018	0.002	0.006	0.461 6
140921	154398	23832	VARILLA DA- NTC 2289 G60 C2 3/4" 12.0 m P41 R	0.270	0.982	0.140	0.008	0.021	0.282	0.097	0.088	0.018	0.002	0.006	0.454 6
139740	153023	23833	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	0.289	0.992	0.135	0.007	0.028	0.241	0.104	0.097	0.021	0.003	0.006	0.475 4
139862	153423	23833	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	0.272	0.991	0.120	0.009	0.021	0.243	0.098	0.091	0.022	0.003	0.005	0.457 6
140916	154404	23833	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	0.266	1.013	0.130	0.012	0.017	0.287	0.148	0.089	0.019	0.002	0.006	0.461 6
140917	154403	23833	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	0.273	0.984	0.127	0.009	0.014	0.294	0.112	0.080	0.020	0.002	0.007	0.460 0
140918	154402	23833	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	0.274	1.001	0.129	0.011	0.021	0.285	0.121	0.079	0.019	0.002	0.007	0.463 7
140919	154401	23833	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	0.261	0.981	0.121	0.011	0.029	0.290	0.106	0.088	0.020	0.002	0.006	0.447 1
140911	154409	23834	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	0.278	0.981	0.141	0.011	0.025	0.307	0.111	0.110	0.022	0.002	0.006	0.465 5
140913	154408	23834	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	0.278	1.005	0.152	0.012	0.026	0.295	0.210	0.135	0.022	0.003	0.007	0.480 5
140914	154407	23834	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	0.277	0.997	0.154	0.008	0.022	0.264	0.164	0.136	0.020	0.002	0.006	0.473 1
140915	154406	23834	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	0.279	0.982	0.149	0.009	0.025	0.262	0.158	0.126	0.021	0.002	0.006	0.471 1
140916	154405	23834	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	0.266	1.013	0.130	0.012	0.017	0.287	0.148	0.089	0.019	0.002	0.006	0.461 6
137481	185717	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.278	1.305	0.226	0.013	0.022	0.307	0.120	0.101	0.025	0.027	0.004	0.517 2
140573	185715	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.276	1.303	0.219	0.007	0.020	0.217	0.097	0.071	0.021	0.024	0.006	0.509 6
140577	185713	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.255	1.314	0.217	0.007	0.013	0.233	0.090	0.077	0.021	0.024	0.006	0.490 0
140578	185714	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.262	1.346	0.200	0.009	0.014	0.218	0.084	0.076	0.020	0.027	0.006	0.501 7
201461	185722	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.269	1.349	0.208	0.011	0.006	0.098	0.070	0.053	0.021	0.027	0.001	0.502 8
201463	185721	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.262	1.321	0.143	0.010	0.013	0.193	0.087	0.070	0.017	0.028	0.001	0.496 1
201464	185720	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.262	1.307	0.141	0.009	0.011	0.200	0.081	0.073	0.017	0.028	0.001	0.494 0
201465	185719	23816	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	0.255	1.366	0.198	0.011	0.013	0.193	0.104	0.068	0.017	0.028	0.002	0.498 7

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Certificamos que este material ha sido producido, inspeccionado y probado de acuerdo a la norma NTC 2289:2020 y con el reglamento técnico de barras corrugadas y lisas de acero de baja aleación para refuerzos de concreto Resolución1856 de 2017 del MCIT. La información de las propiedades químicas y mecánicas contenida en el presente certificado son valores promedio obtenidos de los registros internos de la compañía, cumpliendo con la norma antes mencionada. / We certify that this material has been produced, inspected and tested according to standards applicable NTC2289:2020. All information described in the certificate are average values that are based on internal company records in compliance with the above rule 2015.

EMPRESA CERTIFICADA
ISO 9001:2015 Gestión de calidad
CERTIFICADO ISO 9001:2015
NO. 2021CRE-895
CERTIFICADO DESDE 2021-01-08

ING. JOSE CARLOS OREGEL AYALA
Gerente de Aseguramiento de Calidad / Quality Assurance Manager

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Propiedades Mecánicas / Mechanical Properties

Colada / Heat	Secuencia / Sequence	Producto / Description of Goods	Grado / Steel Grade	Calibre / Diameter	Cantidad / Quantity	RT kg/mm²	TS MPa	% Elong / Elong	LF kg/mm²	YS MPa	RT/LF	P. Doblez / Bend Test	Acabado	Peso metro (Kg/m)	Máx. Espaciamiento	Min. Altura	Separación Extr. Resaltes
						AVG	AVG	AVG	AVG	AVG			Punto 11 de la Norma NTC2289 /	AVG	AVG	AVG	AVG
140917	154403	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	G60	3/4"	12	62.99	617.72	17.57	48.35	474.22	1.30	Cumple / Successfully	CUMPLE	2.14	12.88	1.34	4.96
140918	154402	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	G60	3/4"	5	62.86	616.45	17.32	48.19	472.62	1.30	Cumple / Successfully	CUMPLE	2.13	12.88	1.34	4.96
140919	154401	VARILLA DA- NTC 2289 G60 C2 3/4" 6.0 m P75 R	G60	3/4"	8	62.89	616.76	17.27	48.11	471.84	1.30	Cumple / Successfully	CUMPLE	2.13	12.88	1.34	4.96
140911	154409	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	G60	3/4"	17	63.10	618.85	17.10	48.46	475.26	1.30	Cumple / Successfully	CUMPLE	2.11	12.78	1.15	3.25
140913	154408	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	G60	3/4"	25	61.43	602.50	15.50	46.56	456.60	1.31	Cumple / Successfully	CUMPLE	2.14	12.78	1.19	3.25
140914	154407	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	G60	3/4"	21	61.45	602.64	16.00	46.56	456.64	1.31	Cumple / Successfully	CUMPLE	2.15	12.78	1.16	3.25
140915	154406	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	G60	3/4"	25	61.96	607.69	16.18	47.44	465.30	1.30	Cumple / Successfully	CUMPLE	2.13	12.78	1.16	3.25
140916	154405	VARILLA DA- NTC 2289 G60 C2 3/4" 9.0m P76 R	G60	3/4"	2	63.11	618.91	17.10	48.30	473.69	1.30	Cumple / Successfully	CUMPLE	2.16	12.88	1.29	5.11
137481	185717	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	24	67.35	660.54	15.01	44.83	439.69	1.50	Cumple / Successfully	CUMPLE	0.53	6.45	0.67	2.68
140573	185715	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	27	63.34	621.16	17.09	45.32	444.45	1.39	Cumple / Successfully	CUMPLE	0.53	6.34	0.54	2.18
140577	185713	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	52	67.22	659.22	15.99	44.33	434.75	1.51	Cumple / Successfully	CUMPLE	0.53	6.34	0.58	2.18
140578	185714	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	11	64.17	629.29	16.46	45.25	443.77	1.41	Cumple / Successfully	CUMPLE	0.54	6.34	0.55	2.17
201461	185722	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	40	70.04	686.86	17.25	50.18	492.18	1.39	Cumple / Successfully	CUMPLE	0.53	6.30	0.68	2.28
201463	185721	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	50	69.84	684.93	17.50	49.89	489.29	1.39	Cumple / Successfully	CUMPLE	0.53	6.31	0.68	2.28
201464	185720	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	57	65.53	642.65	15.54	43.81	429.70	1.49	Cumple / Successfully	CUMPLE	0.53	6.34	0.56	2.18
201465	185719	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	52	66.30	650.18	15.17	44.65	437.94	1.48	Cumple / Successfully	CUMPLE	0.54	6.34	0.58	2.18
201466	185718	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	51	66.05	647.74	16.20	45.75	448.74	1.44	Cumple / Successfully	CUMPLE	0.53	6.39	0.66	2.65
201467	185716	VARILLA DA- NTC 2289 G60 C2 3/8" 6.0 m P66 R	G60	3/8"	54	68.38	670.62	16.40	46.28	453.87	1.47	Cumple / Successfully	CUMPLE	0.53	6.34	0.51	2.17

Certificamos que este material ha sido producido, inspeccionado y probado de acuerdo a la norma NTC 2289:2020 y con el reglamento técnico de barras corrugadas y lisas de acero de baja aleación para refuerzos de concreto Resolución1856 de 2017 del MCIT. La información de las propiedades químicas y mecánicas contenida en el presente certificado son valores promedio obtenidos de los registros internos de la compañía, cumpliendo con la norma antes mencionada. / We certify that this material has been produced, inspected and tested according to standards applicable NTC2289:2020. All information described in the certificate are average values that are based on internal company records in compliance with the above rule 2015.

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