



PROCARSA, S.A. DE C.V.

**CERTIFICADO DE CALIDAD  
DE PRUEBAS FISICAS-QUIMICAS**

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CUSTOMER: **TELSON AVILA DE SANCHEZ**  
 PEDIDO CLIENTE / P.O. **12612**  
 PEDIDO INTERNO / I.O. **56621-20 / 59923-40 / 51242-10 / 60679-20**  
 PARTIDA(S) **101 Kg/cm<sup>2</sup>**  
 ITEMS

NUMBER **PTM-59722-2004**  
 FECHA **SEPTIEMBRE 30, 2004**  
 DATE

DIAMETRO: **10 3/4"**  
 ESPESOR DE PARED **0.365"**  
 WALL THICKNESS

GRADO: **ASTM A53-B**  
 GRADE:

PRESSION HIDROSTATICA: **1430 PSI**  
 HIDROSTATIC TEST:

**PRUEBAS DE TENSION**

**TENSILE TEST**

**CHEMICAL ANALYSES PERCENT WEIGHT**

ITEM/PROBETA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (F.S.I.)	ULTIMA TENSION TENSILE STRENGTH (F.S.I.)	% ELONG. ELONG. % ST	C	Min	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ce
32-5 TC TS	143248	66 272	71 217 75 184	36	0.93	1.05	0.015	0.005	0.013	0.003	0.003	0.294	0.038	0.035	0.0025	0.017	0.026	0.006	0.0056	
1-19 TC TS	145704	63 694	73 848 82 507	34	0.86	1.12	0.014	0.004	0.001	0.004	0.003	0.200	0.020	0.036	0.0028	0.020	0.030	0.006	0.0030	
15-13 TC TS	145705	59 440	79 630 80 365	40	0.75	1.14	0.014	0.004	0.002	0.002	0.003	0.200	0.030	0.039	0.0033	0.020	0.030	0.006	0.0040	
12-7 TC TS	145730	66 600	77 330 82 023	35	0.86	1.09	0.013	0.005	0.010	0.003	0.003	0.200	0.030	0.034	0.0021	0.020	0.030	0.007	0.0060	
22-16 TC TS	145731	63 836	78 427 85 416	34	0.81	1.05	0.012	0.004	0.010	0.003	0.004	0.240	0.030	0.033	0.0017	0.020	0.030	0.006	0.0050	
31-15 TC TS	145811	65 794	77 511 82 886	33	0.85	1.06	0.017	0.007	0.010	0.003	0.003	0.260	0.030	0.037	0.0024	0.020	0.030	0.007	0.0060	
3-13 TC TS	145812	67 593	77 778 84 282	32	0.87	1.09	0.012	0.007	0.010	0.003	0.002	0.270	0.020	0.027	0.0022	0.030	0.030	0.006	0.0060	
29-7 TC TS	145815	64 629	75 708 81 567	33	0.85	1.07	0.017	0.006	0.010	0.003	0.002	0.170	0.020	0.029	0.0025	0.010	0.030	0.005	0.0050	
59-14 TC TS	145816	67 625	80 594 88 465	34	0.84	1.06	0.016	0.005	0.010	0.002	0.003	0.180	0.020	0.030	0.0025	0.020	0.030	0.006	0.0100	
16-20 TC TS	237376	65 359	83 100 86 167	32	0.8	1.07	0.011	0.008	0.010	0.002	0.003	0.178	0.019	0.036	0.0030	0.023	0.026	0.004	0.0057	
7-10 TC TS	245558	54 947	74 942 79 467	38	0.73	1.12	0.010	0.006	0.001	0.002	0.003	0.170	0.030	0.042	0.0024	0.020	0.040	0.007	0.0070	

CERTIFICAMOS QUE LA TUBERIA AGUI DESCRITA CUMPLE Y HA SIDO FABRICADA, MU, STREMADA, PROBADA E INSECCIONADA DE ACUERDO CON LOS REQUISITOS APLICABLES DE LA ESPECIFICACION:

WE CERTIFY THE PIPE ABOVE MENTIONED ACCOMPLISH AND HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SPECIFICATIONS:

ASTM A53-B -02

ING. FERNANDO OSORIO PEREZ  
 GERENTE DE ASEGURAMIENTO DE CALIDAD  
 QUALITY ASSURANCE MANAGER