



FLM-406-7

PROCARSA, S.A. DE C.V.

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

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE:

TUCOTA

NUMERO PTM-56867-2003

CUSTOMER:

11077

FECHA

NOVIEMBRE 25, 2003

PEDIDO CLIENTE / P.O.

48987-10 / 49877-10

PEDIDO INTERNO / I.O.

11077

PARTEDA(S)

48987-10 / 49877-10

ITEMS

48987-10 / 49877-10

ANALISIS QUIMICO % EN PESO

37 Kg/cm²

520 PSI

DIAMETRO : 20"
DIAMETER : 20"

ESPESSOR DE PARED
WALL THICKNESS

0.250"

GRADO :
GRADE :

ASTM A53-B

PRESION HIDROSTATICA:
HYDROSTATIC TEST:

37 Kg/cm²

520 PSI

TENSILE TEST

NUM PROBETA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (PSI)	ULTIMA TENSION TENSILE STRENGTH (PSI)	% ELONG. % ELONG.	LEAIT YMP2	C	Min	P	S	Cb	V	Ti	SI	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
12-5 TC Ts	135383	45 887	88 830 75 395	37	0.67	0.161	1.13	0.010	0.008	0.004	0.004	0.004	0.288	0.014	0.040	0.0027	0.017	0.014	0.008	0.0070	
62-5 TC Ts	135385	43 912	69 039 78 692	36	0.64	0.161	1.12	0.016	0.005	0.001	0.002	0.004	0.301	0.013	0.040	0.0026	0.014	0.025	0.005	0.0052	
38-12 TC Ts	135386	43 071	68 106 77 282	37	0.63	0.154	1.11	0.016	0.005	0.001	0.002	0.003	0.296	0.013	0.040	0.0026	0.014	0.024	0.005	0.0051	
90-12 TC Ts	135387	52 011	73 910 78 210	38	0.70	0.174	1.08	0.015	0.006	0.003	0.004	0.004	0.337	0.023	0.035	0.0030	0.017	0.040	0.009	0.0049	
32-10 TC Ts	135389	51 371	71 438 78 616	36	0.72	0.180	1.12	0.017	0.006	0.003	0.005	0.004	0.306	0.020	0.032	0.0032	0.024	0.015	0.009	0.0051	
16-6 TC Ts	135390	47 306	68 594 75 852	37	0.69	0.179	1.10	0.015	0.007	0.005	0.004	0.004	0.332	0.015	0.027	0.0032	0.021	0.011	0.008	0.0080	
30-11 TC Ts	135391	50 633	71 952 77 864	35	0.70	0.162	1.11	0.019	0.006	0.001	0.002	0.004	0.299	0.015	0.036	0.0032	0.010	0.022	0.004	0.0054	
37-4 TC Ts	235130	47 876	68 357 74 259	37	0.70	0.157	1.10	0.016	0.007	0.001	0.003	0.004	0.297	0.017	0.031	0.0016	0.014	0.023	0.004	0.0037	
6-11 TC Ts	235131	49 798	69 987 76 730	36	0.71	0.169	1.07	0.018	0.007	0.002	0.004	0.004	0.261	0.012	0.038	0.0020	0.017	0.006	0.007	0.0076	
54-8 TC Ts	235132	44 837	72 011 74 750	37	0.62	0.157	1.12	0.014	0.009	0.001	0.002	0.003	0.291	0.019	0.045	0.0026	0.016	0.025	0.006	0.0056	
85-13 TC Ts	235133	47 493	68 421 73 830	36	0.68	0.157	1.07	0.014	0.007	0.005	0.004	0.004	0.278	0.014	0.038	0.0020	0.017	0.009	0.009	0.0067	
61-4 TC Ts	235134	48 944	69 980 77 681	34	0.70	0.170	1.13	0.016	0.007	0.001	0.002	0.003	0.326	0.015	0.041	0.0029	0.017	0.025	0.004	0.0058	
11-12 TC Ts	235793	52 843	71 812 76 856	38	0.74	0.166	1.12	0.019	0.007	0.004	0.005	0.004	0.261	0.023	0.037	0.0026	0.023	0.045	0.011	0.0053	
1-8 TC Ts	235794	46 101	69 152 76 979	40	0.67	0.156	1.12	0.014	0.008	0.005	0.004	0.004	0.289	0.012	0.045	0.0030	0.020	0.026	0.01	0.0056	

CERTIFICAMOS QUE LA TUBERIA AQUI DESCRITA CUMPLE Y HA SIDO FABRICADA, MUESTREADA, PROBADA E INSPECCIONADA 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:

ING. FERNANDO OSORIO PEREZ
GERENTE DE ASESURAMIENTO DE CALIDAD

ASTM A53-B-99