



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:		NUMBER:	
PEDIDO CLIENTE/PO:	11077	PR/TA	NOVIEMBRE 25, 2003
PEDIDO INTERNO/IO:		DATE	
PARTIDA (S)			
ITEMS	48987-10 / 49877-10		

DIETRO: 20" ESPESOR DE PARED: 0.250" GRADO: ASTM A53-B PRESION HIDROSTATICA: 37 Kg/cm² 520 PSI

WALL THICKNESS CHEMICAL ANALYSIS PERCENT WEIGHT

TENSILE TEST

PROBETA (DESCRIPTION)	COLADA (HEAT)	LIMITE ELASTICO (YIELD STRENGTH) (PSI)	ULTIMA TENSION (TENSILE STRENGTH) (PSI)	% ELONG. (1")	LEADIT (V.S.T.S)	C	Min	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
12-5 TC	135383	45 887	68 830	37	0.67	0.161	1.13	0.010	0.008	0.004	0.004	0.004	0.286	0.014	0.040	0.0027	0.017	0.014	0.008	0.0070	
TS			75 395																		
62-5 TC	135385	43 912	69 039	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	
TS			76 692																		
39-12 TC	135386	43 071	68 106	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	
TS			77 282																		
90-12 TC	135387	52 011	73 910	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	
TS			78 210																		
32-10 TC	135389	51 371	71 438	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	
TS			78 616																		
16-6 TC	135390	47 306	68 594	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	
TS			75 852																		
30-11 TC	135391	50 633	71 952	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	
TS			77 864																		
37-4 TC	235130	47 876	68 357	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	
TS			74 259																		
6-11 TC	235131	49 798	69 987	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	
TS			76 730																		
54-8 TC	235132	44 837	72 011	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	
TS			74 750																		
85-13 TC	235133	47 493	68 421	36	0.69	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	
TS			73 830																		
61-4 TC	235134	48 944	69 990	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	
TS			77 691																		
11-12 TC	235793	52 843	71 812	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	
TS			76 856																		
1-8 TC	235794	46 101	69 152	40	0.67	0.156	1.12	0.014	0.008	0.005	0.004	0.004	0.299	0.012	0.045	0.0030	0.020	0.026	0.01	0.0056	
TS			76 979																		

CONFIRMAMOS QUE LA TUBERIA AQUÍ DESCRITA CUMPLE Y HA SIDO
RECIBIDA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO
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 -99

ING. FERNANDO OSORIO PEREZ

[Handwritten Signature]

CONTROL DE CALIDAD