



FLM-005-7

PROCARSA, S.A. DE C.V.

CERTIFICADO DE CALIDAD
DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

| | | | |
|-----------------------|---|--------|------------------|
| CLIENTE: | TUCOTA | NÚMERO | PTM-5124-2002 |
| CUSTOMER: | | NUMBER | |
| PEDIDO CLIENTE / P.O. | 8312 | FECHA | FEBRERO 17, 2002 |
| PARTIDA(S) | | DATE | |
| ITEMS | 21343-30 / 26492-10 / 22521-10 / 22574-10 | | |

DIAMETRO: 10 3/4" ESPESOR DE PARED: 0.250" GRABADO: ASTM A53-B

WALL THICKNESS: 0.250" GRADE: CHEMICAL ANALYSIS PERCENT WEIGHT

| NUM. PROBETA DESCRIPTION | COLADA HEAT | LIMITE ELASTICO YIELD STRENGTH (PSI) | ULTIMA TENSION TENSIL STRENGTH (PSI) | % ELONG. 2" | LEBIT VALTS | C | Min | P | S | Cb | V | TI | SI | Cu | Al | Ca | Cr | Ni | Mo | N | Ceq |
|-----------------------------|----------------|--|--|----------------|----------------|-------|------|-------|-------|----|---|----|-------|-------|-------|--------|-------|-------|----|--------|-----|
| 24-2 TC TS | 115944 | 51 174 | 69 019 | 35 | 0.74 | 0.176 | 1.13 | 0.014 | 0.006 | - | - | - | 0.229 | 0.022 | 0.035 | 0.0016 | 0.015 | 0.021 | - | 0.0065 | |
| 26-27 TC TS | 115945 | 52 250 | 77 100 | 35 | 0.74 | 0.180 | 1.11 | 0.013 | 0.006 | - | - | - | 0.226 | 0.020 | 0.040 | 0.0017 | 0.014 | 0.022 | - | 0.0069 | |
| 4-27 TC TS | 115946 | 53 100 | 77 783 | 35 | 0.76 | 0.161 | 1.11 | 0.014 | 0.005 | - | - | - | 0.236 | 0.019 | 0.045 | 0.0016 | 0.009 | 0.019 | - | 0.0069 | |
| 18-15 TC TS | 211490 | 50 427 | 68 983 | 40 | 0.73 | 0.151 | 0.94 | 0.017 | 0.005 | - | - | - | 0.184 | 0.014 | 0.031 | 0.0023 | 0.024 | 0.027 | - | 0.0067 | |
| 12-28 TC TS | 212166 | 54 573 | 72 476 | 41 | 0.77 | 0.147 | 0.93 | 0.015 | 0.004 | - | - | - | 0.161 | 0.039 | 0.048 | 0.0027 | 0.020 | 0.034 | - | 0.0054 | |
| 7-13 TC TS | 212167 | 51 315 | 73 083 | 36 | 0.77 | 0.145 | 0.98 | 0.015 | 0.006 | - | - | - | 0.129 | 0.034 | 0.050 | 0.0027 | 0.020 | 0.038 | - | 0.0077 | |
| 19-23 TC TS | 212168 | 51 279 | 71 839 | 38 | 0.75 | 0.148 | 0.95 | 0.017 | 0.003 | - | - | - | 0.184 | 0.050 | 0.039 | 0.0037 | 0.026 | 0.040 | - | 0.0095 | |
| 3-3 TC TS | 212431 | 62 355 | 76 415 | 35 | 0.84 | 0.100 | 1.18 | 0.018 | 0.006 | - | - | - | 0.200 | 0.041 | 0.039 | 0.0024 | 0.018 | 0.031 | - | 0.0073 | |
| 8-18 TC TS | 212432 | 65 317 | 74 561 | 35 | 0.87 | 0.087 | 1.16 | 0.016 | 0.007 | - | - | - | 0.181 | 0.026 | 0.040 | 0.0026 | 0.016 | 0.030 | - | 0.0079 | |
| 27-25 TC TS | 212433 | 61 677 | 75 181 | 36 | 0.79 | 0.071 | 1.19 | 0.018 | 0.005 | - | - | - | 0.186 | 0.025 | 0.039 | 0.0033 | 0.015 | 0.026 | - | 0.0080 | |

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:

ASTM

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