



FLM-005-7  
**PROCARSA, S.A. DE C.V.**

**CERTIFICADO DE CALIDAD  
 DE PRUEBAS FISICAS-QUIMICAS**  
 QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

|                       |                   |        |                 |
|-----------------------|-------------------|--------|-----------------|
| CIENTE:               | TUCOTA            | NUMERO | PTM-55497-2003  |
| CUSTOMER:             |                   | NUMBER |                 |
| PEDIDO CLIENTE / P.O. | 10801             | FECHA  | AGOSTO 04, 2003 |
| PEDIDO INTERNO / I.O. |                   | DATE   |                 |
| PARTIDA(S)            | JP-4-01 / YG-3-00 |        |                 |
| ITEMS                 |                   |        |                 |

ANALISIS QUIMICO % EN PESO  
 CHEMICAL ANALYSES PERCENT WEIGHT

AMETRO: 24" ESPESOR DE PARED: 0.375" GRADO: ASTM A53-B PRESION HIDROSTATICA: 46 Kg/cm<sup>2</sup> 660 PSI  
 WALL THICKNESS: 0.375" GRADE: ASTM A53-B

| DESCRIPCION    | COLADA<br>HEAT | LIMITE ELASTICO<br>YIELD STRENGTH<br>(TALL) | ULTIMA TENSION<br>TENSILE STRENGTH<br>(TALL) | % ELONG.<br>1" | LEWIT<br>WEIGHT | CHEMICAL ANALYSES PERCENT WEIGHT |      |       |       |       |   |    |       |       |       |    |    |        |       |   |     |
|----------------|----------------|---|--|----------------|-----------------|----------------------------------|------|-------|-------|-------|---|----|-------|-------|-------|----|----|--------|-------|---|-----|
|                |                |   |  |                |                 | C                                | Mn   | P     | S     | Cb    | V | Ti | Si    | Cu    | Al    | Ca | Cr | Ni     | Mo    | N | Ceq |
| 4-5 TC<br>TS   | ZV2889         | 61 289                                      | 68 469<br>71 006                             | 41             | 0.90            | 0.090                            | 0.74 | 0.015 | 0.009 | 0.010 | - | -  | 0.190 | 0.010 | 0.017 | -  | -  | 0.020  | 0.010 | - | -   |
| 98-6 TC<br>TS  | 164213         | 59 527                                      | 70 150<br>75 978                             | 38             | 0.85            | 0.070                            | 0.81 | 0.015 | 0.013 | 0.010 | - | -  | 0.250 | 0.110 | 0.054 | -  | -  | 0.0200 | 0.020 | - | -   |
| 99-6 TC<br>TS  | 164216         | 63 671                                      | 72 949<br>77 427                             | 36             | 0.87            | 0.070                            | 0.88 | 0.015 | 0.008 | 0.013 | - | -  | 0.230 | 0.040 | 0.044 | -  | -  | 0.0300 | 0.010 | - | -   |
| 69-13 TC<br>TS | 289074         | 57 096                                      | 69 207<br>75 680                             | 34             | 0.83            | 0.070                            | 0.86 | 0.015 | 0.007 | 0.015 | - | -  | 0.252 | 0.050 | 0.057 | -  | -  | 0.0200 | 0.010 | - | -   |

ERTIFICAMOS QUE LA TUBERIA AQUI DESCRITA CUMPLE Y HA SIDO  
 ABRICADA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO  
 ON 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  
 GERENTE DE ASEGURAMIENTO DE CALIDAD  
 QUALITY ASSURANCE MANAGER

