



Arab Petrochemical Company



High Density Polyethylene ARMCRP100B (Pipe Grade)

| Typical properties | Test method | Unit | Value |
|-------------------------------------|----------------|--------------------|-------|
| MFI@190°C, 5.0Kg | ASTM 1238 | gr/10min | 0.22 |
| MFI@190°C, 21.6Kg | ASTM 1238 | gr/10min | 6.2 |
| FRR(21.6/5.0) | ----- | ----- | 28 |
| Mass Density(23°C) | ISO 1183-1 | gr/cm3 | 0.957 |
| Bulk Density | ASTM D D1829 | gr/cm3 | 0.605 |
| Carbon Black Content | ASTM D 4218 | % | 2.3 |
| Carbon Black Dispersion | BS-2782 | Rating | max 3 |
| Impact Strength(charpy Index@23c°) | ISO 179/1eA | mj/mm ² | >20 |
| Hydrostatic Strength (80°C/5.5MPa) | ISO 11677 | hr | >165 |
| Volatiles | Basel Method | ppm | 349 |
| Contamination | Hoechst Method | Rating | 2 |
| Vicat Softening Temperature, (B50) | ASTM D D1525 | °C | 75 |
| Oxidation Induction Time, (210 °C) | ASTM D 3895 | min | >25 |
| DSC Melting Point | ----- | °C | 130 |
| Shore Hardness, (Shore D, 3 sec) | ASTM D 2240 | ----- | 63 |

Ø Values shown are typical which are not to be considered as product specifications.

✓ Main application & Characteristics:

ARMCRP100B are high molecular weight high density polyethylene copolymers, developed as general purpose resin for use in pressure and non-pressure pipes. A minimum service life of 50 years is achievable under appropriate pressure and temperature conditions. **ARMCRP100B** offer excellent chemical resistance and environmental stress crack resistance.

ARMCRP100B will provide excellent resistance to effects of ultra violet light exposure in outdoor applications.

ARMCRP100B are suitable for use in transport of a wide range of fluids for industrial, rural and mining applications.

Suitability for use in any application should be determined by appropriate performance testing.

* **ARMCRP100B** are suitable for food contact.



Irak Petrochemical Company



Address:

No. 3, Taban St.
Vali-e-Asr Ave.
Tehran - IRAN

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[MPa] HOOP STRESS

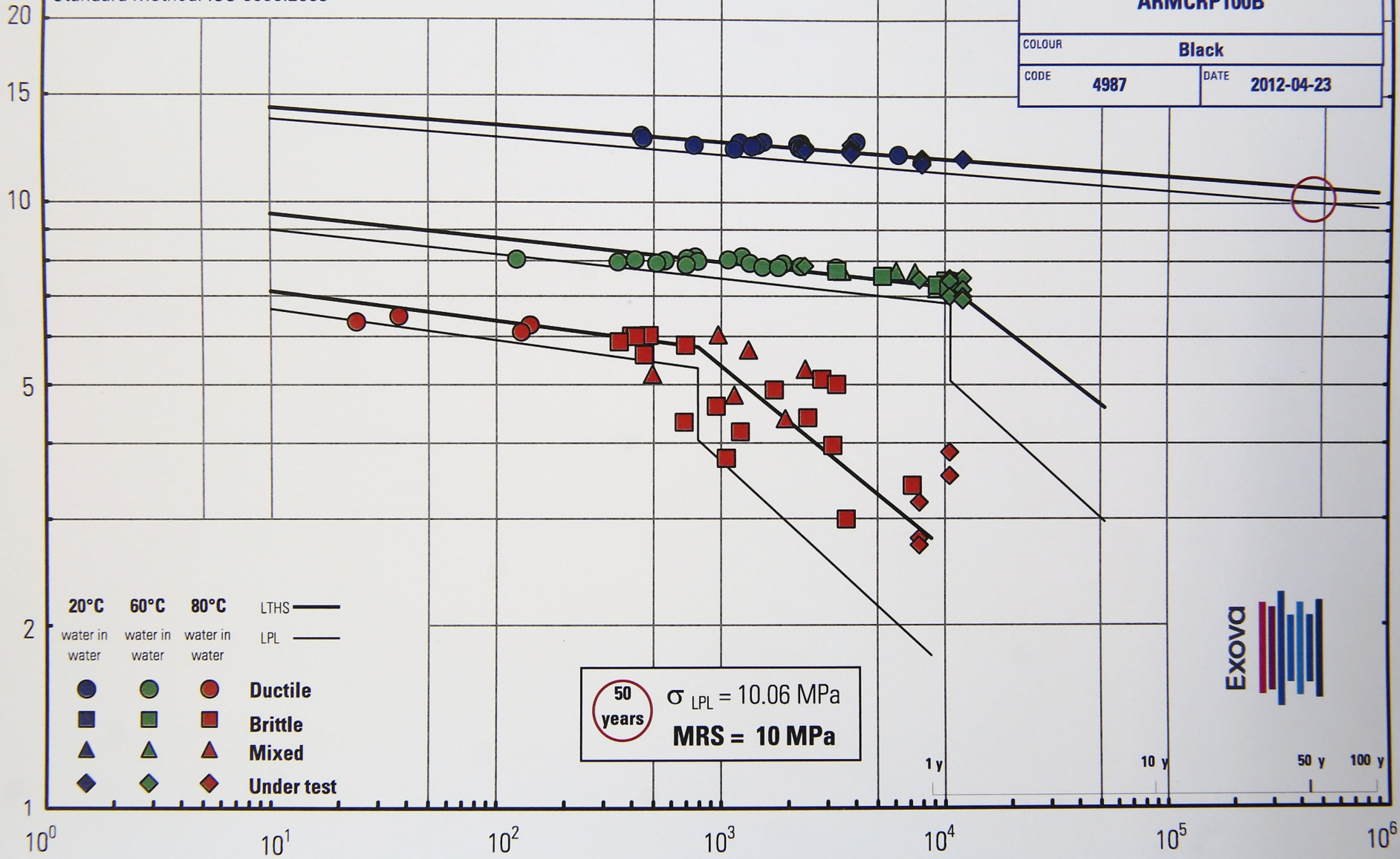
Standard Method: ISO 9080:2003

ARMCRP100B

COLOUR **Black**

CODE **4987**

DATE **2012-04-23**



50 years $\sigma_{LPL} = 10.06 \text{ MPa}$
MRS = 10 MPa

20°C water in water
60°C water in water
80°C water in water
LTHS ———
LPL ———

● Ductile
■ Brittle
▲ Mixed
◆ Under test
● Ductile
■ Brittle
▲ Mixed
◆ Under test
● Ductile
■ Brittle
▲ Mixed
◆ Under test



1 y 10 y 50 y 100 y

TIME [h]