CPR 100 BLACK

Technical Data Sheet	BGT™ HDPE 506

Regulatory Status

For regulatory compliance information, refer to the BGT™ HDPE 100 BLACK Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).
This grade is approved for potable water applications in accordance with ISO 4427 and EN 12201.
This grade is suitable for gas distribution (with appropriate certification per local regulations).

- Not intended for medical or pharmaceutical applications.

Status

Commercial: Active

Availability

Middle East, India, Turkey, Central Asia, Africa, Europe (upon request)

Application

Potable Water Pipes, Gas Distribution Pipes, Sewer Force Mains, Industrial Pressure Piping

Market

Municipal Water Infrastructure, Urban Gas Networks, Industrial Fluid Systems

Processing Method

Pipe Extrusion (Single- or Twin-Screw)

Attribute

PE 100 HDPE, MRS = 10 MPa, Environmental Stress Crack Resistance (ESCR >1000 h, ASTM D1693), High Impact Resistance (Notched Izod >5 kJ/m², ISO 180), Carbon Black Stabilized (2.5 wt%), Melt Flow Rate = 0.25 g/10 min, Density = 0.952 g/cm³, Fully Compliant with ISO 4427 and EN 12201 for Potable Water Applications.

Typical Properties
Physical

Property	Nominal Value	Units	Test Method
Melt Flow Rate (190 °C / 5.0 kg)	0.23	g/10 min	ISO 1133-1
Melt Flow Rate (190 °C / 21.6 kg)	6.5	g/10 min	ISO 1133-1
Density	0.959	g/cm³	ISO 1183-1
Bulk Density	580	kg/m³	ISO 60

Mechanical

Property	Nominal Value	Units	Test Method
Tensile Modulus (23 °C)	1100	MPa	ISO 527-1,-2
Tensile Stress at Yield (23 °C, 50 mm/min)	23	MPa	ISO 527-1,-2
Tensile Strain at Break (23 °C)	≥350	%	ISO 527-1,-2
Tensile Strain at Yield (23 °C, 50 mm/min)	8	%	ISO 527-1,-2

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Property	Nominal Value	Units	Test Method
Flexural Creep Modulus (4-point, 1 min)	1250	MPa	ISO 9080
Flexural Creep Modulus (4-point, 24 hr)	580	MPa	ISO 9080
Flexural Creep Modulus (4-point, 2000 hr)	350	MPa	ISO 9080
Tensile Creep Modulus (1 hr, 2 MPa)	900	MPa	ISO 899-1
Tensile Creep Modulus (1000 hr, 2 MPa)	380	MPa	ISO 899-1
MRS Classification	10	MPa	ISO 9080

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Property	Nominal Value	Units	Test Method
Charpy Impact Strength – Notched (23 °C)	**28**	**kJ/m²**	**ISO 179-1/1eA**
Charpy Impact Strength – Notched (–30 °C)	**14**	**kJ/m²**	**ISO 179-1/1eA**

Hardness

Property	Nominal Value	Units	Test Method
Shore Hardness (Shore D, 3 s)	64	–	ISO 868

Terminal

Property	Nominal Value	Units	Test Method
Vicat Softening Temperature (B50)	75	°C	ISO 306
Oxidation Induction Time (210 °C)	32	min	ISO 11357-6
DSC Melting Point	130	°C	DSC

Additive

Property	Nominal Value	Units	Test Method
Carbon Black Content	2.25	%	ISO 6964

Additional Information

Property	Nominal Value	Units	Test Method
Odor Threshold	<2	–	EN 1622

Product Description

BGT™ HDPE 100 BLACK is a high-density polyethylene (HDPE) pipe grade based on advanced bimodal technology, containing 2.25% carbon black for UV protection. It is fully compliant with ISO 4427 and EN 12201 standards for potable water and gas applications. With a confirmed MRS of 10 MPa and outstanding long-term hydrostatic strength, it is engineered for critical infrastructure with design lives exceeding 100 years.

Availability & Technical Support

For availability, technical information, and application-specific guidance, please contact Persia Trade Consortium (BGT).

REGULATORY & COMPLIANCE INFORMATION

Processing Techniques

Recommended melt temperature range: 200 °C to 230 °C.
For pipe extrusion:

- Screw type: Barrier or bimodal-specific screw
- Die design: Annular or spiral mandrel for uniform wall distribution
- Cooling: Controlled water bath with gradual temperature reduction
- Line speed: Optimize based on diameter and wall thickness to avoid residual stress

Dry material before processing (max. moisture: 300 ppm).

Health and Safety

Molten HDPE may release fumes if overheated or exposed to air for prolonged periods. Ensure adequate ventilation in processing areas. Avoid skin contact with hot surfaces and molten polymer. Use appropriate personal protective equipment (PPE), including heat-resistant gloves and safety glasses. Consult the Safety Data Sheet (SDS) before handling or processing.

Storage

Supplied in 25 kg UV-protected polyethylene bags on pallets.
Store in a dry, cool, and well-ventilated area, below 40 °C, away from direct sunlight, heat sources, and moisture.
Shelf life: 24 months under recommended conditions.
Do not store near oxidizing agents or flammable materials.

BGT Royalty™ Commitment

✅ Britannia GulfGate Trade PE 100 Black Water Commitment™
(A Technical Partnership – Not a Warranty)

CRP 100 BLACK is supplied as a certifiable, carbon-black-stabilized PE 100 HDPE compound — engineered for municipal water authorities, utility contractors, and industrial developers building critical potable water networks across the Middle East, Africa, and Asia.

What Sets Us Apart

1. Ready-to-Extrude for Drinking Water
Pre-formulated with 2.25% high-dispersion carbon black and odor control (<2 EN 1622), it meets ISO 4427 and EN 12201 requirements out of the bag — no masterbatch blending, no color inconsistency.

2. Transparent, Traceable Batch Data
Every shipment includes a Certificate of Analysis (CoA) with verified values for MFR, density, ESCR (>1000 h, ASTM D1693), and OIT (32 min, ISO 11357-6) — giving certifiers the real data they need, not generic claims.

3. ISO-Aligned, Regionally Validated
All performance references use ISO standards only — no ASTM hybrids. This ensures seamless acceptance by certification bodies in GCC, Turkey, India, and Africa.

4. Local Technical Partnership
Direct access to polymer engineers who understand your extrusion line, climate, and water chemistry — no call centers, no generic advice. We support you in your working hours.

5. Jebel Ali Ready Stock
Available from bonded inventory in Jebel Ali Free Zone, with full batch traceability and rapid dispatch — so your water project never waits for resin.

The Britannia GulfGate Trade PE 100 Black Water Commitment™ is a service pledge. It does not constitute a warranty. Final pipe certification, hygiene compliance, and regulatory approval remain the sole responsibility of the pipe manufacturer.

⚠️ Disclaimer

The data presented in this document are based on standard laboratory testing and represent typical values for BGT™ HDPE 100 BLACK. These values are not to be interpreted as guaranteed specifications and do not constitute a warranty of merchantability or fitness for a particular purpose.

Final performance depends on processing conditions, design, installation, and service environment. Users are responsible for verifying suitability for their specific application.

Persia Trade Consortium makes no express or implied warranties except as expressly stated in a written agreement.

Contact us for further inquiries

PERSIA TRADE CONSURTIUM

Britannia GulfGate Trade
Engineering Trust in Infrastructure Polymers

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