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BOLITCH Long-Life Engine Coolant | Borate–Organic Acid Hybrid | 101 °C

Models: BLC-CL-001-12B / -002-12B / -003-12B / -004-12B / -005-12B / -006-12B / -007-12B (2 kg x 12 per carton) | BLC-CL-009-2D / -010-2D / -012-2D (10 kg x 2 per carton) | BLC-CL-013-1D (10 kg x 1 per carton) | BLC-CL-014-12B (oil-based, 2 kg x 12 per carton)
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1. Product description

Water-based / oil-based long-life engine coolant (Borate–Organic Acid Hybrid inhibitor technology).

Inhibitor system: borate (boric-acid based) as the primary high-efficiency inhibitor forms a dense passivation film on metal surfaces; synergised with organic acids for low-depletion, long-life protection; amine-free, silicate-free and phosphate-free.

Colour: Blue / Red / Green (custom colours available).

2. Typical properties

Product Type	Water-based / oil-based long-life engine coolant (Borate–Organic Acid Hybrid inhibitor technology)
Inhibitor Technology	Borate–Organic Acid Hybrid system: borate (boric-acid based) as the primary high-efficiency inhibitor; synergised with organic acids; amine-free, silicate-free and phosphate-free
Colour	Blue / Red / Green (custom colours available)
Freezing Point, °C	0 (water-based series, BLC-CL-001 to -013; no freeze protection) -1 (BLC-CL-014-12B, oil-based formula)
Boiling Point, °C	101 (atmospheric pressure)
pH Value	8.6 (7.5-10.5)
Reserve Alkalinity, mL	≥10
Density @20 °C, g/cm³	1.00-1.05
Chloride, mg/kg	≤25
Ash Content, %	≤2.0
Foaming (ASTM D1881)	Foam volume ≤150 mL, break time ≤5 s
Glassware Corrosion (ASTM D1384)	Copper / brass / steel / cast iron ≤10 mg per coupon, solder ≤30, cast aluminium ≤30 (336 h)
Cast Alu Heat-Rejecting Corrosion (ASTM D4340)	≤1.0 mg/cm ²
Effect on Rubber & Plastics	No swelling, shrinkage or hardening; compatible with common sealing materials
Recommended Service Life	3 years or 300,000 km (follow the vehicle manufacturer's manual)

Values are typical for the formulation and are not guaranteed specification limits. Bracketed references indicate the test method the value is expressed by. A Safety Data Sheet (SDS / MSDS) is supplied per formulation.

3. Packaging, weight and logistics

Packing	N.W / unit	N.W / carton	G.W / carton	Models
2 kg bottle x 12 / carton	2 kg	24 kg	25 kg	BLC-CL-001/002/003/004/005/006/007-12B, BLC-CL-014-12B
10 kg jerrican x 2 / carton	10 kg	20 kg	21 kg	BLC-CL-009-2D, BLC-CL-010-2D, BLC-CL-012-2D
10 kg jerrican x 1 / carton	10 kg	10 kg	11 kg	BLC-CL-013-1D
HS code	3820.00			
Shelf life / storage	3 years (unopened, stored in a cool, dry place away from direct sunlight)			

4. Recommended applications

Formulated for the cooling systems of most passenger cars, SUVs and light commercial vehicles, and also suitable for water-cooled circulating systems in construction machinery, generator sets and marine engines.

Built on Borate–Organic Acid Hybrid inhibitor technology, it forms a dense passivation film on metal surfaces and delivers a 101 °C atmospheric boiling point for boil-over protection, long-life corrosion inhibition and scale control - engineered for tropical, subtropical and frost-free regions (Southeast Asia, South Asia and most of Africa).

Freezing point 0 °C (water-based series) and -1 °C (oil-based BLC-CL-014-12B), neither offering freeze protection - for regions above 0 °C only; service life up to 3 years or 300,000 km, year-round with no seasonal change-over. For cold climates, choose our -25 °C / -45 °C antifreeze grades.

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5. Use, handling and safety

Ready to use, do not dilute. Boiling point 101 °C (atmospheric). Freezing point 0 °C for the water-based series and -1 °C for the oil-based BLC-CL-014-12B; neither grade offers freeze protection, so both are intended for frost-free regions above 0 °C, used year-round with no seasonal change-over. Drain and flush the cooling system before filling.

Handling, personal protection, first aid and transport classification are given in the Safety Data Sheet (SDS / MSDS) supplied per formulation.

6. Documents supplied

Safety Data Sheet (SDS / MSDS) - supplied per formulation, available on request. | This Technical Data Sheet. | Other export documents supplied per shipment as required for customs clearance.

7. Standards and test methods referenced

Standards referenced in formulation and testing:

- GB 29743 - Motor vehicle engine coolant
- Borate-based inhibitor technology - stable pH buffering, suppresses bacterial growth and extends coolant service life

Test methods referenced:

- ASTM D1384 - glassware corrosion test (336 h)
- ASTM D4340 - cast aluminium heat-rejecting corrosion test
- ASTM D1881 - foaming tendency test

The standards and test methods below are quoted as the technical references used when formulating and testing this product. This list is not a certification, approval, licence or mark of conformity. No third-party certification, OEM approval or product licence is claimed or held. Where the market requires conformity assessment (for example PVoC, TBS or O'zDSt), the application is normally filed by the importer or an authorised local representative; we support it with samples, technical documentation and translations.

8. Performance highlights

- Borate–Organic Acid Hybrid formula - long-life protection up to 3 years / 300,000 km
- 101 °C atmospheric boiling point; with the system pressure cap it further suppresses boil-over - engineered for hot tropical climates and stop-and-go traffic
- Borate-based inhibitor forms a dense passivation film protecting all six metals - copper, brass, solder, steel, cast iron and cast aluminium - with low deposit and low depletion
- Excellent scale and deposit control - keeps water jackets, radiators and water pumps clean
- Strong pH-buffering keeps a stable alkaline reserve over time, suppressing acidification and bacterial growth
- Fully miscible with other coolants of the same type - safe for top-up