

# TECHNICAL DATA SHEET – BDQ-220

BIO-LUB CANADA INC.  
650, Route 349 Nord, Saint-Alexis-des-Monts (Québec) Canada J0K 1V0  
Phone : 819-265-2026, Fax : 819-265-2464  
www.bio-lubcanada.com

## Description Product

2-cycle engine oil, TC-W.

## Features and benefits

**BDQ-220** is a 2-cycle engine oil which is a readily biodegradable<sup>1</sup> formula with proven technology that has passed the National Marine Manufacturers Association (NMMA) certification test TC-W (BIA) and TC-WII for 2-cycle engine oil. **Low-Smoke formula** contains additives to improve fuel stability.

**BDQ-220** has been especially designed to operate in water-cooled gasoline engines for the boating industry, and in 2-cycle air-cooled engines for general-purpose equipment and for personal and recreational transportation, such as motorcycles, snowmobiles, chain saws, and lawn and garden equipment. **BDQ-220** meets and exceeds motorcycle API TC and Husqvarna Chain Saw requirements.

**BDQ-220** does not utilize a solvent to increase gasoline miscibility. This feature offers a significant safety advantage since the product has a flash point of 365°F (185°C) and is, therefore, not classified as flammable or combustible according to OSHA or D.O.T regulations. **BDQ-220** is readily biodegradable and has the potential of one product servicing both water-cooled and air-cooled 2-cycle engines.

## Typical Characteristics

| Property             | Typical Value | Method      |
|----------------------|---------------|-------------|
| Viscosity, cSt 100°C | 10.4          | ASTM D-445  |
| Viscosity, cSt 40°C  | 63            | ASTM D-445  |
| Viscosity Index      | 155           | ASTM D-2270 |
| Flash point, °C      | 185           | ASTM D-93   |
| TBN (mg KOH/gm)      | 2.94          | ASTM D-2896 |

## Bench Tests

|                                 |       |
|---------------------------------|-------|
| Low Temperature Fluidity        | Pass  |
| Compatibility with Mineral Oil  | Pass  |
| Filterability                   | Pass  |
| Fuel Miscibility                | Pass  |
| Rust                            | Pass  |
| Biodegradability: CEC-L-33-A-94 | (84%) |

## Engine Tests

|                     |              |
|---------------------|--------------|
| TC-W2 Johnson 40 hp |              |
| Varnish             | 8.7/6.2/Pass |
| Ring Stick          | 9.0/7.8/Pass |
| Yamaha CE50S        |              |
| Lubricity (>Ref.)   | 4.75/6.26    |
| West Bend Deposit   |              |
| Piston Varnish      | 9.7          |
| Ring Stick 8.8      |              |
| Port Blocking (%)   | 4            |

<sup>1</sup>Readily biodegradable > 80% within 21 days in CEC L-33-T-82 test.

## **TECHNICAL DATA SHEET – BDQ-220**

BIO-LUB CANADA INC.

650, Route 349 Nord, Saint-Alexis-des-Monts (Québec) Canada J0K 1V0

Phone : 819-265-2026, Fax : 819-265-2464

[www.bio-lubcanada.com](http://www.bio-lubcanada.com)

### **Packaging**

200 mL and 500 mL.

### **Standard Disclaimer**

To the best knowledge of Bio-Lub Canada inc. and any of its affiliated companies (The Companies), Distributors, Representatives or Agents (Others), the information contained herein is believed to be accurate and reliable. However no liability whatsoever is assumed for the accuracy or completeness of the information contained herein. All materials may present unknown health hazards and should be used with caution. Since actual conditions of use or handling are beyond our control no liability or warranty is expressed, implied or accepted for any loss or damage caused directly or indirectly through the use of this product. Intending users should satisfy themselves by performing appropriate tests as to the suitability of this product for any particular purpose. The sole remedy for non-performance or breach shall be the refund of the purchase price. All other liability is negated and disclaimed. The Companies and Others shall not be liable for incidental or consequential damages. The Companies reserve the right to make changes to the product formulation, technical data and performance specifications without notice to any user or purchaser of the product.

Bio-Lub Canada Inc.

Web-site: [www.bio-lubcanada.com](http://www.bio-lubcanada.com)