



# Product Bulletin

## BRAD PENN<sup>®</sup> BIOGAS ENGINE OIL

**BRAD PENN<sup>®</sup> Biogas Engine Oil** is a premium quality stationary gas engine oil with high alkalinity reserve designed for use in applications where influent gas is generated from anaerobic digestion of manure, compost and/or landfill residue.

**BRAD PENN<sup>®</sup> Biogas Engine Oil** is a high ash containing product formulated specifically for applications fueled by corrosive or high sulfur gasses containing methane. Methane produced by anaerobic digestion of manure, compost and/or landfill residue can contain high levels of corrosive agents and contaminants. Brad Penn<sup>®</sup> Biogas Engine Oil is designed to provide proven performance under poor quality fuel conditions. Since the quantity and quality of the gas produced in these systems can vary significantly, and with the intermittent conditions the oil is being subjected to at any given moment, periodic oil testing is necessary with this product to establish acceptable oil drain intervals. To monitor the adverse effects of fuel contaminants, utilization of the Brad Penn Oil Analysis Program is strongly encouraged. Please contact your Brad Penn<sup>®</sup> Regional Sales Manager or American Refining Group, Inc. Technical Services for information.

### BRAD PENN<sup>®</sup> Biogas Engine Oil - Typical Properties

SAE Grade		40
	Test Method	
API Gravity, 60°F	ASTM D-1298A	27.0
Density, lbs/gal (g/L)	Calculated	7.448 (892)
Viscosity, cSt @ 40°C	ASTM D-445	134.0
Viscosity, cSt @ 100°C	ASTM D-445	14.0
Viscosity, SUS @ 100°F	ASTM D-2161	621
Viscosity, SUS @ 210°F	ASTM D-2161	74.0
Viscosity Index	ASTM D-2270	104
Pour Point, °C (°F) (max)	ASTM D-5949	-27 (-16.6)
Flash Point, °F (°C)	ASTM D-92	450 (232)
Color	ASTM D-1500	Opaque
TBN	ASTM D-2896	15
Sulfated Ash, mass %	ASTM D-874	1.82
<b>Product Code</b>		<b>7286</b>



**AMERICAN REFINING GROUP, INC.**

77 North Kendall Avenue • Bradford, Pennsylvania • 16701

Phone: 814.368.1200 • Fax 814.368.1219 • [www.amref.com](http://www.amref.com) • ISO 9001:2008