

State Of California

AIR RESOURCES BOARD

Executive Order G-714-ADF01

Certification of Alternative Diesel Fuel Resulting in Emissions Equivalence with Diesel
National Biodiesel Board – VESTA™1000

Pursuant to Sections 39600, 39601, 43013, 43018, and 43101 of the Health and Safety Code, Air Resources Board (ARB) adopted the Alternative Diesel Fuel regulation (ADF regulation) under Title 13, California Code of Regulations, section 2293, et seq. Effective since January 1, 2016, the ADF regulation establishes a comprehensive, multi-stage process governing the commercialization of Alternative Diesel Fuels (ADF) in California. The ADF regulation governs the introduction and use of innovative alternative diesel fuels in California while preserving or enhancing public health, the environment and the emission benefits of the existing motor vehicle diesel fuel regulations. The ADF regulation also includes provisions designed to control increases in Oxides of Nitrogen (NOx) emissions from the use of biodiesel under certain circumstances. Those provisions include a process for certification of additives which have been shown to mitigate NOx increases from the use of biodiesel.

The National Biodiesel Board (NBB) has requested approval and certification of an additive, VESTA™1000, as an emissions equivalent additive under Appendix 1 of the ADF regulation.

NBB submitted a test plan on January 31, 2017, which ARB staff reviewed and approved on March 17, 2017. Testing was conducted by Southwest Research Institute (SwRI®) starting April 5, 2017 and performed during the next seven consecutive days. NBB submitted a final report prepared by SwRI®, dated May 30, 2017.

NBB's candidate fuel was comprised of 0.3 percent VESTA™1000, 20 percent biodiesel (B100 blendstock) meeting the requirements specified in Table A.8 of the ADF regulation, and 80 percent reference diesel meeting the requirements specified in Table A.9 of the ADF regulation.

The information contained in Attachment 1 hereto is claimed by NBB to be confidential and shall only be disclosed as authorized by Title 17, California Code of Regulations, section 91022.

The candidate fuel was properly tested in accordance with Appendix 1(a)(2)(F) of the ADF regulation. The candidate fuel emissions tests showed a NOx emissions reduction of 1.9 percent and a particulate matter emissions reduction of 18 percent compared to the reference fuel (CARB diesel). The candidate fuel emissions satisfied all of the requirements under Appendix 1(a)(2)(G) of the ADF regulation.

NOW, THEREFORE, (IT IS ORDERED AND RESOLVED) that the additive VESTA™1000 is approved and certified pursuant to Appendix 1(a)(2)(G) of the ADF regulation as an emissions equivalent additive for use with biodiesel blends B20 and below or use with biodiesel blendstock when applied in accordance with the following conditions:

VESTA™1000 Concentrations for Biodiesel B20 and Below Blends

VESTA™1000 must be blended to the specified levels in the table below.

Biodiesel Saturation Level¹	Biodiesel Blend Level	Volume Percent, Minimum
Low Saturation	>B5 to <B10	0.150
	B10 to <B15	0.225
	B15 to B20	0.300
High Saturation	B10 to <B15	0.075
	B15 to B20	0.150

¹ Low Saturation refers to biodiesel blendstock Cetane Number of below 56; High Saturation refers to biodiesel blendstock with Cetane Number of 56 and above. Cetane Number is determined using the applicable test methods in the Alternative Diesel Fuels regulation.

VESTA™1000 Concentrations for Biodiesel Blendstock B100 or B99

If VESTA™1000 is to be added to the biodiesel blendstock, it must be added at a volume percent of at least 1.50 or 0.75 volume percent for low saturation and high saturation blendstocks, respectively.

Biodiesel Saturation Level	Biodiesel Blendstock	Volume Percent, Minimum
Low Saturation	B100 or B99	1.50
High Saturation	B100 or B99	0.75

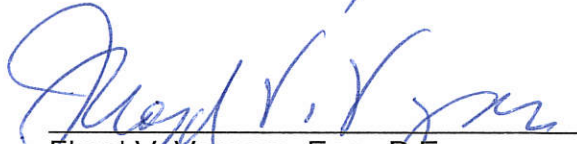
Biodiesel blends B20 and below blended in accordance with the conditions above meet the requirements of the ADF regulation.

ARB reserves the right in the future to review this Executive Order and the certification provided herein to assure that the certified fuel meets the standards and procedures of Title 13, California Code of Regulation, section 2293, et seq.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order.

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National Biodiesel Board – VESTA™1000

Executed at Sacramento, California, this 20 day of July, 2017.



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