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(54) **SOLID AQUATIC HERBICIDE FORMULATIONS**

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(58) **Field of Classification Search**

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,466,693	A	11/1995	Warrington et al.
5,843,203	A	12/1998	Lindsay et al.
5,883,047	A	3/1999	Jaeger et al.
6,337,078	B1	1/2002	Levy
6,825,151	B2	11/2004	Harwell
6,890,888	B2	5/2005	Pursell et al.

OTHER PUBLICATIONS

Renovate OTF Aquatic Herbicide Material Safety Data Sheet, 2006, SePRO, pp. 1-4.*

Fresenburg, B., Home Lawn Weed Control, MU Guide, 2005, MU Extension, University of Missouri—Columbia, pp. 1-4.*

Turflon II Amine Material Safety Data Sheet, 1997, Riverdale, pp. 1-4.*

"1.2 1992 Environmental Impact Statement and Effects of State Senate Bill 5424," Herbicide Risk Assessment for the Aquatic Plant Management Final Supplemental Environmental Impact Statement, Appendix C, vol. 3: 2,4-3, Feb. 2001, 2 pages.

Material Safety Data Sheet AB Navigate, Advantis Technologies, Inc., Manufacturer, Feb. 15, 2007, 4 pages.

www.kadantgrantek.com/biodac/commercial, Commercially Available Formulations of Biodac, last printed Feb. 20, 2008, 1 page.

www.kadantgrantek.com/biodac/composition, Composition and Properties of Biodac, last printed Feb. 27, 2008, 2 pages.

* cited by examiner

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(57) **ABSTRACT**

Described are preferred formulations comprising amine salts of 2,4-D or triclopyr or both, loaded on a granular carrier including plant fiber and mineral filler, 5 and optionally a binder. Also described are methods of making and using such compositions.

15 Claims, No Drawings