



**Kirkpatrick Wire Rope Lubrication Systems
Dynagard Environmental Wire Rope Lubricants**

HOW DEFINITIVE ARE THE ENVIRONMENTAL SPECIFICATIONS OF THE COATING PRODUCT YOU ARE CONSIDERING FOR EXPOSURE TO A SPECIFIC MARINE ENVIRONMENT?

(A brief synopsis and explanation of Bioaquatic LC 50 Testing)

IN LAYMAN'S TERMS: What is Bio-Aquatic LC50 testing?

This testing is performed on coating products that will be exposed to a Marine environment where toxicity is a major concern to living aquatic organisms. Correctly interpreted, it stands for the given amount of time, usually 24 hours or 48 hours; that the test organisms are exposed to a controlled water environment contaminated with the test product solution (oil/wire rope lubricant) at specific intervals. It is then verified as the test progresses how many Parts per million (PPM) added to the Bioaquatic test environment it takes to kill 50% of the test organisms used. The true test of the environmental safety of a product is gauged by the number of parts per million (PPM) that it takes to reach a 50% kill level within the test period (24 hours / 48 hours.) The higher the Parts per million rating; the safer the product is to a marine environment. The lower the PPM rating, the less environmentally friendly (safe) to a Marine environment. Please keep in mind a 24 test is also less definitive than the longer 48 hour test period, Therefore this should be a criteria for your evaluation of any bioaquatic data provided you concerning a product you are considering.

Example: We recently tested a product claiming an environmentally friendly status against our own Dynagard product. The LC50 findings for the competitive product were 1334 PPM to kill off 50% of the test specifications in 24 hours. Our own testing with Dynagard Blue was over 25,000 PPM in 48 hours. Actually, as indicated earlier, no specimens had died when the Lab quit the testing at 48 hours indicating the Dynagard Blue possibly had an even higher LC50 rating. These findings show that the competitive product was almost 18 x less safe to a Marine Environment in 24 hours than the Dynagard it was compared to tested for 48 hours...

TEST SPECIMENS USED: IT MAKES A DIFFERENCE.

Many coating products test specifications, that we have observed, used a hardy fish species such as trout to establish their Bioaquatic safety claims. This data is too many times inclusive of general explanations describing unclear and weakly defined test methods that only serve to confuse the end user.

In 1991 our company decided to go with one of the most sensitive bio-aquatic marine organisms available to prove the strong Bioaquatic performance levels of our Dynagard formulations. The organisms used for our testing were the microscopic Estuary Shrimp Species, *Mysidopsis Bahia*. We chose this organism over the much hardier fish or trout species used by other sources to provide unchallengeable proof of the safe Bioaquatic standards of our Dynagard Environmental wire rope lubricants. The results of our Dynagard "E" came in with an LC50 reading of 21,500 PPM @ 48 Hours. The Dynagard Blue testing as



mentioned previously, was stopped at 48 hours (25,000 PPM) when it was found that no specimens had died and therefore no need to continue due to the superior performance of the Dynagard Blue product.

These results placed both products in a category of bio-aquatic safety that we have not been able to yet find in any other competitive product to our own at this. The United States Navy now has created environmental specifications based on our presentation to them of the use of the Mysidopsis Bahia Estuary Shrimp Species for their Type II Environmental Qualified products List.

Dynagard Environmental Wire Rope Lubricants. Approved for use by:

- Bureau of Land Management (Colorado River (Hoover Dam))
- Tennessee Valley Authority for all fresh water systems controlled by them. This organization did their own testing apart from our own results and confirmed the Bioaquatic safety standards of the Dynagard product.
- United States Coast Guard.
- Canadian Coast Guard
- U.S. Army Corps of Engineers Columbia River System Oregon
- The British Columbia Hydro Group for all fresh water systems in Canada. BC Hydro performed an independent test of our Dynagard "E" product and found it to be 97% biodegradable.
- United States Navy for both the Type I and Type II Qualified Products List. Naval Sea Systems Command in conjunction with the NEC confirmed the Dynagard "E" type II and the Dynagard Blue Type I as meeting their own Bioaquatic standards, in separate confirmation of our own results.

Kirkpatrick Wire Rope Lubrication Systems
Dynagard Environmental Wire Rope Lubricants
Manufactured By:

The Kirkpatrick Group, Inc.
701 East 15th St., Suite 101
Plano, TX. 75074 USA

Toll Free: (800) 466-4414 / Tel.: (972) 509-2468 / Fax: (972) 509-2554
www.thekirkpatrickgroup.com / TKG-Sales@thekirkpatrickgroup.com

www.stottind.com.au

Email : sales@stottind.com.au

OR

www.thekirkpatrickgroup.com.au



Unit 1, 19 Balook Drive
Beresfield NSW 2322
Phone 02 4966 8020
Fax 02 4966 8302
www.stottind.com.au

