High-Performance Bearings and Seals Advance Oceanic Research

A partnership with TriStar gives you a competitive edge.



71% of earth's surface area is covered by water. The health and sustainability of our oceans are vital for the survival of our planet and TriStar has been fortunate to be involved with both private and government entities working to better understand all that is going on in our watery world.

When designing equipment for underwater use, careful selection of bearings and seals is critical. On buoys, our role has typically been selecting and custom-engineering bearings and thrust washers used as part of the subsea connections and controls.

Data gathered from these buoys include water and air temperatures, wave dimensions, pollution trends, and weather/current patterns. These buoys contain tsunami alert sensors, live streaming cameras, and even equipment for monitoring shipping lanes for illegal dumping.



Ultracomp Excels in Linear, Oscillating, and Rotary applications

Our <u>Ultracomp</u> <u>300A and 300AX</u> products are the most suitable materials for these systems for several important reasons:

- They do not absorb moisture so they're dimensionally stable underwater.
- Ultracomp is equally effective in both Arctic cold and Caribbean warm waters without degradation or loss of dimensions.
- They are non-corrosive in the high salinity of the oceans because they do not sustain any cathodic reaction with metal hardware.
- These materials are ideal for the high loads and low oscillating or linear motions required for these applications.
- They are easy to machine into complex components.
- Ultracomp materials are self-lubricating in dry service.

Other innovative ocean study applications we've worked on include new autonomous wave-runners, mobile buoys that work much as the static buoys do while also traversing many nautical miles.

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing

CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



Ultracomp®

- Self-Lubricating
- High Load | Low Speed
- High Compressive Strength
- Vibration & Impact Resistance



TriSteel™

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



Rulon®

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



| Meldin[®]

- High Performance Materials
- High Temp Dimensional Stability
- Chemical Resistance
- Withstands Thermal Shocks



🕸 🛛 Enhanced Materials

- Plasma Surface Treatment
- Filtration Membranes
- Specialized Primers & Coatings
- Material ID & Selection



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