

# BIO-FOULING PROTECTION FOR MARINE SUBSEA INSTRUMENTS

## EXECUTIVE SUMMARY

Maringlide™ is a biocide-free optical clear film with adhesive resistant to underwater static and dynamic environments. Applying anti-biofouling protection film can prevent surface damage from marine organisms such as barnacles, polychaetes, mussels, and more, for prolonged periods. The anti-biofouling layer works by preventing organisms from attaching to the film by blocking the proteins those organisms use to adhere to surfaces.



**MARINGLIDE™**



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## ADDRESSED CHALLENGES WITH SONAR AND CAMERA APPLICATIONS

- Poor signal quality resulting in inaccurate data
- Lack of visibility not allowing for effective monitoring
- Frequent maintenance operations leading to high maintenance costs
- Time-consuming and dangerous maintenance causing potentially permanent damage

Minimized bio-fouling  
on instruments

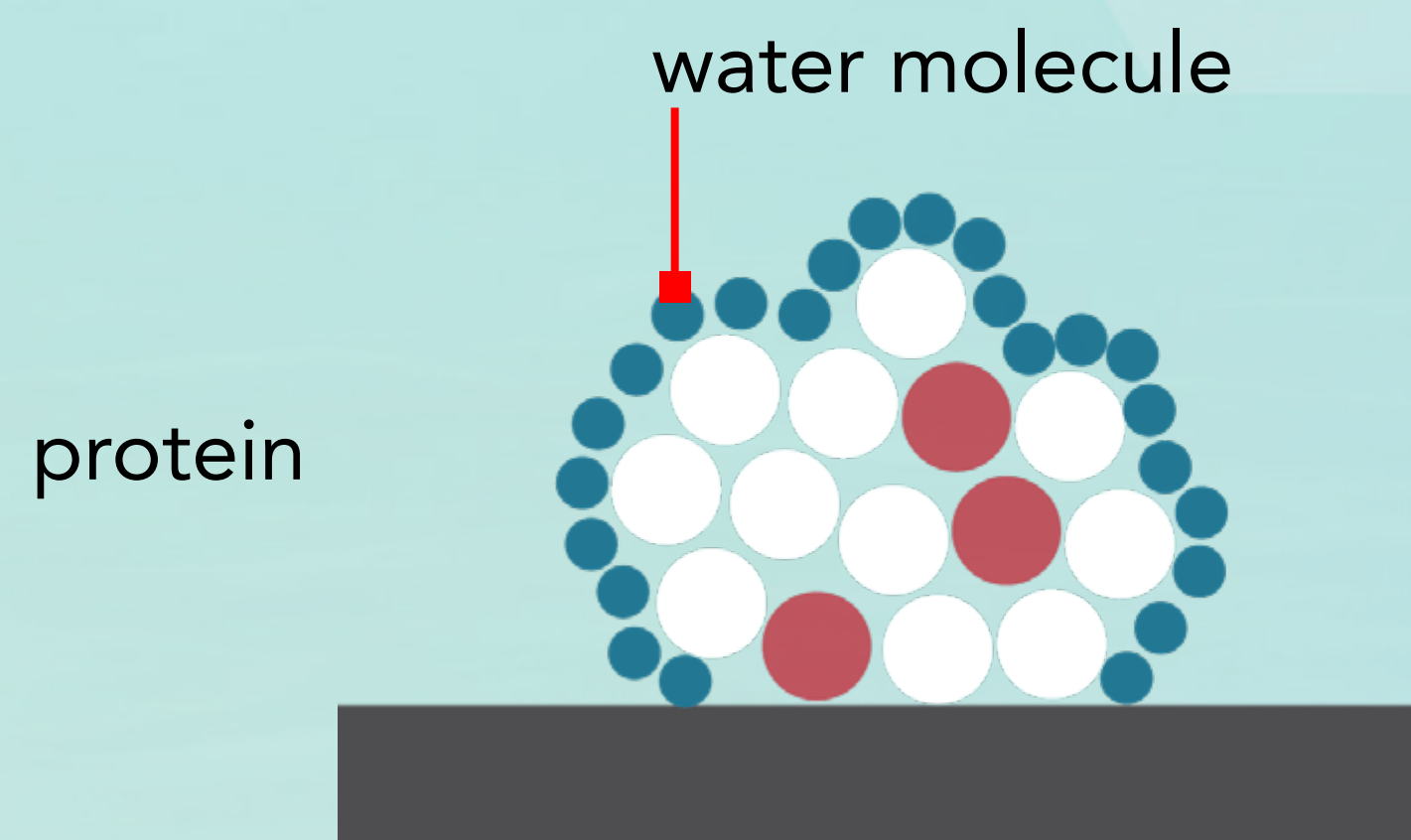




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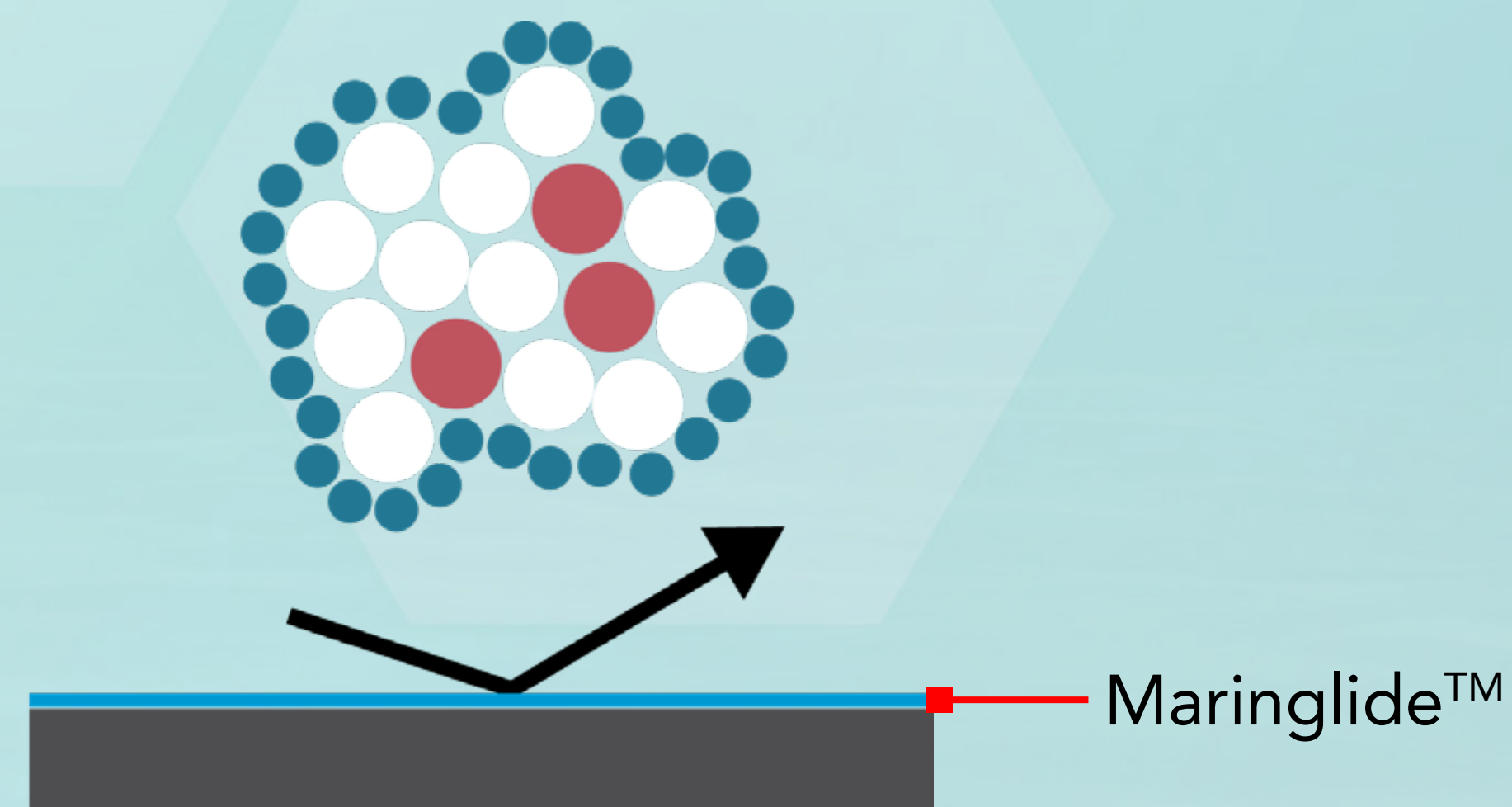
## NITTO'S NEW ANTI-FOULING SURFACE TREATMENT TECHNOLOGY

### Conventional method

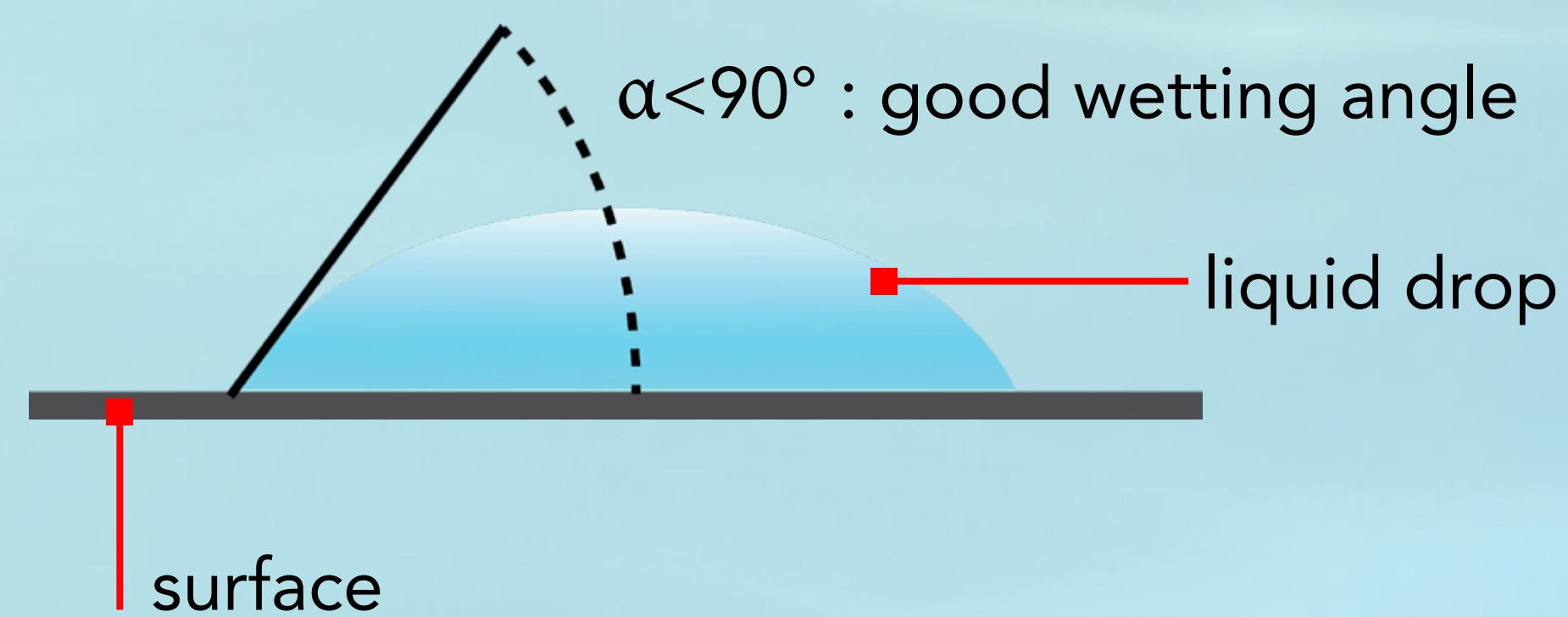


The water molecule layer breaks and **the protein sticks** to the substrate.

### Nitto's special hydrophilic surface



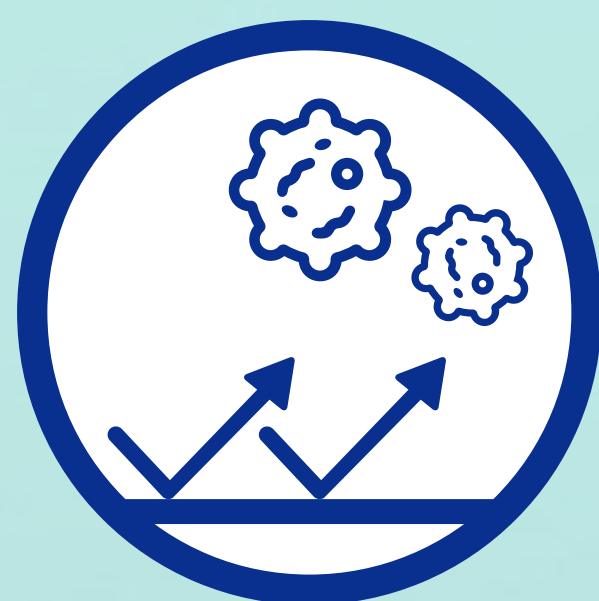
The water molecule glides over the film: **the protein cannot attach.**





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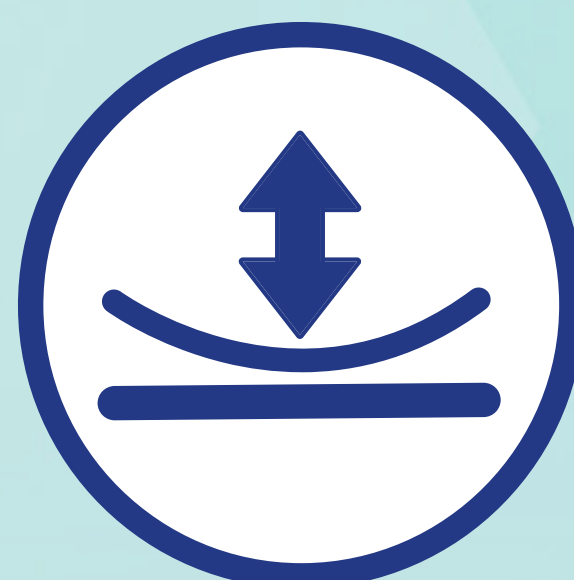
## MAIN CHARACTERISTICS OF NITTO'S MARINGLIDE™



High-performance  
anti-fouling  
properties



Biocide-free  
technology



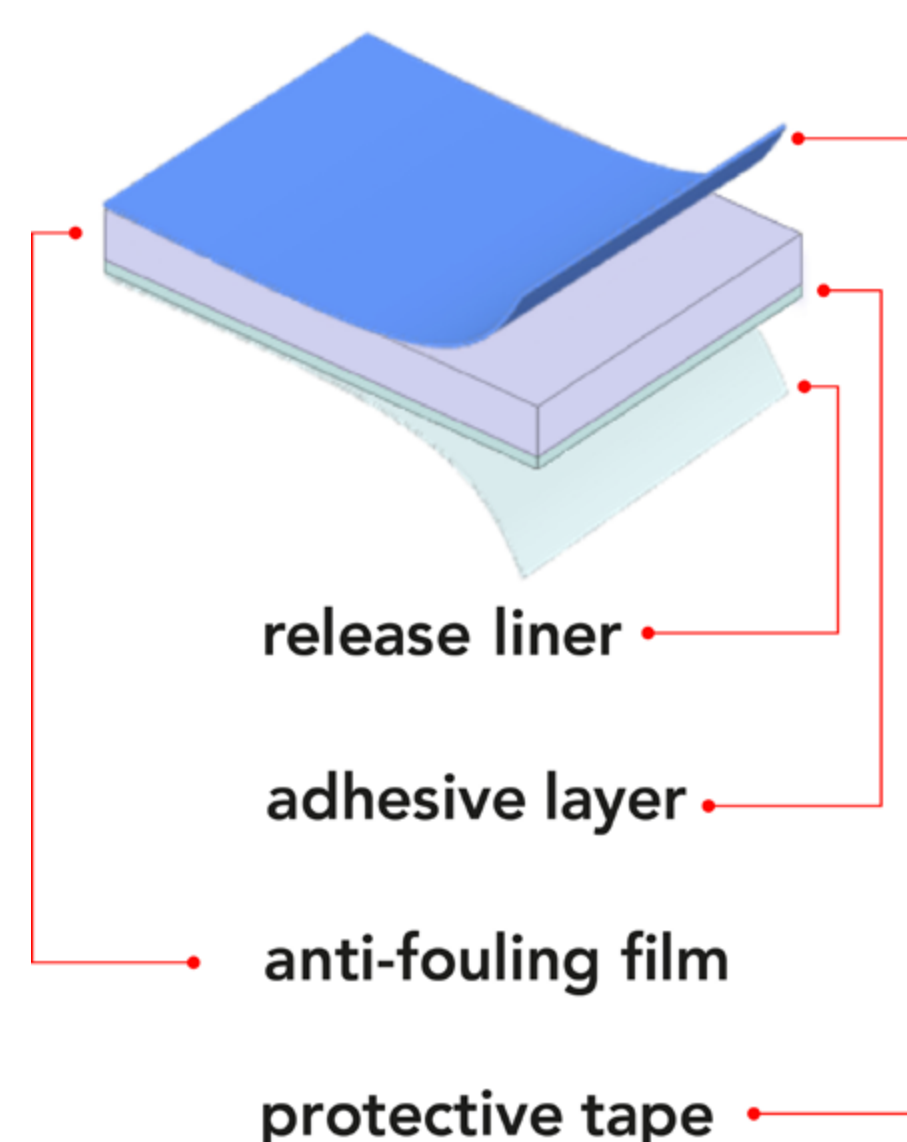
Easy to apply  
and remove



Optically clear

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