

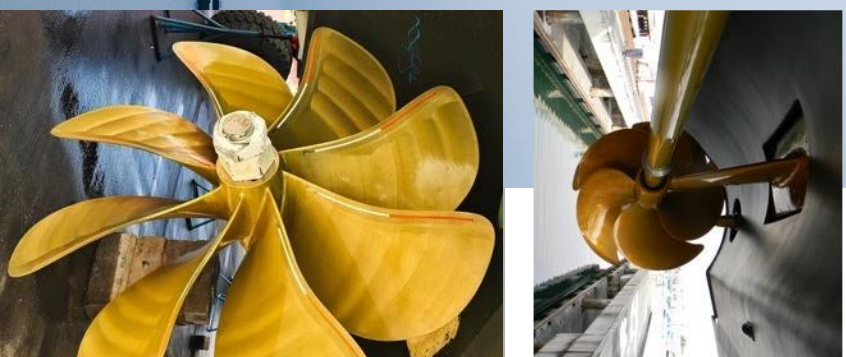


# PROPSPEED APPLICATION TRAINING PRESENTATION 2021



## Overview

# AN INTRODUCTION TO PROPSPEED



- PROPSPEED – The company behind the product  
Who are we?
- The problem – Marine growth
- The solution – Propspeed Coating Technology
- Product Overview
- Preparation and Planning
- The Application Process
- After Care
- Q&A





## Company Overview

# PROPSPEED

A strong reputation built over the past 21 years - The best foul-release coatings on the market.

Founded in New Zealand, PropSpeed is born from a nation that is surrounded by water, fuelled by innovation with people who live for boating.

### The PropSpeed network:

- Available in over 30 countries around the world
- Applied to boats from 26ft – 150ft
- Award winning products
- 6 Staff on the ground in the US



## The Problem

# BARNACLES

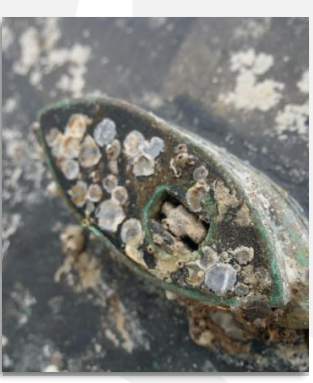
- Inefficiencies caused by marine growth
- Increased maintenance costs
- Spread of invasive biofouling species
- Damage to propellers and running gear caused by removal of hard growth:
  - Barnacle glue – 6 times stronger than any man-made glue



Underwater Light



Propeller



Transducer

**PROPSPEED**<sup>®</sup>

**LIGHTSPEED**<sup>™</sup>

**FOULFREE**  
ANTIFOULING



The Solution

# PROPSPEED COATING TECHNOLOGY

- Foul-release coating, not anti-foul
- An effective, multi-season solution that is trusted globally
- Our products can be applied to all underwater assets:

## The PropSpeed System MECHANICAL ACCESSORY SOLUTIONS

- All underwater metal
- Propellers
- Thruster propeller
- Plastic thruster propellers
- Shafts
- Struts
- Trim tabs
- Rudders
- Keel coolers
- Through hull fittings

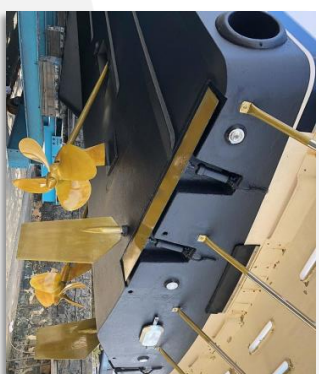
## Foulfree & Lightspeed ELECTRONICS ACCESSORY SOLUTIONS

- Transducers
- Underwater lights






More Than a Foul-Release Coating

# PROPSPEED



How Much do I Need

# APPLICATION GUIDE

PROPELLERS	SIZE IN INCHES	NUMBER OF BLADES	KITS + ETCH KITS + PROPPREP (PP)	LABOR HOURS
	Up to 24"	3 - 4	200ml kit	0.5*
	26" - 30"	4 - 5	500ml kit	0.5*
	31" - 38"	4, 5 & 6	500ml kit	1*
	39" - 46"	5, 6 & 7	500ml kit + 1 etch kit	1*
	47" - 56"	6 - 7	1l kit / 0.5 l PP	1*
	Up to 24"	3 - 4	500ml kit	1*
	26" - 30"	4 - 5	500ml kit	1*
	31" - 38"	4, 5 & 6	1l kit / 0.5l PP	1*
	39" - 46"	5, 6 & 7	1l kit / 0.5l PP	1*
	47" - 56"	6 - 7	1l kit + 2 etch kits / 1l PP	2*
	Up to 24"	3 - 4	1l kit + 1 etch kit / 0.5l PP	3**
	26" - 30"	4 - 5	1l kit + 1 etch kit / 0.5l PP	4**
	31" - 38"	4, 5 & 6	2l kit + 1 etch kit / 1l PP	8**
	39" - 46"	5, 6 & 7	3x 1l kit + 2 etch kits / 1l PP	10**
	47" - 56"	6 - 7	3x 1l kit + 3 etch kits / 2l PP	12**

(\* ) Labour hours based on one man. (\*\* ) Labour hours based on two men.



How Much do I Need

# APPLICATION GUIDE

POD RANGE & PROPELLER SERIES	POD RANGE & PROPELLER SERIES	PROPSPEED REQUIRED	LABOR HOURS
	IPS-350 (pod 100 design)	1l kit + 1l bottle Propprep	2*
	IPS-400 (pod 100 design)	1l kit + 1l bottle Propprep	2*
	Propeller series T2-T10, TS3-TS6	500ml kit + Consumables (brushes, rags...)	1*
	IPS-450 (pod 100 design)	1l kit + 1 primer kit + 1l bottle Propprep	3*
	IPS-500 (pod 100 design)	1l kit + 1 primer kit + 1l bottle Propprep	3*
	IPS-600 (pod 100 design)	1l kit + 1 primer kit + 1l bottle Propprep	3*
	Propeller series T2-T10, TS3-TS6	500ml kit + Consumables (brushes, rags...)	1*
	D8 IPS-700 (pod 150 design)	1l kit + 500ml kit + 1l bottle Propprep	3*
	IPS-800 (pod 150 design)	1l kit + 500ml kit + 1l bottle Propprep	3*
	D8 IPS-800 (pod 150 design)	1l kit + 500ml kit + 1l bottle Propprep	3*
	Propeller series NS4-NS5, NI-N7	500ml kit + Consumables (brushes, rags...)	1*
	IPS-950 (pod 200 design)	2x 1l kits + 1l bottle Propprep	4*
	Propeller series P2-P7	1l kit + 500ml kit + 1l bottle Propprep + Consumables (brushes, rags...)	1*
	IPS-1050 (pod 300 design)	2x 1l kits + 1l bottle Propprep	4*
	IPS-1200 (pod 300 design)	2x 1l kits + 1l bottle Propprep	4*
	Propeller series Q1-Q7	1l kit + 500ml kit + 1l bottle Propprep + Consumables (brushes, rags...)	1*



(\*) Labour hours based on two men.





Application

## THE MAGIC RULE IN ANY PROPSPEED APPLICATION

“

*Be organized, plan ahead, and ensure you follow the process, step-by-step.*

”



# THE PROCESS



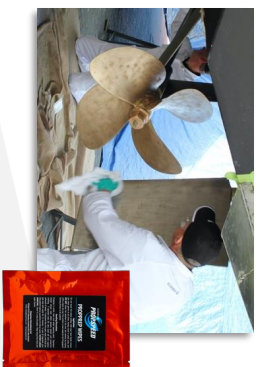
## 1 METAL PREPERATION

Preparation is a critical part of the application process. The better the preparation the better the final result. Start how you want to finish.



## 2 INITIAL CLEAN

Cleaning the metal substrate so it is completely free of contaminants is an important step to ensure a successful application of the Propsspeed Solution.



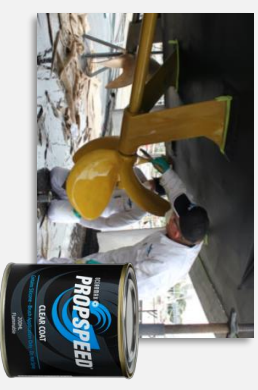
## 3 METAL CONDITIONING

An essential stage in the process is in the chemical preparation of the metal substrate to be coated with Propsspeed.



## 4 ETCHING PRIMER

The gold standard in the industry. The Propsspeed Etching Primer bonds to the metal substrate by both physical and chemical bonds.



## 5 CLEAR COAT

When the Clear Coat is applied it bonds to the primer coats as well as the metal substrate, creating a hydrophobic surface.



Before You Start

# APPLICATION TOOLS



In addition to the Propspeed system, you will also need the below items to ensure a successful Propspeed application:

- Paint suit
- Disposable gloves
- Eye protection
- Dust sanding mask
- Dual-action sander
- Wet and dry 80 grit sandpaper
- Plenty of clean rags
- Disposable paint trays
- Disposable foam rollers
- Disposable brushes (high quality)
- Plastic mixing containers (optional)



Before You Start

# BE PREPARED



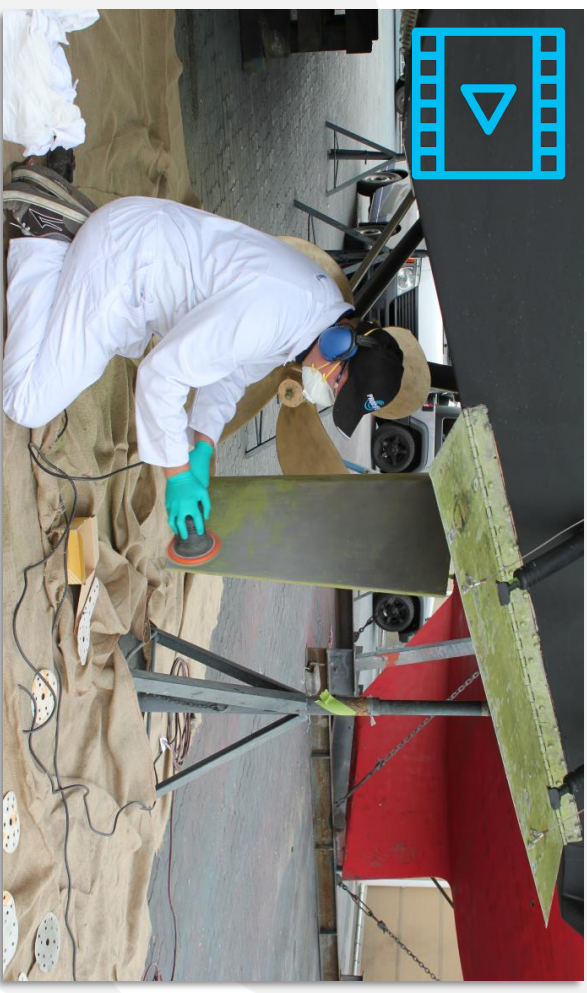
When applying Propsspeed, there are a few things you will want to check before you get started.

- **What effect does the climatic conditions have on the application?**
  - Minimum temperature is 5°C / 40°F
  - When it is cold (5-10°C/40-50°F) – work in the middle of the day when it is warmest, timing windows will be longer, overall curing time will be a minimum of 24 hours.
  - When it is hot or windy (>35°C/95°F) – timing windows become shorter, work in small sections, keep small quantities decanted from original containers.
- **How long before I can launch the boat?**
  - Propsspeed requires a minimum of 8 hours curing time.
- **Do I need more than one person to do this job?**
  - Big applications require more than one person, as timings are critical when applying Propsspeed.
- **Do I have all of the tools required?**
  - Run through the list provided in the previous slide, make sure you have everything you need before you start.

Preparation

# REMOVING OLD PROPSPEED

\* Propspeed can be removed by sanding with wet and dry 80 grit sandpaper or, for quick and easy removal, use **Propstrip**. You must wear a dust sanding mask when removing old Propspeed - inhaling any residue could be harmful.



Preparation

# METAL SANDING

\*The metal surface must be abraded to an **80 grit profile** before Propspeed can be applied.

A dual-action or air-driven sander can be used for most areas. Difficult to reach areas can be wet and/or dry sanded by hand.

Sanding is paramount in the application process for two reasons:

1. Thoroughly cleaning the surface of residual coatings.
2. Creating a profile for a mechanical bond.

80 grit sandpaper  
(Mechanical bond)

metal  
substrate



Cleaning

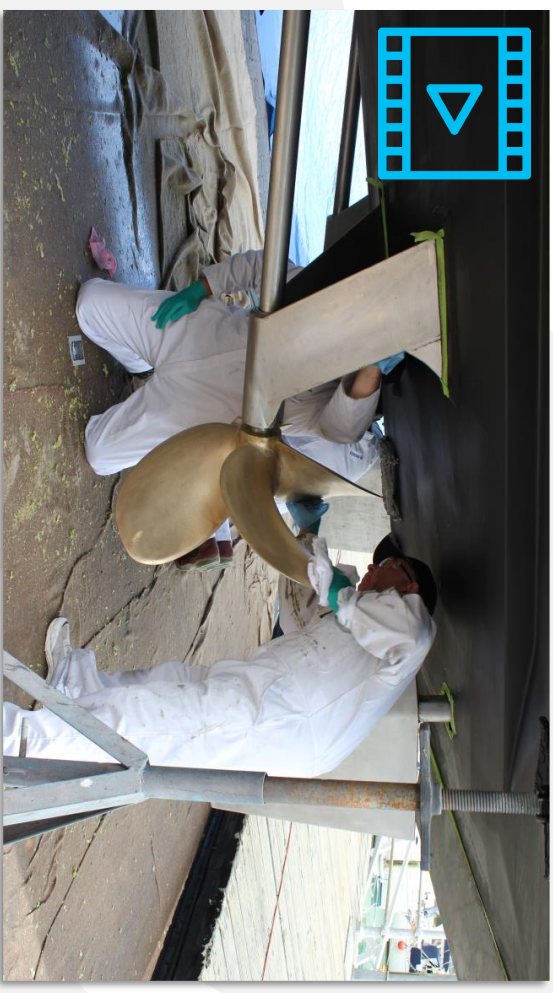
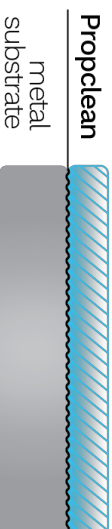
# PROPCLEAN

The **two preparation steps** before applying Propspeed are critical to enhancing the system's longevity.

**1** The first step is applying the **Propclean**, this is a solution which dissolves organics such as grease and fingerprint residue.

It is crucial that the metal substrate is completely free of contaminants, and isn't touched with ungloved hands.

Failure to complete the cleaning process, or touching the metal, can result in the Etching Primer not adequately adhering to the metal substrate.



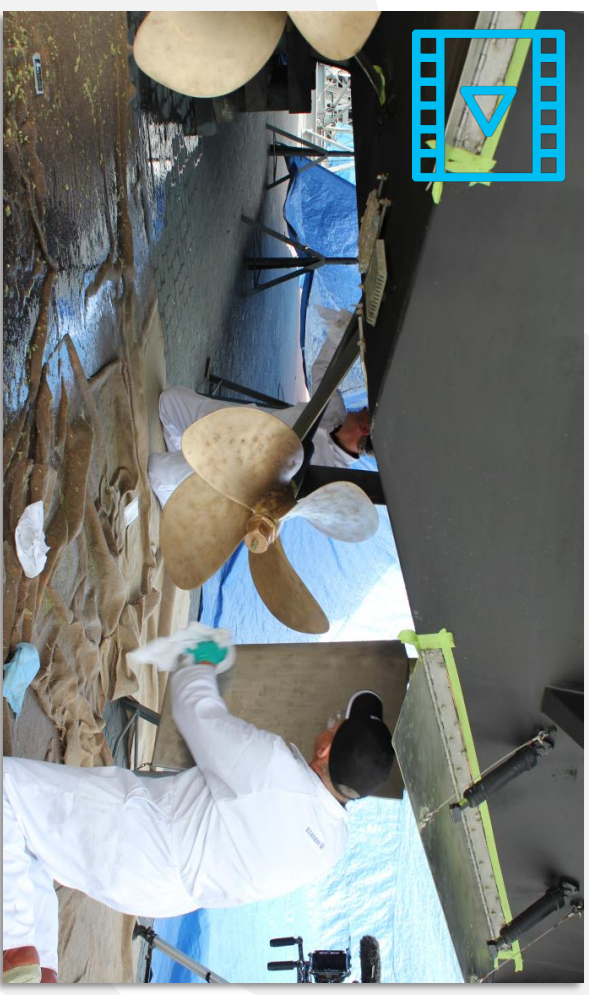
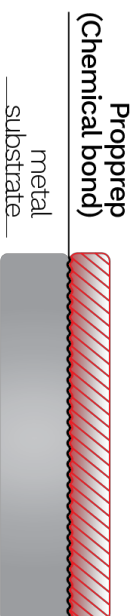
Metal Conditioning

# PROPPREP

**2 Propprep** is essential in the chemical preparation of the metal substrate to be coated with Propspeed.

**Propprep** contains ingredients that react with the metal, creating a porous surface layer. This porous layer is key to ensuring proper penetration and the completion of the self-etching reaction of the primer to the metal substrate.

**Propprep** also ensures that no free alkalinity, as a result of various soap/detergent washing, is present to interfere with the self-etching primer reaction and adhesion to the metal substrate.





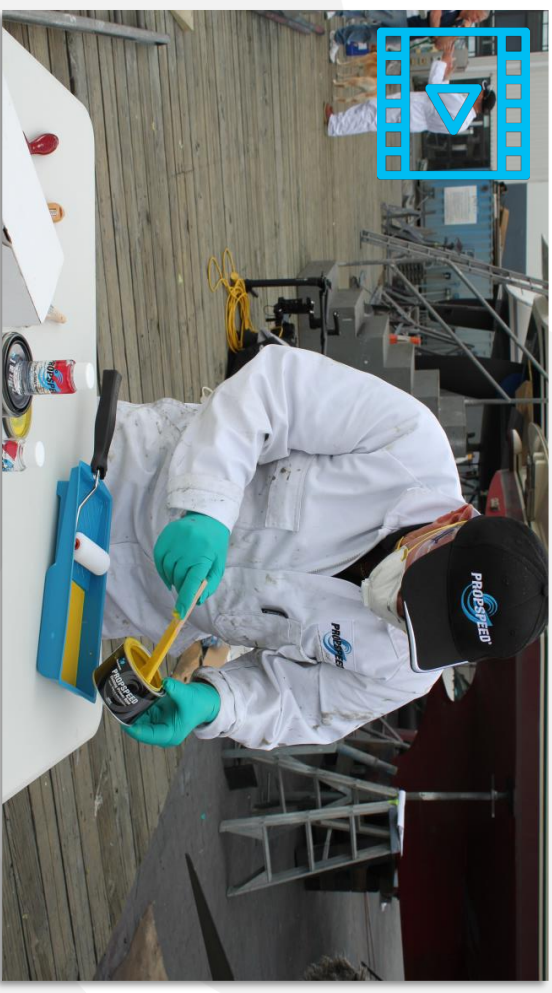
Etching Primer

# MIXING

The Etching Primer Base requires mixing before adding the Hardener.

This usually takes no more than two or three minutes.

**Note:** Failure to thoroughly mix the Etching Primer base may lead to premature hardening, inconsistencies and short life expectancy of the final coating system.



Etching Primer

## ADDING THE ETCHING PRIMER HARDENER

**3** The Etching Primer Hardener and Base have a mixing ratio of 4 parts by volume Etching base to 1 part by volume Etching hardener (4:1).

**3** Again, mix thoroughly before using.

Once the Etching Primer Base and Hardener is mixed, **use immediately.** Any product not being used immediately can be left in the sealed can in the shade for up to 6 hours. If mixed at 10am you need to use it by 4pm following the 6 hours or discard it.



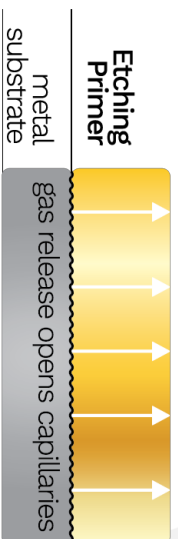
Etching Primer

# APPLICATION

## How does the Etching Primer work?

The Etching Primer bonds to the metal substrate by both physical and chemical bonds.

This bond causes gas bubbles to be released, creating tiny capillary holes in the surface of the primer.



Etching Primer

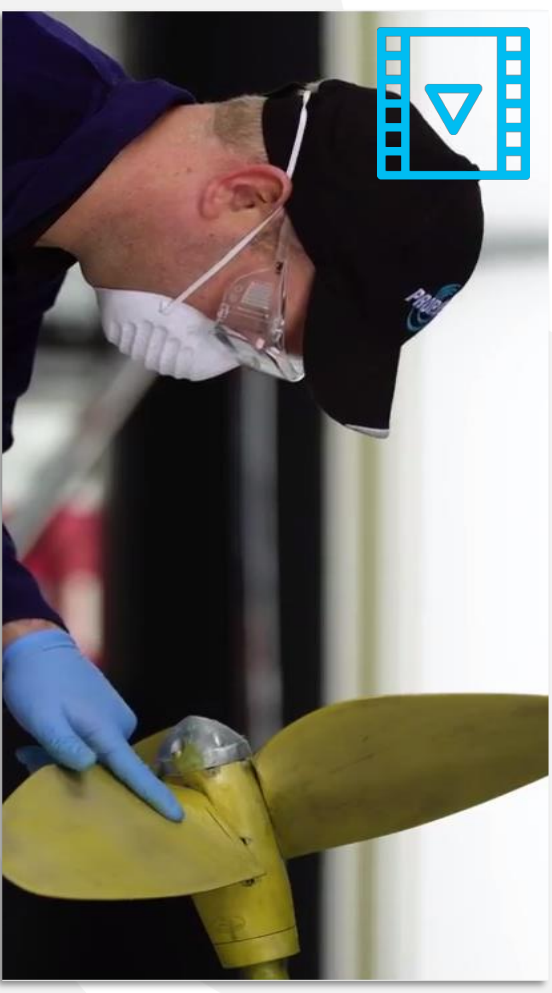
# RECOAT WINDOW

**3 It is critical to adhere to the recoat window.**

A minimum of 2 generous coats of Etching Primer are required to ensure proper coverage of the metal surface.

**Perform the dry-to-touch test to check when you can apply the next coat. This is usually 3-5 minutes.**

Use a gloved finger to check if the Etching Primer is dry enough to not transfer to your glove, but the touch is enough to leave an imprint on the coating.



Timing is Everything

# RECOAT WINDOW TABLE

The following table is provided as a guide for PropSpeed applicators to consider when applying the **Metal Etching Base** and the **Clear Coat**.

40°F & below 5°C & below	40 – 50°F 5 – 10°C	50 – 60°F 10 – 16°C	60 – 70°F 16 – 21°C	70 – 80°F 21 – 27°C	80 – 90°F 27 – 32°C	90 – 95°F 32 – 35°C	95°F & above 35°C & above
Apply <b>1<sup>st</sup> coat of Metal Etching Primer</b> and wait:							
We do not recommend the application of PropSpeed in this temperature range.	15-20 minutes <b>Tip:</b> Heat the surface to reduce the timing.	10 – 12 minutes	8 – 10 minutes	5 – 7 minutes	3 – 5 minutes	2 – 4 minutes	We do not recommend the application of PropSpeed in this temperature range.
Apply <b>2<sup>nd</sup> coat of Metal Etching Primer</b> and wait:							
We do not recommend the application of PropSpeed in this temperature range.	15-20 minutes <b>Tip:</b> Heat the surface to reduce the timing.	10 – 12 minutes	8 – 10 minutes	5 – 7 minutes	3 – 5 minutes	2 – 4 minutes	We do not recommend the application of PropSpeed in this temperature range.
Apply the <b>Clear Coat</b> and wait to dry before the launch for:							
We do not recommend the application of PropSpeed in this temperature range.	36-48 hours	24-36 hours	18-24 hours	12 hours	8 hours	8 hours	We do not recommend the application of PropSpeed in this temperature range.

Now launch your boat with confidence.



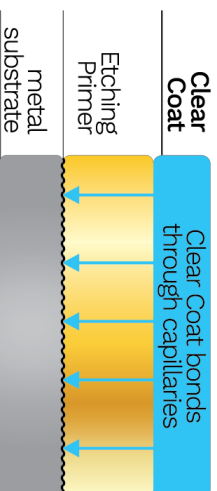
Clear Coat

# APPLICATION

## 4 How does the Clear Coat work?

When the **Clear Coat** is applied it soaks into capillary holes, binding to the Etching primer coats as well as the metal substrate.

It is this process which relies on the re-coat timing window being strictly followed – if the **Etching Primer** is too dry when the **Clear Coat** is applied the capillaries will have closed up, so the interlocking of all layers won't work.



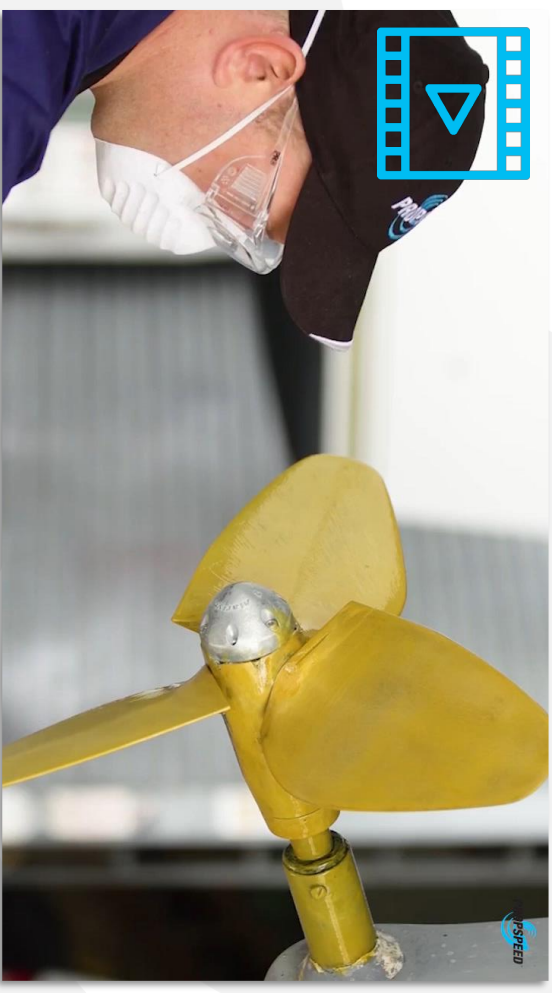
Clear Coat

# FINAL CHECK


## 4 Check for any missed areas!

The **Clear Coat** has a glossy finish and the **Etching Primer** has a matte finish, so it is easy to see if there are any areas that may have been missed.

Brush out any drips, sags or runs in the Clear Coat before it sets. You usually have 5-10 minutes to do this.



# TIPS

- 
- Wear appropriate personal protection equipment.
  - When coating the blades of a propeller, start in the hub area and work your way out.
  - Install all zincs or tape off areas where zinc anodes will be placed before applying Propspeed. Be sure to carefully remove any tape that has been applied before the Propspeed is fully cured.
  - For larger jobs to meet the recoat window you will need more than 1 person.
  - You can do separate areas at different times to meet the recoat windows.
  - Take note of the weather before every application. Temperature, humidity and wind will increase or decrease the drying time of the individual coatings.
  - On larger jobs mix the Etching Primer Base first and only add the Hardener when ready to use.



After Application

# PROPSPEED AFTER CARE

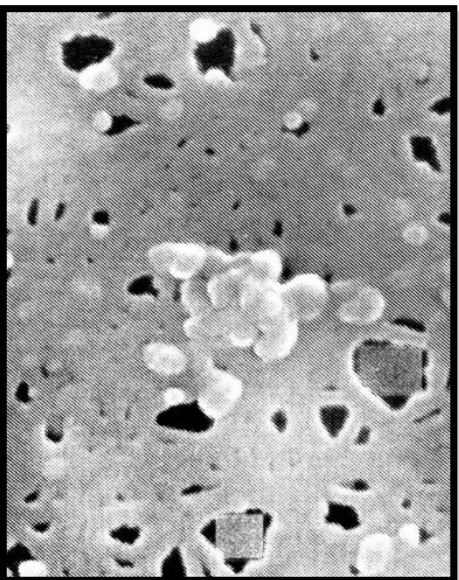
**Once it is applied, you need to look after it...**

- Propspeed requires a minimum of 8 hours to dry before launching. In cold conditions, 5-16°C / 40-60°F, we recommend at least 24 hours drying before launching.
- Take care not to damage the coating.
- Unlike traditional bottom paints Propspeed's effectiveness is not adversely affected by sitting out of the water for extended periods of time in warm or cold climates.
- Keep the coated assets out of direct sunlight – UV can damage the coating.
- If it will be kept out of the water for extended periods of time, using the top of a trim tab as an example, it should be covered with a plastic sheet or bag to minimising product degradation to UV exposure.

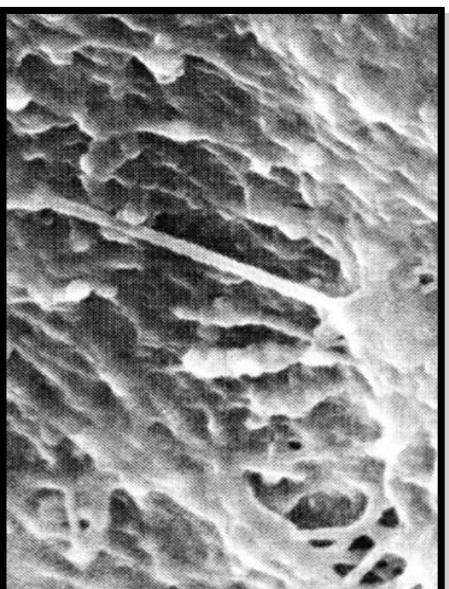
The Problem

# BARNACLES vs GLUE COMPARISON

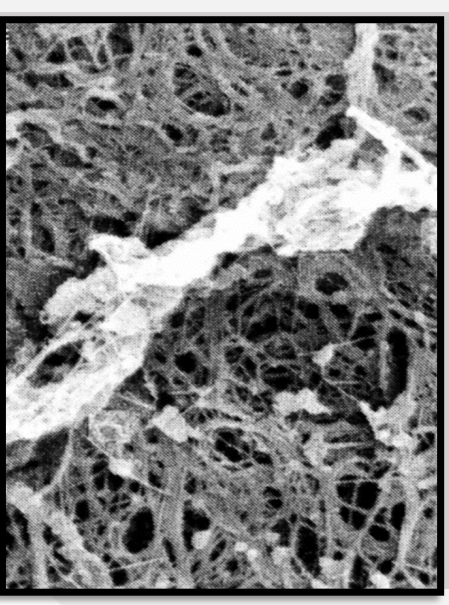
The below images were captured on a JEOL 7000 FE Scanning Electron Microscope to see the



**Barnacle glue on bare metal substrate**



**The same barnacle glue forming on competitor X**



**The same barnacle glue attempting to form on Propsspeed**



Let's Learn Together!

## Q&A?

Please share with us any questions you have around anything you have seen or heard today?



## Conclusion

# FINAL THOUGHTS

- **21 Years in the Industry** – Proppspeed is the original & still the best foul-release-coating available today.
- Be organized, plan ahead and ensure you follow the process, step-by-step.
- Understanding the conditions, recoat times and tools you will need are critical to delivering an excellent application.
- Preparation is key – Don't rush this stage, ensure all surfaces are properly sanded, cleaned and wiped down with Propprep.
- Mixing is a must – Dig deep and make sure to mix the Etching Primer Base all the way through, before adding the hardener.
- The risk of rushing a job is 10x greater than taking the time to follow the process and do it right the first time.



THANK YOU