

# NYALIC<sup>®</sup>

Clear Surface Protectant  
[www.nyalic.com.au](http://www.nyalic.com.au)



*John F Kennedy said*

*... We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard ...*

*So they strapped a rocket missile on their butt, and off they went.*

# The **amazing** tale of NYALIC

We are a small company with a big idea: a clear, permanent protectant that prevents rust and corrosion from robbing the life and value of your equipment. It wasn't an overnight idea. Over 50 years ago, people travelled to the moon and back to perfect our formulation.

As part of the Apollo space program, Nyalic was the only product proven to protect in the most extreme conditions.

Today, our proprietary, high-performance formulation protects critical equipment from agriculture to construction, transportation to marine, etc. We can help protect your corner of the universe too.



## **Our Secret Formula is Your Secret Weapon**

**Nyalic is not a paint or temporary coating. It bonds to exterior surfaces and critical internal components, forming a clear, permanent seal.**

Under the hood, Nyalic performs like a conformal coating, yet is ultra-thin, allowing heat to escape so sensitive electrical and mechanical components remain cool.

Our unique formulation is durable and won't yellow, crack, peel or flake. It's

easy to apply and delivers professional results.

Whether it's the unforgiving fields of America's heartland, the stormy waters of the New Zealand coast or the corrosive salt mines of the Mississippi River Valley or Dampier Salt, where working conditions get tough, Nyalic gets to work. With Nyalic, you can avoid crippling downtime, reduce maintenance costs and protect your investment season after season

## **Put Nyalic To Work For You**

Nyalic is fit for your operation, regardless of size. Our convenient cans are perfect for smaller equipment like mowers, all-terrain vehicles, field repairs, and touch-ups. We can offer complete Do-It-Yourself kits for larger equipment like tractors, skid steers, dozers and sprayers.

We can have one of our professional applicators come to you for fleets, more extensive jobs, or on-site applications.

In Aust, call us on 0420 982 329  
or [jeff@nyalic.com.au](mailto:jeff@nyalic.com.au)

NZ use 0800 692 542  
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# NYALIC<sup>®</sup>

Clear Surface Protectant

## **This picture is the side of a faded green John Deere tractor.**

Quite common in Goondiwindi but all across Australia - the factory paint tends to perish in extreme conditions.

The green has perished, but with a small application of Nyalic, see it reflective and rejuvenated at the left...

Note the reflection of the picture taker. Camera in the right hand, a safety vest on and a smile for the camera; the image says it all.

## **That magic is in a quick application of NYALIC.**



# But this is Colour?

## Exactly - How does Nyalic® do that?

As Nyalic® is 100% Chrystal Clear, hopefully, this short manual will explain how Nyalic has so many uses. Fixing faded coloured paint is just one.

Nyalic works very well with colours - LINFOX Red is somewhat dramatic, and the restoration does confound normal logic.

A liberal application on an ancient PAN-TECH box trailer... the old thing came back like new, quite astounding!

**Astounding, a great word ~ even more so when considering this pan-tech is clad in old fibreglass.**



# NYALIC® is **very good** on boats

This hull being coated at Yamba is coated inside and out with Nyalic® to protect the vessel from corrosion.

Why inside? Boats in service sweat and they can rot from the inside outwards!

The crew at Yamba Welding & Engineering in the seaside metropolis of Yamba build great patrol craft. Well framed and welded solid!

Here the application of a liberal coat of Nyalic within the void space, below the deck and before any fuel pod installation.

Finished unit below.





# Big ones small ones

All good jobs

- One built in Geraldton
- One built in Fremantle
- One built in Tasmania
- Or it could be Thailand or Singapore, Nyalic is exceptional in service on commercial vessels.
- Even some of those on the River Thames are Nyalic coated.

These vessels are built to work hard, built tough and often operated in extreme conditions. Commercial users report less down time at maintenance.

**These three examples were Nyalic® over-coated.**

# NYALIC®

Spacecraft Proven Protection

# PREPARATION

is the key



# Pre-Prep of the surface

## Nyalic likes metal 'clean'... **Yes - clean.**

You decided you wanted Nyalic®, you contacted us for corrosion protection. That shows to us you put a value on your asset.

Nyalic® application is easy at every step but look at your project a little clinically. Don't rush it and do it right for the best results; it is all very straightforward!

If we say - get it clean. Nothing is worse than doing a good job and discovering a streak, or worse, a grandchild's handprint slap bang in the middle of the job.

Nyalic is a Clear Coat that provides you with corrosion protection. Yes, 100% Clear and like all clear coats, **it will hide nothing!**

Commercially there are various cleaning and pre-treatments available. Some people like acid wash; others don't! That is OK. but these are opinions; We know that our way works!

The best cleaner for metal is a combination of soap and water.

This 17 M West Australian Fisheries vessel was polished to mirror finish by two apprentices - one side each and yet it was still easy to do.

After the lads effort, the polishing medium then washed off to prepare the surface. The results were brilliant.

There are many processes and soaps you could use, but be wary. Things that people use for degreasing may contain chemicals that could be better for you.



**NYALIC**  
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Everybody has a friend with his ideas. Many use a particular commercial truck wash - sold everywhere ... made with salt and we know it contains GLYCOL... Not only does that knacker paint, but it also is not EPA-friendly!

**ALWAYS READ THE SAFETY DATA SHEET**

Our company products, Simple Prep™ and Right Rinse™, have been created expressly for cleaning metal and other substrates. Neither is to "etch" your surface; they are cleaners. They were explicitly created to pre-clean and create the optimum neutral surface for a Nyalic application.

There are alternative soaps readily available. For quick jobs, you can use substitute cleaners. Grab some **SIMPLE GREEN**, this is available from Bunnings and Coles - Thin down with water and rinse well. You can achieve similar results with our house brands - It's also cheaper!

**Simple Green** is an all-purpose concentrated cleaner that removes dirt, grease, and stains and is recognised by the **U.S. EPA's Safer Choice** Program.

Use full strength on heavy messes or dilute for daily cleaning...

Simple Green takes its environmental responsibility seriously, that's why selected Simple Green products have been verified by GECA as better for the environment.

Look for the GECA tick of approval for safe sustainable solutions for our planet and people.

We suggest you don't use soaps that are yellow in colour without checking. Yellow soaps habitually contain a product called "**d'limonene**"... see the next page..



thin this down - it is

**CONCENTRATE**

**NYALIC**  
Spacecraft Proven Protection®

While **d'limonene** is created often naturally in our food chain, it is also used as an Industrial SOLVENT... and should we prepare a painted surface with solvent... Not always the best idea. It might not be the best option to use when washing down your assets AT DAYS END ...

We had a client once who used barrel wash that contained 'Muriatic acid' to wash down his tractors and equipment. Oops!

## And... the excellent **Bushman's Plus Insect Repellent**

Brilliant stuff to get rid of the mozzie and the midge... and super handy as it comes with sunscreen to protect us from burning our noses off...

Available everywhere as well...

There is a downside - being tropical strength it contains alcohol and therein creates an

issue... If you don't rinse for boat down often with a soap and water solution, progressively the Bushman's and most sunscreens (Zinc) will allow your Nyalic coating and painted duco to soften and wear.

Combining soft coatings and sweat, over time you might notice either white marks or brown...

All FIXABLE and easy... but don't be phased, its easy-fix.

**D-Limonene Orange Oil** is a **biodegradable solvent** occurring in nature as the main component of citrus peel oil. It has a pleasant citrus aroma and is used for many cleaning purposes.

**D-limonene** is used in food manufacturing and some medicines, e.g. as a flavouring to mask the bitter taste of alkaloids, and as a fragrant in perfumery; it is also used as a botanical insecticide.

**D-Limonene** is increasingly being used as a solvent for cleaning purposes, such as the removal of oil from machine parts, as it is produced from a renewable source (citrus oil, as a by-product of orange juice manufacture). It is used as a paint stripper and is also useful as a fragrant alternative to turpentine.

**D-Limonene** is also used as a solvent in some model aeroplane glues and as a constituent in some paints.

**D-Limonene** is a colourless liquid hydrocarbon classified as a cyclic terpene.



# Fact & Myths

## **THERE IS A REASON WE ASK SO MANY QUESTIONS.**

Every week we get a call from somebody who tells us they have used Nyalic before and are a professional; *apparently with some professionals they know everything,*

Every sale, distribution or shipment we make is entered into a database. That allow us to ensure we know about a project and so provide best practice and the best methodologies are used.

## **We want your projects done right. It protects our good name, product and reputation.**

In the last twenty-five years - four people have been involved with Nyalic – Skip and Warren in the USA and John and Jeff in the South Pacific. Nyalic is always our trading name, so if you think you know it all, then

## **Please READ the Manual**

then you may understand what we are on about about....



# **When you pickup an aerosol can - do you shake it?**

**Fact:** Some grades of aluminium are known to be very prone to corrosion in aggressive environments. That is why we started to paint the surface over the years - and now why we use Nyalic to solve the corrosion problem. Seal the aluminium to stop the atmosphere from getting to the surface of the alloy.

**Fact:** By its nature, traditional paint has a habit of being ejected off the surface - sadly, it's also true that over time all coatings break down and allow moisture to ingress - i.e. sneak under - A corrosion reaction occurs, and whoops - your paint falls off! Unfortunately, the humidity helps give us corrosion and bubbles under the colour!

**Fact:** Paint and Nyalic have pretty different properties - Nyalic is a mix of proprietary polymers and is, in reality, **NOT** a paint.

Nyalic polymer, when correctly applied, bonds to the aluminium, at which point water H<sub>2</sub>O and corrosive salts cannot get under the coating. Hence you see no corrosion - no access to air, and the polymer does not pop off. Nyalic gets into the pores of the metal and locks out the Oxygen O<sub>2</sub>. No Oxygen. No salts, no problems!

Apply Nyalic right - it solves a heck of many problems.

**Fact:** Most aluminium corrosion is aluminium oxide, a sturdy material that protects the aluminium from further corrosion. It is natural and part of aluminium.

Aluminium oxide corrosion nodules look a lot like a dull grey to powdery white. Oxide nodules can scratch your skin and look terrible, so it can be advantageous to stop this action.

**Fact:** Aluminium, when it is delivered new to a factory, is often wrapped in plastic to stop the air and moisture. The exact process is what Nyalic does; we must all be onto something!

Even when wrapped in plastic, all metal is dirty. There will be mill oil or something, so even your new boat will always need a wash before you start doing anything.

**Fact:** Aluminium surfaces coated with Nyalic must be clean, dry and free of oil, films, grease, silicones and wax.

An example. Many vendors or salespeople will polish a brand-new alloy boat for a quick sales presentation at every boat show. No finger marks - to look pretty etc. Typical sales 101, all-flash performance.

All the cleaning product needs to be removed - who knows what they used; hence you need to clean well with every coating job. Silicon wax does not like Nylon or Vinyl - that is simple old-school chemistry, and better to be a little fussy with your preparation efforts!

**Fact:** Contaminated surfaces may not allow proper adhesion leading to protection failure. Pretty basic stuff.

Wash off the natural aluminium with a water solution - Simple Prep and Right Rinse will help remove these contaminants, as will Simple Green when used correctly.

Good potable rinsing water is paramount to a successful job. And always remember that recycled water is only sometimes pristine.

**Myth:** Recycled water is always drinkable or potable? Heck no. All water sources vary in quality; a water test is a great idea.

How do we know? We re-tested their supposed perfect water at a very professional shipyard with recycled water systems. We found it was contaminated with paint thinners.

Even in different states, you may need to question if the water is hard or, worse, filled with odd "stuff"..... If you have any worries, grab the phone and call your Nyalic Guy. We have lots of history worldwide.

Our team are more than happy to assist in assessing water quality ... Would you drink the water - so you might **taste the water**. Is it potable?

Mostly preparation of raw metal, is it clean - ensure the rinse water appears to 'sheet' off the surface. No beading effect like when you hose down your freshly waxed car!

"Sheeting" - you will know this effect as soon as you see it. It's simple.



**Myth:** it is a myth that using a gas flame heater will help you get a surface dry. It will dry the surface, but it won't help you much. Flame and gas can fill the air with soot - this soot will settle on your surface, and you will likely need to start all over again.

**Tips:** My wife's hairdryer is often used to blow air out of cracks, and I have used some of her old towels. Just use her favourites sparingly!... Lastly, be careful with cold metal on cool days; you don't want to trap water! When your surface has been - it is best from this point on not to touch the metal with a bare hand. Your sweat will leave oils on the surface.

Suitable gloves can save a lot of heartache and recontamination!

So **we recommend always wearing gloves** - cheap nitrile or vinyl from the supermarket are great. Use them AND regularly change gloves!

**Tip:** When wearing gloves - Always "double up the gloves" - invariably, a finger in a glove will break, and having a second glove underneath not only saves you, it even seems to make the gloves last longer.



**Nyalic is easy to apply, and you can use any of these methods.**

**You can spray - brush - roll, or even wipe using a lint-free rag.**

Even a cheap \$50 low-pressure spray gun can be ok.

- Nyalic can be successfully brushed using foam-type applicator brushes, which you can buy in various sizes.
- While most hardware stores have vast choices, we do not wish to offend anybody, but Asian foam is not always as good as it was ... We have purchased great foam brushes from a craft shop.

If more than one coat is applied, ensure the first coat has adequately dried before re-coating.

**Drying** - Generally, 20 minutes when sprayed at 20 deg C is adequate, but this will vary due to prevailing conditions, humidity etc.

In New Zealand, you may have 16° C; in Australia, 28° C - in Atlanta, 77° F and in Dubai, 55° C. Plan the project, and it will be easy.

The local dry time is essential, as are ambient conditions - talk the issue of any local humidity through with your Nyalic Guy.

Any brush or roller used to apply Nyalic must be made to withstand solvent reaction, so check with manufacturers. Our comment about foam brush rings is valid with rollers... Cheap is sometimes the best, but a decent local brand is usually okay...



Take the choice that your paint store guy suggests for enamel... we like **UNIPRO or ROTA-COTA... white foam, no nap!**

- A. The best are solid foam - and most are double-ended...
- B. The use of bad rollers can promote bubble lines in the applied Nyalic. The round-ended small roller, as illustrated, is best used to help avoid these lines.
- C. Because Nyalic is self-levelling, these bubble-type imperfections will level out and go away ... but it is still better to use the right tool.
- D. A combination of roller application followed by laying off with a foam brush can achieve good results -
- E. 100 mm rollers do a better job than 160 mm.
- F. **ROLLER BLANKS MUST BE WHITE.**







# AN ACID WASH

The boat at left was raw, cleaned metal that was Nyalic coated. Another Nyalic crew covered the other.

Both vessels are Stabicraft. The boat at left was washed with soap and water - dried, and then roller covered with Nyalic. It was coated in the dead of night at Batemans Bay in August.

As a result, we had a super shiny bright boat for display at the Sydney Boat Show. It gleamed, and the metal did not show the finger marks. The perfect vessel for a trade display...

The vessel at right was cleaned first with a soap and water wash - then, while still wet, it was acid washed using a phosphoric acid mix. *Incidentally, it was acid washed with the decals on.*

What was previously reflective metal was dulled to this battleship grey patina.

After a bicarbonate of soda rinse, this vessel was sprayed with Nyalic®.

HVLP spray or roller - it did not matter much. The Nyalic was laid down on the surface in both cases, and excellent corrosion-resistant results were achieved.





Queensland Water Police PV Stewart Kerlin ii  
Built BY **Norman Wright BOATBUILDERS** at RIVERGATE  
Nyalic Applied over a sanded and washed surface. NO ACID USED



QWP PV Brett Irwin  
Series 1, One of three built by **AUSTAL**



NAIAD units built in NSW by **Yamba Welding & Engineering**  
These fast patrol craft have been manufactured for Police, Border-force, Federal Police,  
Parks Authority, Maritime/RMS

# Spray application - more

SPRAY! So many options  
Any of the spray systems we mention are suitable for applying Nyalic.



**HVLP** high-volume low-pressure systems provide the best and most cost-effective medium for applying Nyalic.

The gun setup can be either a **pressure pot** or a **top-loader gun**. In either case, a 1. to 1.5 cap should be used. In all cases, filters for oil and water contaminants are always required.

**Conventional Air Spray** - either top loading or pressure pot can be used; the air cap and needle should be in the 1 to 1.4 range.

**Air Assist** - this system is ideal for volume production and large jobs. Again any setup with a 1 to 1.4 mm air cap.

We have even used **Wagner** units with success. Just be aware of your tools and understand them and the situation. When out doing a FIFO job, these Wagners have done remarkable jobs and large projects at that... they are cheap enough to throw away.

Even the baby Ozito unit can be turned down to apply Nyalic ...



*The most important message we offer... Ensure that the last product you put through the chosen spray system and all the thinners are well-cleaned from the unit.*

- When working, note that humidity above 85% may slow your dry time - it can even create a squalling effect.
- Ventilate - have plenty of air so that vapours are removed.

*In the old story OH&S and sources of ignition, you are dealing with condensation... Uncommonly common sense is all you need.*

- Have a copy of the MSDS with you.
- Nyalic is applied at 30 - 33 m<sup>2</sup> per litre, getting a wet film thickness of approximately .5 mils.
- *The dry film thickness will be approximately 5 microns.*
- Spray the area from top to bottom using a back-and-forth horizontal pattern.

*If the Nyalic is allowed to overlap, ensure that all overlaps occur before the resin dries to avoid a dry spray effect.*

- Usually, one coat is as good as multiple coats of aluminium.

*If more than one coat is desired, the first coat should be dry to the touch before applying an additional coat.*

**On average, a spray or roller will give between 28 to 30 Sg M coverage on a pristine clean surface.**

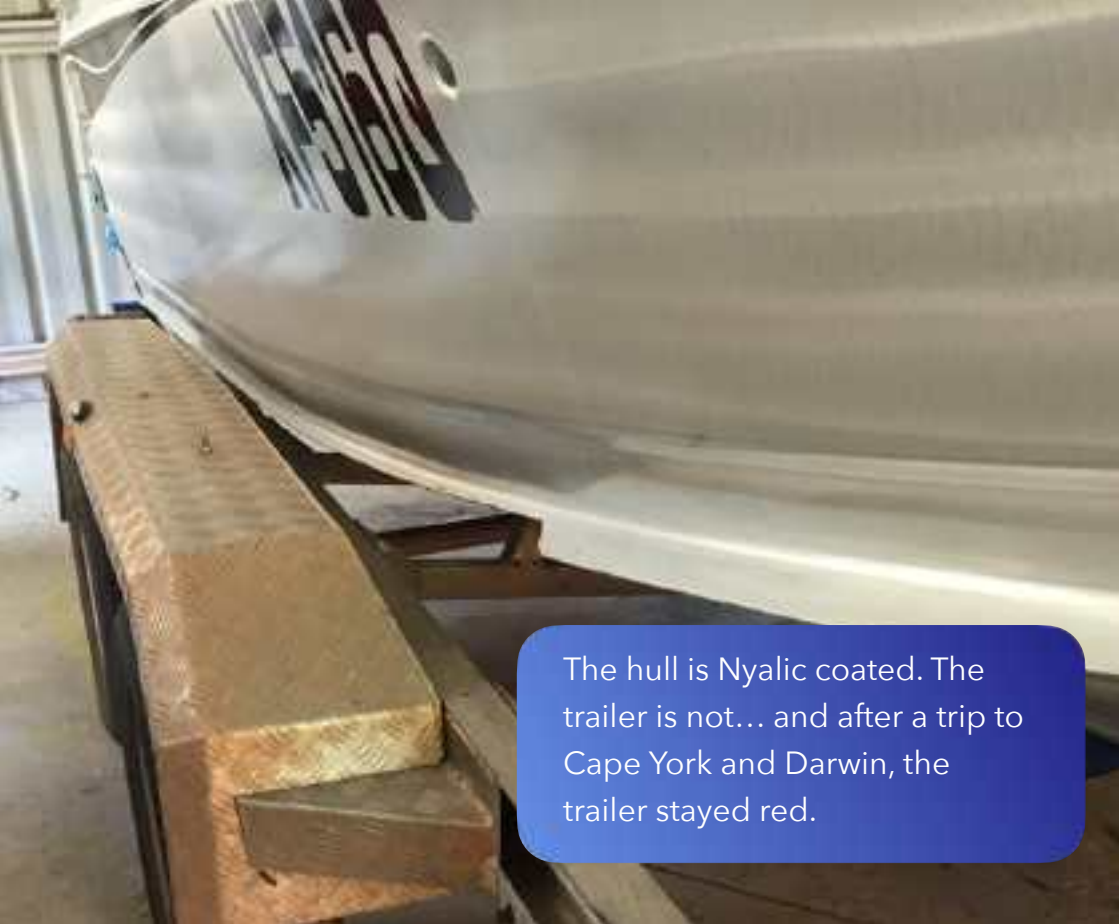
# Things to take note of...

Do not apply to  
glass., We  
accept no  
responsibility  
when people  
put it on  
windscreens

Nyalic does not  
like to be applied  
over silicon.  
Call us about the  
solution to  
**save you time**

We **DON'T**  
recommend  
**thinning Nyalic.**  
If its really hot and  
you need advice  
**just call**





The hull is Nyalic coated. The trailer is not... and after a trip to Cape York and Darwin, the trailer stayed red.

**Dragged out behind the car - dunked in the water...** Left in the trailer park in the sun all day - still covered in salt.

**Dunked again... Dragged home** - washed roughly, and then you wonder why the wheels rust.

Take the wheels off the trailer; you can leave the tyres on.....

- **Scrub the rims down...**
- **Dry them off.**
- **Nyalic them inside and out.**

**It is easy to Nyalic your alloy trailer.**

This example shows the instant benefit ... and alloy trailers are not cheap!

**Odd project -**  
create a 250-metre  
alloy bridge  
construction across  
a tidal river.



**The position..** Over the Crooked River, the estuary and the beach. Being tidal, the construction needed to be the best available. Box alloy was welded in lengths, bolted together in sections and then coated with Nyalic clear for corrosion protection against the elements.

- Marine alloy fabrication built for wild southerly coastal conditions with high rails and stanchions
- Designed by recognised marina constructors
- Assembled and erected to support the local community

Every time there is a good southerly, this bridge gets a hiding. Yet it still shines and defies the elements.

Sea Slip build and then NYALIC coated





**The project is  
yours...**

**NYALIC**  
Spacecraft Proven Protection

It is better to take 20 minutes extra time to do it right than to suffer abuse and ridicule at the site from an apprentice who would do a shoddy job.



**RTFM**

Before you ask!

Take your time. Be proud of a job well done.

## HOW TO MAINTAIN A NYALIC-COATED SURFACE

**Nyalic® coatings are designed to be low maintenance; a minimum amount of cleaning is needed.**

A little soap - a couple of squirts of something easy - a little Simple Green, which you can buy at Bunnings or Coles - or something like a neutral eco-friendly product at ALDI. Two fifty-cent-sized blobs in a 20-litre bucket will be a perfect surfactant to dispose of salt ...

Sticking to the following basic rules for maintaining your Nyalic coating can significantly extend the coating's life and premium appearance.

One fact that most people do forget... **Nyalic dries by evaporation ...**

When applied, people find it amazing that Nyalic dries into the high gloss in 15 to 20 minutes, but it still needs to be dry...

Nyalic gets dry over time - the thinners in the product need to evaporate out... that is not to say it's not tough from Day 1.

Officially we always say it takes 30 days to get rock hard - but that is based on the US legal system. The reality is that Nyalic dries hard much faster than that...

**We can give examples where we've had to paint a vessel on Tuesday, have it moved out of the shed on Wednesday - exposed to coal dust and toxic substance at a Brisbane wharf... The ship was launched on Thursday, and Friday, crews wanted to be at sea en route to Port Douglas 1500 miles north...**

Nyalic has been "hard",.... but not rock hard!

Water Police Boats often get passaged up the Queensland coast - even after so few days. *Not the best idea, but....*, there has never been any damage to the surface coating. Not once!

People will often grumble or moan and say you can scratch Nyalic off with your fingernail... we know that, and it is like that for a reason.

- HBI100 Nyalic is designed to self-anneal.
- It is still fluid in the drying cycle and ...
- at a microscopic level. It is binding to the surface.

Yes, I will agree with that, but it is only during the first few days of application...

On a professionally painted boat - prepared correctly, clean, dry and washed clean of any dross... In the first hours, mainly if it's cooler, Nyalic can be scratched, but from days four and five, Nyalic will tighten onto the base metal and shrink to form its typical self-annealing slick surface.

**Prohesion tests prove NYALIC DRIES HARD - it takes a little time! Show a little patience.**



## NYALIC AND RAW METAL

Decals in strips: Many trailer boats have strip decals down the sides. Good grade decals; you should have no issues. 3M are best... Not all decals are top-grade.

It's no different with the professional grade product used on Waterways, Roads and Maritime or WaterPolice.

- The checker of Police and others is a flat decal, screened.
- The checker on Rescue craft is often "manufactured" as they use reflective. Neither have issues with Nyalic...

In most situations, the metal surface has been pre-coated with some Nyalic .. Mostly as the builders don't mask to a line. It does not matter... Decals stick either way.

Decals, on average, can last up to five years, and they often last longer if the surface is Nyalic sealed.



## CARE OF MARINE DECALS...

Should people POLISH or WAX DECALS?

**The answer is NO, and they don't... this is not normal.**

**SO LOGICAL PEOPLE WON'T POLISH OR WAX THE NYALIC COATING EITHER;**

AGAIN - it is unnecessary; some polishes and wax contain solvents that may dull the finish. The result is more damage than good!

**The Marine Rescue Alloy Tube boats and Victorian Police Naiad are all Nyalic coated...** In the case of the Naiad Response boats, they are covered internally to stop corrosion ... Note - the blue on the shed is all a decal.



Sometimes we end up with a scar on the side of a boat... The Nyalic gets scraped off over quite a short time; the aluminium oxides make that area black...

This is NOT a problem... Nyalic is resistant to acid... and often, the quickest fix is to do this...

### **Get a litre of ALUBRITE or BLITZ -**

...this is a phosphoric acid mixture obtainable from SuperCheap Auto or Bunnings...

1. Put on SOME CHEAP PLASTIC GLOVES
2. Grab a MICRO CLOTH that is clean and washed
3. Put some ALUBRITE or BLITZ on the micro cloth...and then...
4. Hold the acid *directly on the black mark*. In 95% of situations, the black mark will disappear in minutes...

The acid will not harm the existing Nyalic-coated surface. RINSE the area well with clean potable water...

Reapply some Nyalic on the spot using either a rag, brush or roller... let it dry... then go fishing.



## WHEN YOU SPILL PETROL OR SPEWS OUT THE BREATHER...

Decide how much area needs to be cleaned.

Rinse the surface with soap and water - this de-fuels and removes oils and salt. The car wash brush is good.

- Makeup two soft towelling pads - old nappies are great .... Anything that has been washed or even two washed micro cloths. You want these pads to be LINT-FREE.
- Put some XYLENE on both pads (Xylene was \$17 a litre from Bunnings and is made by Diggers - it's a clean solvent)
- With one pad in your left hand, wipe the stained area... You will feel the Nyalic soften... and in the right hand, using a continual turning motion - remove the Nyalic off the surface with the second pad.
- Reapply the Nyalic - it will be gone, and so will your stain.





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