

# Perfection

## Ultimate performance polyurethane gloss finish

The **Perfection** system is the latest in a long line of two component polyurethane coating developments to come out of the central research facility of International Paint for use under the world renowned name, Interlux®. This latest development is in keeping with our policy of continuous product improvement as technology moves forward.

**Perfection** has been formulated with versatility in mind whether you prefer brush/roller application or spray application. The product objectives are those of fitting the requirements of the ‘Do-it-Yourselfer’ while producing characteristics that the professional applicator expects. These products can be used to make the project proceed quicker and with minimal effort. For the professional applicator with the proper safety equipment and training, **Perfection** can be sprayed to an appearance synonymous with gelcoat.

**Perfection** high-performance formula combines a long lasting abrasion and chemical resistant finish with superb protection from the detrimental effects of UV. Its abrasion resistance makes it ideal for application to decks and gunwales. It is resistant to the effects of fuel, oil, mild acids and detergents. **Perfection** can be used anywhere above the true waterline on properly prepared fiberglass, clear epoxy resin systems, aluminum, wood, and steel. The superb high gloss characteristics, long lasting color retention and effective resistance to abrasion makes **Perfection** the finest coating currently available. It beats conventional enamels in product characteristics.

For professional-quality results made easy use **Perfection**.

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## I. SURFACE PREPARATION – FIBERGLASS, CLEAR EPOXY RESIN SYSTEMS, WOOD, ALUMINUM AND STEEL

It must be remembered that **Perfection** contains aggressive solvents and are not to be used directly over conventional alkyd type marine finishes. **Perfection** can be applied directly over properly prepared catalyzed epoxy finishes, gelcoat or catalyzed polyurethanes. Remember, surface preparation is 80% of the job. **Perfection** requires a flawless surface as its ultra high gloss will highlight, not conceal underlying imperfections. The following sections will outline the proper surface preparation for varied types of substrates.

### SURFACE PREPARATION FOR BARE FIBERGLASS:

The surface preparation of bare fiberglass for **Perfection** is very important. Keep in mind with sanding operations, it is important that all sanding dust be removed before any coat of paint is applied. Also, porosity can sometimes be confused with an unclean surface. Wax residue from an improperly cleaned and/or sanded gel coat will cause 'fish eyes' which resemble gel coat porosity.

#### Fiberglass (gelcoat):

- 1) The entire surface to be painted must always be as clean as possible. All fiberglass boats, regardless of age, must be wiped down with **Fiberglass Solvent Wash 202\*** or **Fiberglass Surface Prep YMA601** to remove all waxes, silicones, and mold releasing agents (see label directions for details). Sanding does not remove surface contamination.
- 2) After the surface has been thoroughly cleaned, sand with 120-220 sandpaper. After sanding wipe surface clean with **Fiberglass Solvent Wash 202** to remove sanding residue.
- 3) Fill all dents and gouges with **Interfill® Epoxy Filler YAV867** or **Watertite® Epoxy Filler YAV135**, and allow it to dry thoroughly before continuing.
- 4) Sand repaired areas smooth with 120 grit production sandpaper until smooth. Clean the surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 5) Apply one coat of **Epoxy Primekote® 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper.
- 6) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 7) Apply the second coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper. Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.

**NOTE:** If additional filling and fairing is required, use the **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135** then apply another coat of **Epoxy Primekote 404/414**. Usually one coat of **Epoxy Primekote 404/414** will be all that is needed to cover the fairing compound, but if necessary, a second coat may be applied. If so, repeat Steps 5 & 6 prior to the application of **Perfection**.

### PREPARATIONS FOR EPIGLASS OR OTHER CLEAR EPOXY RESIN SYSTEMS:

When painting over **Epiglass Epoxy Resin** or clear epoxy resin systems it is important to remove the amine blush before applying any paint over it.

- 1) You will want to wash the **Epiglass Epoxy Resin** or the clear epoxy resin system with the **Fiberglass Surface Prep YMA601**. Rinse with fresh water. This will remove the amine blush. Sanding will not remove the amine blush and sanding may grind the amine blush into the surface making it more difficult to remove.
- 2) Sand the clear epoxy resin system with 80 grit sandpaper and remove the sanding residue with **Fiberglass Solvent Wash 202**.
- 3) Fill any dents and gouges with **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135**, or by mixing **Epiglass** fillers into **Epiglass Epoxy Resin**, and allow it to dry thoroughly before continuing.

- 4) Sand repaired areas smooth with 120 grit production sandpaper until smooth. Clean the surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 5) Apply one coat of **Epoxy Primekote 404/414** by brush or roller, thinned 20-25% with **Brushing Reducer 2333N**. Allow to dry overnight, and then sand it with 120-220 grit production sandpaper.
- 6) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 7) Apply the second coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper. Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.

**NOTE:** If additional filling and fairing is required, use the **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135** then apply another coat of **Epoxy Primekote 404/414**. Usually one coat of **Epoxy Primekote 404/414** will be all that is needed to cover the fairing compound, but if necessary, a second coat may be applied. If so, repeat Steps 5 & 6 prior to the application of **Perfection**.

#### **SURFACE PREPARATION FOR BARE WOODEN PLANK HULLS:**

Before painting wood surfaces it is important that the wood is clean, dry and well seasoned. One should not attempt to paint any unseasoned wood. To do so will result in blistering and severe paint failures. Do not use **Perfection** on flexible construction. **Perfection** will crack on clinker/lapstrake hulls.

##### **Procedure:**

- 1) The entire surface to be painted must always be as clean as possible. Clean the bare wood with **Fiberglass Solvent Wash 202** and then sand with 80 grit sandpaper. After sanding wipe surface clean with **Fiberglass Solvent Wash 202** to remove sanding residue.
- 2) **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135** to fill any gouges or holes. Once dry these areas should be sanded flat and smooth.
- 3) Sand repaired areas smooth with 120 grit production sandpaper until smooth. Clean the surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 4) Apply one coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper.
- 5) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 6) Apply the second coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper. Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 7) Depending upon how thorough a job has been done, it may be necessary to apply a third coat of **Epoxy Primekote 404/414** until the small grain marks are no longer visible.
- 8) Wipe the surface clean before applying the first coat of **Perfection** with **Brushing Reducer 2333N**.

**NOTE:** If additional filling and fairing is required, use the **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135** then apply another coat of **Epoxy Primekote 404/414**. Usually one coat of **Epoxy Primekote 404/414** will be all that is needed to cover the fairing compound, but if necessary, a second coat may be applied. If so, repeat Steps 5 & 6 prior to the application of **Perfection**.

#### **SURFACE PREPARATION FOR BARE ALUMINUM SPARS AND BOATS UNDER 25 FEET:**

Painting bare aluminum surfaces with **Perfection** usually involves more steps than painting fiberglass. **Perfection** is not recommended for continuous immersion beneath the waterline for periods longer than three days. However, for trailerable boats with short-term immersion, **Perfection** affords an extremely hard abrasive resistant coating. If the boat is larger than 25 feet (7.6 meters), it is suggested that you contact Interlux Technical Service.

- 1) Prior to sandblasting it is imperative to solvent clean all surfaces with **Fiberglass Solvent Wash 202** for the removal of grease and oil or other surface contaminants. Use a clean dry cloth, saturate with **Fiberglass Solvent Wash 202** and scrub surface thoroughly. Before **Fiberglass Solvent Wash 202** dries, wipe up completely with a clean dry cloth.
- 2) Sandblast to a clean white surface with medium mesh silica sand or other nonmetallic blast media to provide a blast profile of 1.0-1.5 mils. Metal must be clean and bright with no residue remaining. After sandblasting remove all blast residue by using a clean (oil and water contamination free) air line and by sweeping with a clean brush or broom.
- 3) If sandblasting is not possible, degrease with first with **Fiberglass Solvent Wash 202** and clean dry cloths using the 'Two Rag' wipe down method. Disc grind metal with 36-60 grit abrasive discs to a uniform, clean, bright metal with a uniform 2-3 mil anchor pattern. Avoid gouging and leaving deep sanding tracks. Vacuum clean the surface to remove sanding residue.
- 4) Within one hour after sanding and cleaning. Apply one thin continuous coat of mixed **Viny-Lux Primewash 353/354** thinned 25-30% with **Viny-Lux Solvent 355** on all metal surfaces to be primed. Allow to dry for 1 hour but not more than 24 hours before you apply the first coat of **Epoxy Primekote 404/414**. If you go beyond 24 hours without overcoating the **Viny-Lux Primewash 353/354** you will want to remove it and start over.
- 5) Apply one coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 120-220 grit production sandpaper.
- 6) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 7) Fill all dents and gouges with **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135**, and allow it to dry thoroughly before continuing.
- 8) Sand repaired areas smooth with 120 grit production sandpaper until smooth. Clean the surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 9) Apply the second coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper.
- 10) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.

#### **SURFACE PREPARATION FOR BARE STEEL:**

Painting bare steel surfaces with **Perfection** usually involves more steps than painting fiberglass. This process is not difficult, but more preparation is needed to achieve a good long lasting finish.

- 1) Prior to sandblasting it is imperative to solvent clean all surfaces with Interlux **Fiberglass Solvent Wash 202** for the removal of grease and oil or other surface contaminants. Use a clean dry cloth, saturate with **Fiberglass Solvent Wash 202** and scrub surface thoroughly. Before **Fiberglass Solvent Wash 202** dries, wipe up completely with a clean dry cloth.
- 2) Sandblast to a clean white surface with medium mesh silica sand or other nonmetallic blast media to provide a blast profile of 1.0-1.5 mils. Metal must be clean and bright with no residue remaining. After sandblasting remove all blast residue by using a clean (oil and water contamination free) air line and by sweeping with a clean brush or broom.
- 3) If sandblasting is not possible, degrease with first with **Fiberglass Solvent Wash 202** and clean dry cloths using the 'Two Rag' wipe down method. Disc grind metal with 36-60 grit abrasive discs to a uniform, clean, bright metal with a uniform 2-3 mil anchor pattern. Avoid gouging and leaving deep sanding tracks. Vacuum clean the surface to remove sanding residue.
- 4) Within one hour after sanding and cleaning. Apply one continuous coat of mixed **Viny-Lux Primewash 353/354** thinned 25-30% with **Viny-Lux Solvent 355** on all metal surfaces to be primed. Allow to dry for 1 hour but not more than 24 hours. If you go beyond this 24 hour period you will want to remove what you have applied and start over.
- 5) Apply one coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 120-220 grit production sandpaper.
- 6) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.

- 7) Fill all dents and gouges with **Interfill Epoxy Filler YAV867** or **Watertite Epoxy Filler YAV135**, and allow it to dry thoroughly before continuing.
- 8) Sand repaired areas smooth with 120 grit production sandpaper until smooth. Clean the surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.
- 9) Apply the second coat of **Epoxy Primekote 404/414** thinned 20-25% with **Brushing Reducer 2333N** by brush or roller. Allow to dry overnight, and then sand it with 220-320 grit production sandpaper.
- 10) Clean entire surface with **Brushing Reducer 2333N** to remove all surface dust or sanding residue.

#### LARGE ALUMINUM AND STEEL YACHTS – BARE METAL

Because of the complexity of the painting scheme, we prefer not to write general specifications for yachts in this class. The types of products specified are varied and are recommended on the basis of each requirement. Choice of product is dependent upon yard equipment, personnel and cruising range of the yacht (i.e., if the yacht cruises on a worldwide basis, it is unwise to use products that cannot be obtained in foreign ports). Yachts in this class are 25 feet and over and should be handled on a personal basis by contacting a representative in our Interlux Technical Service.

#### PREVIOUSLY PAINTED SURFACES (FIBERGLASS, WOOD, ALUMINUM, OR STEEL):

It is not possible to paint directly over old, conventional enamels with **Perfection**. It contains an aggressive solvent system, which is apt to soften and lift old conventional coatings. If the painted surface is in poor condition then we would recommend that you remove the old coating using Interstrip 299E, or by sanding or sandblasting.

## II. INTERLUX PRIMER USED PRIOR TO THE APPLICATION OF PERFECTION COATINGS

**Interlux Epoxy Primekote 404/414** should be used to smooth the existing surface and provide adhesion for **Perfection** when the surface is to be painted. **Epoxy Primekote** will provide a solvent resistant coating over which **Perfection** can be applied.

**Epoxy Primekote 404/414** is a multipurpose two-part epoxy primer which is recommended for priming fiberglass gelcoat, clear epoxy resin systems, wood, aluminum and steel. The appropriate thinning procedures call for **Brushing Reducer 2333N** for brush application and **Spray Reducer 2316N** for spray application. For either spray or brush application, 20% to 25% thinning by volume is normally required.

## III. MIXING PERFECTION – MIXING RATIOS AND SOLVENTS

**Perfection** Base (Part A) and **Perfection** Curing Agent (Part B) are first mixed together in a 2:1 ratio. This mixture is then reduced with appropriate solvent for either brush or spray application, if needed. **Spray Reducer 2316N** is recommended to be used if the product is to be sprayed: **Brushing Reducer 2333N** is recommended for brush application.

Application conditions vary, and it is suggested that each individual applicator determine the amount of solvent and solvent type used based upon requirements. When paint is setting fast, blends of **Brushing Reducer 2333N** and **Spray Reducer 2316N** solvents can be used to get better wet out and after flow for a smoother coating free of orange peel. Initial 50% blends of **Brushing Reducer 2333N** and 50% of **Spray Reducer 2316N** would be a good starting point. When spraying use enough solvent to reduce viscosity to approximately 14-16 seconds on No. 2 Zahn Cup. Generally this will be about 35% to 40%. However, a maximum of 10% by volume of **Brushing Reducer 2333N** is about the correct amount of thinner to properly reduce **Perfection** for brush or roller application.

It should be realized that **Brushing Reducer 2333N** for brushing is a slow evaporating solvent and can be used to modify **Spray Reducer 2316N** for spraying to slow paint set-up and improve leveling. It is the judicious use of solvent which often means the difference between just an average paint job and an excellent one.

When base material, reactor and solvent are mixed, the mixture will remain stable for approximately two hours at 73°F (23°C). After the two hour time interval, a slight increase in viscosity will occur necessitating the addition of a small amount of solvent to maintain viscosity. It is suggested that only enough material be mixed for use during a two hour period.

**DRYING AND POT LIFE TIMES:**

| Substrate Temp  | 41°F (5°C) | 59°F (15°C) | 73°F (23°C) | 95°F (35°C) |
|-----------------|------------|-------------|-------------|-------------|
| Pot Life        | 5hrs       | 3hrs        | 2hrs        | 1hr         |
| Touch Dry (ISO) | 11hrs      | 7hrs        | 4hrs        | 3hrs        |

**IV. APPLICATION OF INTERLUX PERFECTION**

**Perfection** can be sprayed to an appearance that is as good as gelcoat.

However, to achieve such optimum results, specific atmospheric conditions are required:

- Like all high performance two-part polyurethanes, **Perfection** is a moisture sensitive product.
- It cures by a chemical reaction that is triggered and accelerated by atmospheric temperature and humidity.
- Application should always take place during good, dry and calm weather conditions in order to obtain the best possible performance and end result.
- The optimal hull temperature range for application is 50-84°F (10-29°C).
- It is a good idea is to wet down the surrounding working area to settle any dust and dirt particles which could contaminate the surface and mar a fresh coat of paint.
- Pot life expectancy is 2 hrs at 73°F (23°C), therefore, only mix proportionately as much paint as will be used for that application.
- Read and follow all health and safety procedures when spraying **Perfection**.

**SPRAY APPLICATION PROCEDURE:**

**Medium Wet:** Apply a medium wet coat and allow to tack up for ten to fifteen minutes, or until the coating passes the thumb print test: when a thumb can be pressed on the paint film leaving a print on the coating but not paint on the thumb, then it has tacked up sufficiently.

**First Full Coat:** Then apply a full coat over the medium wet coat. Using this procedure, one coat may be satisfactory depending upon the spray technique used and surface preparation.

**Second Full Coat:** If a second coat is required, allow first coat to dry overnight. Then wet sand with 320-400 grit wet and dry paper, to remove any surface imperfections such as dust. Remove all sanding residue by flushing the surface thoroughly with fresh water. Wipe down to remove any residue with either **Spray Reducer 2316N** or **Brushing Reducer 2333N**. Finally, apply second coat of **Perfection**.

**SUGGESTED GUN SET UP FOR PERFECTION APPLICATIONS:**

| Binks Bullows    |                         |              |                        |
|------------------|-------------------------|--------------|------------------------|
| <b>Gun: 2001</b> |                         |              |                        |
| Pressure pot:    | Tip: 63A* or 63B        | Needle: 563A | Air Cap: 63PB* or 63PW |
| Siphon cup:      | Tip: 66                 | Needle: 565  | Air Cap: 66SD          |
| <b>Gun: 95</b>   |                         |              |                        |
| Pressure pot:    | Tip: 63A* or 63B        | Needle: 663A | Air Cap: 63PB* or 63PW |
| Siphon cup:      | Tip: 66                 | Needle: 665  | Air Cap: 66SD          |
| Pressure at gun  | 40-50 PSI / 3.0-3.5 bar |              |                        |
| Pot Pressure     | 8 PSI / 0.5 bar         |              |                        |

**BRUSHING APPLICATION PROCEDURE:**

Since every individual painter has his or her own personal brushing technique, it would be impractical to suggest one. However, several suggestions can be made to assist the applicator in brushing **Perfection**.

- 1) **Perfection** must be applied by brush in several very thin coats instead of one thick coat to avoid runs and sags. Do not worry about the first coat not hiding, it will certainly cover in 2-3 coats.
- 2) Apply **Perfection** by brush using quick, even strokes and always maintain a wet edge. Never cut back into the paint film once it has been applied and begins to set up.
- 3) 'Gang Painting' is recommended on boats over 30 feet in order to maintain a wet edge and avoid lap marks.
- 4) In between coats of **Perfection**, after the previous coat has been allowed an overnight dry, wet sand with 320-400 grit wet and dry paper, to remove any surface imperfections such as dust. Be sure all sanding residue is removed by flushing the surface with fresh water and wipe down with **Brushing Reducer 2333N**.
- 5) Finally, it is essential that all brushes and equipment are clean. Use a high quality, short natural bristle brush, such as China bristle brush or badger hair brush. By using a good high quality brush the tendency to leave brush marks will be reduced.

**FOAM ROLLER APPLICATION PROCEDURE:**

Utilizing a roller and brush technique has proven to be highly successful approach to applying **Perfection**. A high density, closed cell, foam roller with a China bristle brush or badger hair brush combination, when properly utilized, will assure a thin coat with a uniform flow. Note that it is important to use only a high density, closed cell foam roller that is able to resist the aggressive solvents in **Perfection**. Look for 'solvent resistant' on the label of the roller. Other types of rollers may 'break-up' or deteriorate when used with a polyurethane.

For best results the following guidelines are recommended, requiring a two-person team:

- 1) The first person should roll on a thin coat in one direction with a minimum amount of overlapping. Do not load up the roller with paint: it should be free of excess paint to ensure a thin coat.
- 2) Have a second person follow behind lightly 'tipping off' or leveling any air bubbles with a China bristle brush or badger hair brush. Be sure to always maintain a wet edge and use one or two quick, even strokes, brushing back in the direction of the previously tipped wet paint. Once **Perfection** is applied, do not attempt to cut back into the paint film since it is a quick drying coating.
- 3) After an overnight dry, wet sand the surface with 320-400 grit wet and dry paper. Be sure all sanding residue is removed by flushing surface with fresh water. To be sure all sanding residue is removed wipe down with **Brushing Reducer 2333N**.
- 4) Repeat Steps 1 and 2.

**NOTE:** Some of the lighter tints and whites can be rolled and not tipped off with a brush. By using this technique a very acceptable finish can be obtained which closely resembles a spray finish with a slight orange peel. Very large surface areas can be done quickly with very good results using this method. However, it will only work satisfactorily with light colors. The darker **Perfection** colors do not flow out as well and must be 'tipped-off' with a brush.

**OVERCOATING:**

| Substrate Temp              | 41°F (5°C) |        | 59°F (15°C) |        | 73°F (23°C) |        | 95°F (35°C) |       |
|-----------------------------|------------|--------|-------------|--------|-------------|--------|-------------|-------|
|                             | Min        | Max    | Min         | Max    | Min         | Max    | Min         | Max   |
| Overcoated by<br>Perfection | 28hrs      | 4 days | 14hrs       | 3 days | 6hrs        | 2 days | 4hrs        | 1 day |

**NOTE:** If maximum times are exceeded, sand with 320-400 grade (grit) sandpaper. For the best results it is recommended to sand between coats.

## V. ACCESSORY PRODUCTS

**Perfection Varnish YVA853** is made from the same quality material as the other **Perfection**. However, it does differ in that is not supplied in a concentrated form which can be either brushed or sprayed. It is ready for brush application once Part A and Part B are mixed together. (The proper mixing ratio is three parts base to one part curing agent). **Perfection Varnish** is not recommended for spray application because of the slow evaporating solvent system which leads to slow set-up time and therefore possible sagging. Brushing characteristics are much the same as the older type spar varnishes. It brushes easily with excellent leveling properties and hardens into an extremely tough, high gloss, weather resistant clear coating with maximum longevity.

### SYSTEM FOR BRUSHING PERFECTION VARNISH OVER STAINED WOOD:

**Perfection Varnish** can be applied over Interlux wood fillers **Interstain**. However, because of the strong solvent used in **Perfection Varnish**, it will have a greater tendency to lift the wood filler out of the grain than regular varnishes. To avoid this, we would recommend that you allow the **Interstain** to thoroughly dry and apply the first coat without too much brushing action as this could 'cloud up' the finish. Be sure to wet sand between all coats with 220-320 grit paper.

### PERFECTION VARNISH SYSTEM FOR HIGH OIL CONTENT WOODS:

Certain types of wood do not lend themselves to good adhesion when overcoated. Woods with high oil content such as Juniper, Cedar, Teak and Spruce fall into this category. The boat owner should be made aware that **Perfection Varnish** may experience the same adhesion problem that plagues all other coatings over these types of wood. However, excellent results have been obtained utilizing the following:

#### Procedure:

- 1) Sand the wood smooth with 80 grit paper.
- 2) Wipe the surface clean with **Special Thinner 216** in an attempt to remove as much surface oil as possible. Several wipe downs may be necessary.
- 3) The first coat of **Perfection Varnish** should be thinned 25% by volume with **Brushing Reducer 2333N**. The purpose of thinning is to get as much penetration into the wood as possible.
- 4) Apply additional coats until desired finish is obtained.

**WARNING: INTERNATIONAL PAINT COMPANY CANNOT ASSURE THAT COATING WOODS WITH HIGH OIL WILL BE SUCCESSFUL UNDER ALL CIRCUMSTANCES.**

### FLATTENING AGENT FOR 2-PART POLYURETHANES YZM914:

Used in **Perfection** to reduce glare when it is applied to decks, spars and masts. If a semi-gloss finish or a low gloss finish is required when **Perfection** is used, **Flattening Agent for 2-Part Polyurethanes** may be added directly to the catalyzed **Perfection**.

It is suggested that a known quantity be added to the first coat of **Perfection**, and, if necessary, adjust the amount in the second coat to satisfy requirements. Due to differences in pigmentation of the **Perfection**, each color will respond slightly different to the addition of **Flattening Agent for 2-Part Polyurethanes**.

### TYPICAL GLOSS REDUCTION USING FLATTENING AGENT FOR 2-PART POLYURETHANES YZM914 KIT

| Gloss Level     | Amount of mixed Perfection (Base & Cure) | Mixed Flattening Agent YZM914 Kit (Part A & Part B) |
|-----------------|--|---|
| High semi-gloss | 2 parts                                  | 1 part  |
| Low semi-gloss  | 1 part                                   | 1 part  |
| Satin           | 1 part                                   | 2 parts   |

**EXAMPLE:** To obtain a low semi gloss finish for Perfection Snow White YHB000 add 1 mixed quart unit of Perfection with 1 mixed quart unit of Flattening Agent for 2-Part Polyurethanes YZM914.

**ACCELERATOR FOR 2-PART POLYURETHANES YQA100:**

As the name implies, will appreciable speed up the cure process or cross linking of the **Perfection**. It should only be used for spray application when a faster cure time is desired. Typically, it should be used to accelerate tape times, when contact with rain and dew is likely, during cool weather application or if the previous coat of **Perfection** has flattened out due to vapor condensation occurring during late afternoon.

**ACCELERATOR FOR 2-PART POLYURETHANES (YQA100) USE – QUART CONTAINER:**

|                                     | <b>Below 50°F<br/>(10°C)</b>     | <b>50-59°F<br/>(10-15°C)</b> | <b>59-68°F<br/>(15-20°C)</b> | <b>68-77°F<br/>(20-25°C)</b> | <b>77-85°F<br/>(25-30°C)</b> | <b>85°F &amp; above<br/>(30°C)</b> |
|-------------------------------------|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------------|
| Minimum addition per mixed US quart | Do not use Perfection below 50°F | 5ml                          | 2.5ml                        | 1.5ml                        | 1ml                          | No addition required               |
| Maximum addition per mixed US quart | Do not use Perfection below 50°F | 12ml                         | 8ml                          | 4ml                          | 2ml                          | 1ml                                |

**NOTE:** North American packaging also comprises a quart kit part filled with 21 fluid ounces base component to accommodate the addition of 10.5 fluid ounces of curing agent.

**ACCELERATOR FOR 2-PART POLYURETHANES (YQA100) USE – HALF GALLON CONTAINER:**

|  | <b>Below 50°F<br/>(10°C)</b>     | <b>50-59°F<br/>(10-15°C)</b> | <b>59-68°F<br/>(15-20°C)</b> | <b>68-77°F<br/>(20-25°C)</b> | <b>77-85°F<br/>(25-30°C)</b> | <b>85°F &amp; above<br/>(30°C)</b> |
|--|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------------|
| Minimum addition per mixed half gallon | Do not use Perfection below 50°F | 13ml                         | 6ml                          | 3ml                          | 1ml                          | No addition required               |
| Maximum addition per mixed half gallon | Do not use Perfection below 50°F | 30ml                         | 16ml                         | 10ml                         | 6ml                          | 2ml                                |

**NOTE:** North American packaging also comprises a half gallon kit part filled with 50 fluid ounces base component to accommodate the addition of 25 fluid ounces of curing agent.

**INTERGRIP NOSKID COMPOUND 2398c:**

**Intergrip Noskid Compound 2398c** is a man-made plastic sphere additive for transforming decks into non-skid surfaces. Its regular shape diminishes the tendency to collect dirt and has excellent non-slip properties.

For mixing, a good starting point is 4-6 ounces of Intergrip no-skid compound by volume per quart of **Perfection**, depending upon the degree of non-skid texture desired. Two or more coats are recommended for best results.

**VI. TROUBLESHOOTING:**

| Symptom                             | Probable Cause   | Possible Cures  |
|-------------------------------------|--|---|
| Orange Peel                         | Tack coat viscosity too heavy.   | In most cases Perfection must be sanded smooth and repainted as buffing is rarely effective in these cases. |
|                                     | Dry time between coats too short.  |   |
|                                     | Spray pressure too high when applying second coat.                                     |   |
|                                     | Spray gun nozzle held too close to wet tack coat.                                      |   |
|                                     | Proper barrier coat primer not applied.  |   |
|                                     | Moisture on surface when spraying.   |   |
| Cratering,<br>Fisheye               | Surface porosity underneath Perfection.  | If problem is severe, surface may require sanding and repainting.   |
|                                     | Waxes or mold release agents not thoroughly removed.                                   |   |
| Sags,<br>Runs                       | Spray gun held too close or too long.  | Use proper spray techniques.  |
|                                     | Paint film too thick.  |   |
|                                     | Tack coat too dry to support second coat.  |   |
| Blistering,<br>Peeling              | Moisture trapped in wood, primers, gel coat and driven to the surface by sun and heat. | Gloss may be temporarily restored with waxing.  |
|                                     | Solvents trapped in paint film due to poor drying conditions.                          |   |
|                                     | Improper surface preparation causing poor adhesion.                                    |   |
| Loss of gloss/<br>premature dulling | Paint film too thin.   | Repainting of area may be required.   |
|                                     | Too much solvent reducer added to Perfection.  |   |
|                                     | Moisture deposit on wet paint.   |   |
|                                     | Improper scouring of the glossy surface with an abrasive or harsh chemical reducer.    |   |

**PROCEDURE FOR CORRECTING RUNS AND SAGS**

As with all polyurethanes **Perfection** should be applied in multiple thin coats. When applied in heavy coats, runs and sags may appear due to the thin nature of the coating. Generally it is best to start with the rubbing compound to try and correct the runs or sags, if the rubbing compound does not work then proceed with sanding. The following procedure has proven successful in correcting runs and sags within 48 hours after applying:

- 1) Sand smooth with 1200 working if need be to 600 grit wet or dry.
- 2) Use 3M™ 260L Finishing Film P1200 with Low Profile Finishing Disc Pad.
- 3) (Optional) For reduced compounding, use 3M Trizact™ Hookit™ II Foam Discs, Grade 3000.
- 4) 3M™ Perfect-It™ III Rubbing Compound with any Superbuff™ Compound Pad.
- 5) 3M™ Perfect-It™ III Machine Glaze with Perfect-It™ Foam Polishing Pad.
- 6) 3M™ Perfect-It™ III Finishing Glaze with Perfect-It™ DA Glazing Pad.

For more information on this system or products used please contact 3M™.

**NOTE:** Due to the change in the integrity of the paint film which may take place as a result of this process, the buffed area may not maintain the same level of gloss as long as the remainder of the boat.

## VII. SAFETY PRECAUTIONS

|   |  |
|---|--|
| <b>Generic Type:</b>                      | Two-part, linear type, aliphatic polyurethane                                    |
| <b>Solids:</b>                            | 49% Concentrate; 37% reduced for spray application                               |
| <b>Weight/Gallon:</b>                     | 10.8 lbs. reduced for brush application; 10.5 lbs. reduced for spray application |
| <b>Flash Points:</b>                      | Concentrated Base: 91°F (32°C)   |
| <b>Average Square Foot Coverage:</b>      | 535 Square Foot/Gallon (Normal application is 1.5-2.0 mils DFT)                  |
| <b>Suggested Application Temperature:</b> | Between 50°F and 85°F (10-30°C)  |
| <b>Pot Life Expectancy:</b>               | 2 hrs at 73°F (23°C)   |

When **Perfection** is brush applied, application hazards are considerably reduced and represent primarily the solvent hazards in the paint product. The polyurethane prepolymer is very hazardous when an aerosol is formed during spray application.

When **Perfection** is sprayed, the following precautions must be closely observed.

### -ALIPHATIC POLYURETHANE- CONTAINS ALIPHATIC POLYISOCYANATE

#### DANGER!

Vapor and spray mist harmful. Overexposure may cause lung damage. May cause allergic skin reaction and respiratory reaction, effects may be permanent. Individuals with lung or breathing problems, or prior reaction to Isocyanates must not be exposed to vapor or spray mist. Wear an appropriate, properly fitted respirator (NIOSH approved). An airline respirator (NIOSH approved) is recommended.

- Do not breathe vapor or spray mist.
- Do not get in eyes or on skin.
- Keep away from heat (sparks) and open flame.
- Keep closures tight and upright to prevent leakage.
- Keep container closed when not in use.
- In case of spillage, absorb and then dispose of in accordance with local application regulations.

**FIRST AID:** If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for 15 minutes; call a physician. In case of skin contact, immediately wash thoroughly with soap and water.

Please read and follow all health and safety information on the labels and on the Material Safety Data Sheets (MSDS) for both the base and curing agent of **Perfection** and other product used in conjunction with **Perfection**.

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