

PM33

67599-1

8/12/98

118  
AUG 12 1998

Ed Ehler  
American Marine Coatings, Inc.  
1445 N. Northlake Way  
Seattle, WA 98103

**RE: PermaShield Marine Coating  
EPA Reg. No. 67599-1  
Your Letter Dated 6/1/98 (Associated Amendment Dated 10/29/97)**

The letter and original amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you make the following labeling changes.

You must submit final printed labeling (five copies of Part A, Part B, and Application Guide No. PS 1201), with each the following labeling corrections

1. In both Part A and Part B labels, under "Mixing & Application", delete the centered word "WARNING".
2. In both Part A and Part B labels, under "Mixing & Application", change "Working temperature range is 45 degrees to 85 degrees (7 degrees C to 27 degrees C)", to "Working temperature range is 45 degrees to 80 degrees (7 degrees C to 25 degrees C)". This will then correspond with the approximate flash point of 80 degrees.
3. In both Part A and Part B labels, the "Storage and Disposal:" header must be the same type size as the "Keep out of Reach of Children" statement. Also delete the colon after "Storage and Disposal:".
4. In the Part A label, in the "Warranty" section, add the word "...code" as the last word in the section to complete the following sentence "This product may not carry the implied warranties of the uniform commercial code".
5. In both Part A and Part B labels, under the "Keep Out Of Reach of Children" statement, change "See Side Panel for Additional" to "See Side Panel For Additional Precautionary Statements".

CONCURRENCES

SYMBOL	Application Guide PS-1201 must show the words "EPA Reg. No. 67599-1".					
SURNAME						
DATE						

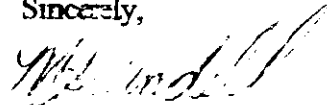
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7. In the Application Guide PS 1201, you must change the working temperature range of 45-95 degrees, shown on page 4, to match the working range shown on Part A and Part B which also must be changed to 45-80 degrees, as described in #2 above.

A copy of the stamped, accepted (with comments) labeling is enclosed for your records. You must submit five (5) copies of the final printed labels.

If you have any questions about the comments in this letter, please feel free to contact Tony Kish at 703-308-9443.

Sincerely,



Marshall Swincell,  
Product Manager Team 33,  
Regulatory Management Branch I  
Antimicrobials Division (7510W)

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

AUG 12 1998

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide,  
registered under EPA Reg. No.

67599-1

# PermaShield™

## MARINE COATING

PermaShield™ an epoxy barrier coating and protective coating, repellent against barnacles, zebra mussels and other hard marine fouling. For use in fresh, salt and brackish waters.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Causes eye irritation. Harmful if absorbed through skin. May cause nose and throat irritation. May cause allergic skin reaction. Avoid contact with skin, eyes or clothing. Wear protective clothing such as gloves, long-sleeved cotton shirt, long pants and hat. Do not breathe dust, vapor or spray mist. Wash contaminated clothing before reuse. Never give anything by mouth to an unconscious person. Call a physician immediately. Avoid storage and usage near food and feed products. When used in confined areas or while spraying and/or sanding boat surface, wear a mask or a respirator jointly approved by the Mining Enforcement and Health, under the provisions of CFR 11. Skin and eye irritation may occur on exposure. Use protective clothing during washdown and/or application on marine vessels. Wash thoroughly after use. For use on commercial and/or noncommercial (pleasure craft) marine vessels.

**ENVIRONMENTAL HAZARDS:** Do not contaminate waters by cleaning of equipment or disposal of wastes. Do not allow chips and dust generated during paint removal to enter waters. Dispose of waste debris in an approved landfill.

**PHYSICAL OR CHEMICAL HAZARDS:**  
**FLAMMABLE, FLASH POINT APPROXIMATELY 80°F or 27°C** - Keep away from heat, sparks and open flame. Vapors may flash fire. Do not smoke. Extinguish all flames and pilot lights.

### PART A

Mix PART A and PART B before using

LIQUID	
11.87 LBS.	5.40 KILOS
0.52 GALLONS	1.97 LITERS

ACTIVE INGREDIENTS	
COPPER METAL	68.90 %
INERT INGREDIENTS	31.10 %
TOTAL	100.00 %

CONTAINS EPOXY RESIN AND XYLENE

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED:** Drink promptly a large quantity of water. Avoid alcohol. Do not induce vomiting. Get medical attention immediately.

**IF IN EYES:** Flush with plenty of water. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention immediately.

**STORAGE AND DISPOSAL:**  
Do not contaminate water, food, feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE DISPOSAL:**  
Paint that cannot be used according to label instructions must be disposed of according to Federal, State or local procedures under the Resources Conservation and Recovery Act.

**CONTAINER DISPOSAL:**  
Dispose of container by triple rinse and recycling or puncturing and disposing in a sanitary landfill or by other approved State and local procedures. If burned, stay out of smoke.

**WARRANTY:** American Marine Coatings, Inc. warrants that the contents of this container conform to the product's description on this label.

**THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, IN NO EVENT SHALL AMERICAN MARINE COATINGS BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER INCLUDING WITHOUT LIMITATION LOSS OF USE OR PROFIT. THIS PRODUCT MAY NOT CARRY THE IMPLIED WARRANTIES OF THE UNIFORM COMMERCIAL**

**WARNING**  
**KEEP OUT OF REACH OF CHILDREN**  
**SEE SIDE PANEL FOR ADDITIONAL**

EPA ESTABLISHMENT NO. 89185-WA-001  
EPA REG. NO. 87599-1

FLAMMABLE LIQUID UN 1263

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Keep container closed when not in use. In case of spillage absorb with inert material and dispose of in accordance with applicable local State and Federal regulations. Harmful or fatal if swallowed. May be absorbed through skin or cause skin irritation. Follow all safety and health precautions established by local, State and Federal agencies.

#### Mixing & Application

Mix entire contents of Parts A and B. Working temperature range is 45°F to 85°F (7°C to 27°C)

PermaShield must be applied by trained applicators with approved equipment. See AMC Technical Bulletin No. PS-1201 for application instructions.

#### WARNING

**Notice:** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

To avoid breathing vapors or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches or dizziness increase fresh air or wear respirator protection (NIOSH/MSHA TC 23C or equivalent). Follow respirator manufacturer's directions for respirator use.

**Warning:** Detectable amounts of chemicals or substances known to the State of California to cause cancer, birth defects or other reproductive harm may be found in chemical products, petroleum products and their vapors. Follow applicable directions and use care when handling chemical and petroleum products (California Health and Safety Code, Section 25249.8)

Do not store or use near heat, sparks or open flame.

Vapor may be harmful.

Manufactured for:  
American Marine Coatings, Inc.  
1445 N. Northlake Way  
Seattle, WA 98103

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AUG 1 2 1988

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
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# PermaShield™

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**ENVIRONMENTAL HAZARDS:** Do not contaminate waters by cleaning of equipment or disposal of wastes. Do not allow chips and dust generated during paint removal to enter waters. Dispose of waste debris in an approved landfill.

**PHYSICAL OR CHEMICAL HAZARDS:** FLAMMABLE, FLASH POINT APPROXIMATELY 80°F or 27°C - Keep away from heat, sparks and open flame. Vapors may flash fire. Do not smoke. Extinguish all flames and pilot lights.

### PART B

Mix PART A and PART B before using

LIQUID	
3.85 LBS.	1.66 KILOS
0.48 GALLONS	1.81 LITERS

#### INERT INGREDIENTS ONLY

INERT INGREDIENTS	100.00 %
TOTAL	100.00 %

CONTAINS POLYAMIDE RESIN AND XYLENE

### STATEMENT OF PRACTICAL TREATMENT

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**IF IN EYES:** Flush with plenty of water. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention immediately.

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THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT SHALL AMERICAN MARINE COATINGS BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER INCLUDING WITHOUT LIMITATIONS LOSS OF USE OR LOST PROFITS. THIS PRODUCT MAY NOT CARRY THE IMPLIED WARRANTIES OF THE UNIFORM COMMERCIAL CODE.

### DIRECTIONS FOR USE

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#### Mixing & Application

Mix entire contents of Parts A and B. Working temperature range is 45°F to 85°F (7°C to 27°C)

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Do not store or use near heat, sparks or open flame.

Vapor may be harmful.

Manufactured for:  
American Marine Coatings, Inc.  
1445 N. Northlake Way  
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EPA ESTABLISHMENT NO. 69185-WA-001  
EPA REG. NO. 67599-1

FLAMMABLE LIQUID UN 1263

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AUG 12 1998

# AMERICAN MARINE COATINGS, INC.

1445 N. Northlake Way  
Seattle, WA 98103

Phone: (206) 633-3308 Fax: (206) 633-3384

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide,  
registered under EPA Reg. No.

67599-1

## PERMASHIELD

An epoxy barrier coating and protective coating, repellent against barnacles, zebra mussels and other hard marine fouling.

### Application Guide Rev. 6-2-98

American Marine Coatings Technical Bulletin No. PS-1201

### Vessel Set Up

If possible, position the hull so that its bottom is completely free of supporting blocks. Set the boat on its keel or skeg and fasten support legs to the topsides or gunwales. If the boat can be positioned in this manner, the bottom can be painted without interrupting the spray pass.

If the boat is set on support stanchions that have pads against the bottom, it will be necessary to move the stanchions after the coating has cured for a minimum of 24 hours at minimum of 50 degrees and spray the areas that were covered by the pads.

When positioning a motor yacht, set it on keel blocks that are taller than normal - at least 30 inches off the ground - this distance is needed for the spray gun to apply a proper pattern to the bottom of the skeg or keel and also to give the applicator room to move about freely under the vessel.

Cover all areas of the boat that are subject to overspray. If the work is being done in an area where other boats, cars, buildings, etc. can be oversprayed, it will be necessary to tent the entire work area. Mask off the propeller shaft, propeller, knot meter, wheel and depth sounder transducer. Install plugs in "through hull" openings. Be sure to remove all plugs before launching. Care must be taken to cover, mask or plug any area of the boat that would be damaged by preparation or painting activities.

### Surface Preparation

#### • **Fiberglass Boat - New**

Since mold release wax will prevent the proper adhesion of PermaShield to the hull, all mold release wax must be removed down to the gel coat.

After the mold wax is removed, tape off the waterline stripe and "lightly abrade" the gel coat. Using either sandpaper or a light abrasive blast, lightly abrade all areas of the hull only to roughen the surface. Do not abrade through the gel coat.

After abrading, wipe down the hull with a dewaxing agent to remove any residue. Next using a 1/2 inch nap roller apply one coat of PermaTack sealer to a dry film thickness of 2 mils. For larger boats PermaTack may be spray applied. Wait a minimum of 2 hours or until "tack free", and then spray apply the PermaShield to a dry film thickness of 12 to 15 mils. If the PermaShield is applied within 18 hours of the PermaTack application, no further preparation is needed. If more than 18 hours has passed since the PermaTack application, the surface must be lightly abraded and any residue removed before the PermaShield is applied.

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- **Fiberglass Boats - Used**

Tape off the waterline and strip off all existing bottom paint down to the gel coat or to a tightly adhered epoxy barrier coat. Carefully check the hull for blisters and repair them if any are found. Unprepared blisters can lock moisture into the hull and cause separation. Using a moisture meter, measure the moisture content of the hull in several places. If the moisture content is below 7%, the PermaShield can be applied. If the moisture content is above 7%, allow the hull to dry to 7% or to a stabilized moisture content, before applying the coating.

Using sandpaper or light abrasive blast, lightly abrade the gel coat to roughen the surface. After abrading wipe down the hull with a dewaxing agent to remove the residue.

After preparation is complete, roll or spray the PermaTack Sealer to a dry film thickness of 2 mils, and spray on the PermaShield Coating using the same procedures as used with a new fiberglass hull.

- **Steel Hull Vessels**

Remove existing bottom paints down to a solid epoxy anti-corrosive barrier coat. Lightly abrade the surface of the epoxy barrier coat. If the epoxy barrier coat is in poor condition or rust is present, the hull must be abrasive blasted to Near White metal (SSPC SP-10). After the abrasive blasted surface has been cleaned of all dust and contamination apply one coat of an epoxy anti-corrosive primer to a maximum dry film thickness of at 7 mils to 8 mils. Apply the primer in accordance with the manufacturers instructions. Check with the primer manufacturer to be sure that the epoxy anti-corrosive primer used is compatible with the PermaShield system. PermaShield is compatible with most anti-corrosive epoxy primers. After the epoxy Anti-corrosive barrier coat has cured in accordance with the manufacturers instructions, apply the PermaTack Sealer and PermaShield Coating using the same procedures as used with a new fiberglass hull.

- **Aluminum Hull Vessels**

Please consult with American Marine Coatings technical personnel for information regarding Aluminum hulls.

- **Wood Hull Vessels**

PermaShield is not recommended for application to wood hull vessels. Vessels with wood composite hulls or plywood/epoxy hulls should be prepared as per the above instructions for boats with fiberglass hulls.

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## Spray Equipment

PermaShield is applied using an **Air Assisted Airless or Conventional Airless** system driven by an air powered piston pump of at least 20 to 1 or larger. For small jobs a **Pressure Pot** and a **HVLP Spray Gun** can be used.

- The airless pump needs to be a 20 to 1 or larger. The pump must be able to maintain at least 2000 PSI at the gun tip. At the material outlet from the pump install a "T" fitting. Attach a valved bypass line to one side of the fitting and the valved material line to the other side of the fitting. This bypass line will enable the applicator to circulate the material from the container through the pump and back into the container while the material line is not under pressure. The airless pump body must be submerged into the material container to insure proper "pickup" of the material. Pickup stingers or hoses cannot be used as they impede the material flow and tend to collapse, cutting off the material flow completely. Any line filters or pump filters must be removed. If gun does not have a reverse-a-clean tip a gun filter is usefull. If the pump body is too short to properly pick up the material from the container a straight pipe extension, not longer than 12 inches may be threaded on to the pump body. It is important to hold the pump body or the pipe extension at least 1/2 inch above the container bottom. If the pump body or pipe extension rests on the container bottom material flow will be stopped.
- When using a 20 to 1 pump the airless material line should not be longer than 12 feet and at least 1/4 inch interior diameter. If job requirements demand a longer material line, a larger airless pump will be needed. A 25 foot material line must have a 3/8" interior diameter and requires a 50 to 1 pump.
- Suggested Equipment
  - A: Graco High Pressure Air-Assisted Airless Model AA Plus Spray Gun - Part. No. 239-001, Series B - This is a Hi-Flow Spray7 Bun with Hi-Flow fluid needle and diffuser-seat, AA Reverse-A-Clean (RAC) assembly, and 1/4-18 npsm (R1/4-19) air line fitting. The size of the tip can vary from .021" (Graco 521) to .035" (Graco 535), depending on pump capacity, temperature, size of job and applicator experience.
  - B: Graco WPR 5000 PSI - 345 bar. Airless Spray Gun - Part. No. B90H with reverse-A-clean tip. The tip can vary from .021" (Graco 521) to .035 (Graco 535), depending on pump capacity, temperature, size of job and applicator experience.
  - C: Develblis HVLP ( High Volume Low Presure) Spray Gun. Part.No.JGHV-531-46FF,FX with a 46 MP air cap. This gun would be used with a cup or pressure pot.

## Mixing PermaShield

PermaShield is supplied in 1 gallon kits, 4 gallon kits and 5 gallon kits. Each kit consists of the epoxy resin with copper (Part A) and an equal volume of hardener (Part B). Using a power mixer thoroughly blend the ingredients in Part A with 12 oz to 24 oz of MEK per gallon. The amount of thinner used will depend on what equipment is used. A general rule of 12 oz of MEK per gallon will need to be added to achieve a good spray pattern at 72 degrees F. If the temperature is 80 degrees or more, thinning with MEK may not be needed at all. In any event do not exceed 24 oz of MEK per gallon. Next thoroughly blend the ingredients in Part B. After the two parts have been separately blended, it is time to mix them together. With the power mixer operating, slowly add Part B to Part A. Take the time to mix all the material thoroughly.

AUG 12 1998

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## Spray gun adjustment

Before beginning spray operations proper gun adjustment is mandatory. Turn off the air supply to the air cap and remove the air cap. Trigger the gun and increase the pump pressure until there is a stream of material coming from the tip approximately 12 inches to 14 inches long. If the pump cannot maintain a 12 inch to 14 inch stream:

- The pump pressure adjustment may need to be increased.
- The pump may need maintenance, packings etc.
- The pump may not be large enough.
- The PermaShield material temperature may be too low.
- There may be a line restriction or the material line may be too long.
- The PermaShield material may need thinning. Try all other remedies before thinning.

After the 12 inch to 14 inch stream has been attained, install the aircap and turn on the air supply to the aircap. Trigger the gun and increase the air pressure to the aircap until you observe a portion of the copper metal become separated from the epoxy resin. This copper metal should appear suspended as a cloud about 18 inches in diameter surrounding the spray pattern. This suspended copper metal will settle on the freshly coated surface giving PermaShield its distinctive texture.

## Applying PermaShield

The ambient temperature window for applying PermaShield is between 45 degrees minimum temperature and 95 degrees maximum temperature. The PermaShield will be spray applied in 1 coat to a dry film thickness of 12 mils to 15 mils. Width of spray pattern should be approximately 10 inches. Overlap  $\frac{1}{3}$  of the width of the spray pattern with each spray pass. High wear areas such as the bow, waterline, keel and prop wash areas should receive additional milage to a total dry film thickness of 20 mils.

A worker should monitor the equipment during operation. The level of mixed material in the container at the pump should not be allowed to get low enough to cause cavitation. Before this occurs the empty container should be exchanged for a container full of fresh material. To avoid waste, after a portion of the fresh material has been used, scrape out the remaining material from the empty container and transfer to the container of fresh material.

Allow the PermaShield a minimum of 24 hours curing time prior to launch. The PermaShield is not fully cured if an indentation can be made in the coating with your thumb nail.

## Cleaning Equipment

After the project is completed care must be taken to properly clean the spray equipment. The equipment will not be ready for the next project if it is not completely cleaned. Flush the pump, lines and spray gun thoroughly MEK to remove all PermaShield residue.

## Surface Smoothing

It is not necessary to sand PermaShield after the coating has cured, unless a smoother surface is desired. If so desired, after the coating has cured, using an orbital sander "lightly sand" the surface with 80 to 100 grit sandpaper. To achieve an extremely smooth finish use 600 grit wet/dry sandpaper. When sanding edges such as front and rear of rudder and keel, take extra care not to sand through the coating.