



ULTRACOTE®

MULTI-TEMP THERMAL SHRINK COVERING

- High-tech polyester covering
- Unique multi temperature-controlled adhesive shrinkage system
- Versatile and easy to apply
- Polymerizing process permanently fuses the color to the polyester film covering, eliminating the possibilities of color-layer separation and permits repositioning of the covering on your model
- Light weight
- Fuel proof and waterproof

Required Tools

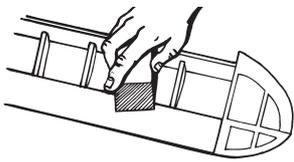
Sealing Iron (HAN101)	✓
Sealing Iron Sock (HAN141)	
Hobby knife with several #11 blades	
Sandpaper: 180, 240, 320	

Sanding Block	✓
Straight Edge	
Scissors	
Vacuum	

Optional Items

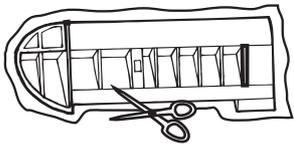
Sealing Tool (HAN145)	✓
Heat Gun (HAN100)	
Covering Glove (HAN150)	

IMPORTANT: Cover the model in as dry a climate as possible. Place the model in a room with a dehumidifier for several days before covering to prevent sagging.



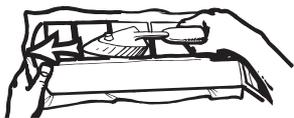
Surface Preparation

- Sand the model using a sanding block and progressively finer sandpaper, finishing with 320 grit sandpaper.
- Using a damp cloth, wipe down the model.
- Let the model dry.
- Sand the model a second time, using 320 grit sandpaper.
- Remove the dust by vacuuming.
- Fill gaps and dents with a high-quality filler. If using light-colored covering, use tan-colored filler that matches the wood color.



Trimming the Covering

- Cut the covering a few inches larger than needed to cover the bottom of the wing.
- Remove the backing.
- Place the covering adhesive side down and centered over the wing.
- Set the covering iron to 220°F (104°C). We recommend using a sealing iron sock to prevent scratches. If using a sealing iron sock, increase the temperature 10% more than listed.



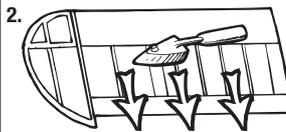
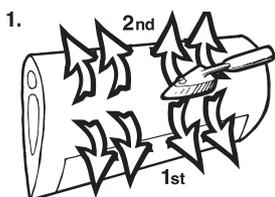
Covering the Spar

- Tack the covering to the spar or high point of the wing using the covering iron.
- Gently pull the covering toward the root and toward the tip, working the iron from the center of the spar to the root and tip of the wing.
- Press the iron gently, allowing the heat, not pressure, to activate the adhesive.

Covering the Bottom of the Wing

1. Solid-Sheeted Wing:

- Using the iron, work from the center of the spar out to the trailing edge, then to the leading edge.
- If a wrinkle develops, carefully lift the covering and reapply.



2. Open-Structured Wing:

- Work from the spar to the trailing edge with the iron only contacting two ribs.
- Adhere the covering to the remaining ribs with the iron, working toward the tip and root.
- Use the same method for the leading edge. If the leading edge is sheeted, follow the steps under Solid-Sheeted Wing.

Covering the Top of the Wing

- Use the same instructions as covering the bottom of the wing.

Covering the Fuselage and Solid Surfaces

- Use the same instructions as covering the wing. Start with the bottom, then the sides and finally the top.

Sealing the Edges

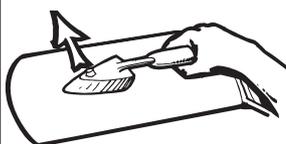
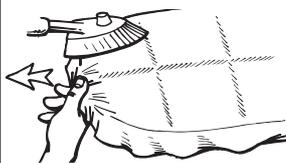
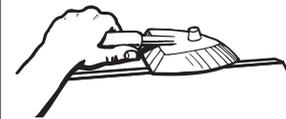
- Set the iron to 220°F (104°C). A sealing tool can be used in place of the iron.
- Seal the leading and trailing edges with the iron.
- Using a straight edge and hobby knife, trim the excess covering, allowing a minimum 1/4 in (6.35mm) overlap.
- Reseal the leading and trailing edges with the iron.

Covering the Wing Tip

- Set the iron to 300°F (149°C). Depending on the curvature of the wing, you may need to set the iron up to 350°F (177°C) to eliminate all wrinkles.
- Pull and stretch the covering around the wing tip while applying the iron. If a wrinkle develops, carefully lift the covering and reapply.
- Trim the excess covering, then reseal the covering.

Shrinking the Covering

- Set the iron to 300°F (149°C). A heat gun can be used in place of the iron.
- Apply heat starting from the spar and working out.
- Increase the heat to eliminate wrinkles.



Troubleshooting

Multiple Colors

When apply two different colors of covering, apply the lighter color under the darker color to prevent the darker color from showing through.

Painting

Most types of polyurethane, epoxy and automotive acrylic paints are acceptable. Do not use model dope or butyrate-based paint. We recommend scuffing the surface with steel wool or a scouring pad, then cleaning the surface with Isopropyl or denatured alcohol before painting.

Bubbles/Blemishes

To remove a bubble/blemish, heat the affected area using a heat gun. The bubble/blemish will rise. Pop it using a needle, then wipe the area clean using a cold, wet washcloth. This may take several attempts to completely remove the bubble/blemish.

Cleanup

Remove adhesive from the model or iron using acetone or a mild thinner.

LIMITED WARRANTY

What this Warranty Covers - Horizon Hobby, LLC (Horizon) warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) Product not purchased from an authorized Horizon dealer, (vi) Product not compliant with applicable technical regulations, or (vii) use that violates any applicable laws, rules, or regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

Law

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES

Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance.

For questions or assistance, please visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services

If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at http://www.horizonhobby.com/content/service-center_render-service-center. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.

Warranty Requirements

For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Service

Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website http://www.horizonhobby.com/content/service-center_render-service-center.

ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

WARRANTY AND SERVICE CONTACT INFORMATION

Country of Purchase	Horizon Hobby	Contact Information	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/Request-Form/	2904 Research Rd. Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com 877-504-0233	
	Sales	websales@horizonhobby.com 800-338-4639	
Europäische Union Union Européenne Unione Europea	Horizon Technischer Service	service@horizonhobby.eu	Hanskampring 9 D 22885 Barsbüttel, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

