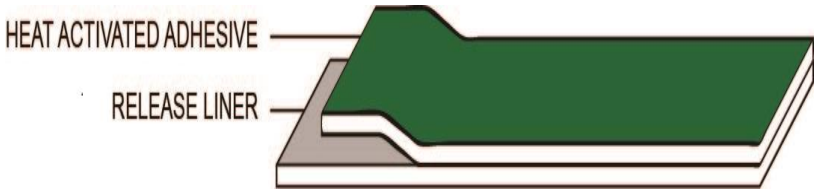
# Product Information Sheet
# ARcare® 93400

Adhesives Research®

**ARcare® 93400 is a highly conductive heat seal adhesive transfer tape. The adhesive resists creep and maintains excellent electrical and adhesive properties at elevated temperatures, in humid environments, and upon cyclical aging conditions.**

## PRODUCT APPLICATIONS

The typical use for this product is for EMI/RF grounding applications, heat sink bonding, and as an alternate to soldered or fused connections.




## FEATURES AND BENEFITS

- Electrically and thermally conductive adhesive
- Suitable for small contact applications (6 mm X 6 mm)
- Metal oxide penetration for direct electrical contact with metal substrates
- Adhesion to a wide range of substrates including Kapton, tin, copper, aluminum, stainless steel, ITO and other metal substrates
- Excellent thermal and chemical resistance
- Stable electrical and mechanical performance through elevated temperature and thermal cycling exposure
- Thin consistent bond line
- Easy to handle and convert into preforms via common techniques including laser-cutting and die-cutting

| Product Construction | | | |
|---|---|---|---|
| | Typical Values* | | Description |
| Release liner thickness | 2.0 mil | 51 µm | Clear double-faced PET release liner |
| Adhesive thickness | 1.4 mil | 35 µm | Highly conductive heat seal |
| Total thickness | 1.4 mil | 35 µm | (Excluding liners) |

*All stated values are nominal and should only be used as a guide for selection. They are not specifications.

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## APPLICATION GUIDELINES

Application conditions must be optimized for each specific application and substrate. For initial conditions, Adhesives Research recommends a two-step process. First, heat tack the adhesive to the substrate using 70 lb/in$^2$ pressure for 5 s at 100 °C, then heat in an oven or autoclave for 30 min at 145 °C for full cure. If heat tacking is not an option, adhesive may be adhered to product under pressure for 30 min at 145 °C. Optimal application conditions should ideally be identified via DOE.

| Technical Properties | | | |
|---|---|---|---|
| Attribute* | Typical Values* | | Test Method* |
| T-Peel adhesion on copper foil (12 in/min, 35 µm copper foil, 30 psi lamination / 30 min cure at 145 °C) | 35 oz/in | 9.7 N/25.4 mm | ASTM D1876 |
| Contact resistance through adhesive (23 °C, 11.5 psi, 1" x 1" gold-plated electrodes) | < 10 mΩ | | ART 3035 |
| Recommended storage of unconverted product | 70°F ± 20°F<br>50% ± 20% RH | 21°C ± 11°C<br>50% ± 20% RH | |
| Shelf life of unconverted product | Not to exceed 12 months from date of manufacture | | |

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Note: The information contained on this data sheet is based upon test results of limited quantities of this material and may be modified by Adhesives Research following additional production experience and evaluation. This data should not be used in preparing specifications. Products identified as developmental may be subject to modification by Adhesives Research, Inc.

**APPLICATION AND STORAGE OF PRESSURE-SENSITIVE ADHESIVE TAPES**

Pressure-sensitive adhesive tapes function as a mechanical product; however, the adhesive itself is a chemical composition that can be sensitive to environmental conditions. A purchaser of pressure-sensitive adhesive products should be aware of the shelf life of each product and not purchase more than it can use before the expiration date. Shipping and storage conditions affect shelf life. The optimum storage temperature is 70 °F (21 °C). Cool, dry storage is recommended.

**For best results…**

1) The surfaces you wish to bond should be clean and free of oil, moisture and dust. If the surface temperature is below 40°F, it may be difficult to achieve a proper bond.
2) Do not use a pressure-sensitive adhesive product where it will be exposed to temperatures lower or higher than those designated for each product. Heat can destroy the effectiveness of the bond and extreme cold can cause the adhesive to harden and not adhere properly.
3) When the tape is applied, use firm hand or lamination pressure to achieve contact between the adhesive and the surface to which it is applied. Hand rollers or nip rollers may be needed for certain products or applications.

Consult your AR sales representative if you need additional information.

**THIS IS NOT AN OFFER**

This Product Information sheet ("PI Sheet") is not an offer to sell by Adhesives Research ("AR") and does not contain any binding warranties or terms of sale. While this PI Sheet does contain technical information and general warranty information, this PI Sheet is non-binding and is for information purposes only. If you wish to purchase the product set forth on this PI Sheet ("Product"), or have any questions regarding the warranty or other terms related to this Product, contact AR customer service or a sales representative and they will provide you with AR's terms of sale for the Product in the form of a Sales Order Acknowledgment. AR shall not be bound by any terms or information set forth in this PI Sheet.

**DISCLAIMER OF WARRANTIES**

AR's warranty on product is limited to the warranty set forth in the Sales Order Acknowledgment. **NOTHING SET FORTH IN THIS PRODUCT INFORMATION SHEET SHALL CONSTITUTE A WARRANTY OF ANY KIND AND EXCEPT AS SET FORTH IN THE SALES ORDER ACKNOWLEDGMENT. UNLESS OTHERWISE STATED IN A SALES ORDER ACKNOWLEDGMENT, AR EXPRESSLY DISCLAIMS ALL WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** No provisions, statements, diagrams, drawings or pictures contained in any product literature, price list, catalogue, purchase order, product data sheet, order acknowledgment, invoice, delivery ticket, or any other communication by AR, including information on AR's website or statements made by AR's employees or agents, constitute express warranties. Results of tests and recommendations included in communications of AR do not constitute express warranties. MANY FACTORS MAY AFFECT THE USE AND PERFORMANCE OF AN AR PRODUCT IN A PARTICULAR APPLICATION, INCLUDING, AMONG OTHERS, THE PRODUCT SELECTED FOR USE, THE CONDITIONS IN WHICH THE PRODUCT IS USED, THE TIME AND ENVIRONMENTAL CONDITIONS IN WHICH THE PRODUCT IS EXPECTED TO PERFORM, THE MATERIALS TO BE USED WITH THE PRODUCT, THE SURFACE PREPARATION OF THOSE MATERIALS, AND THE APPLICATION METHOD FOR THE PRODUCT; THEREFORE, PURCHASER ACCEPTS RESPONSIBILITY FOR DETERMINING WHETHER AR'S PRODUCT IS FIT FOR A PARTICULAR PURPOSE AND SUITABLE FOR PURCHASER'S METHOD OF APPLICATION. AR retains the right to modify or change its products if in AR's judgment it is advisable.

AR limits the purchaser's remedies in the event of a breach of any warranty. The purchaser's exclusive remedy and AR's obligations for a breach of any warranty shall be as set forth in the Sales Order Acknowledgment.



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