

W-4013 is a 3 mil (75 micron) clear polyester ultra-low extractable silicone liner with an easy release, thermally-cured, solventless silicone coating on one side.

# **PRODUCT APPLICATIONS**

The typical use for this product is for support and protection of PSAs requiring easy release with practically zero extractable silicone. Main applications include internal hard disc drive labels and bonding tapes, and medical adhesives.

# FEATURES AND BENEFITS

- "Ultra-low" extractable silicone surface prevents silicone contamination
- Stable easy release properties with no "lock up" and consistent release force run-to-run
- No loss of adhesion and backside printability properties due to silicone contamination
- Chemistry and process assures excellent thermal stability, aging resistance and anchorage to polyester base film
- Green, eco-friendly solventless coatings
- Suitable for indirect skin and food contact, included in US FDA Drug Master File (21 CFR)
- Compatible with clean room applications
- Dimensionally stable, flat, smooth PET base with excellent die-cut properties
- Narrow width slitting to 1" available

Technical Properties				
Attribute*		Typical Values*		Test Method*
Liner release <sup>1</sup>		~20 grams/1 in		180 degrees, 300 ipm
Extractable Silicone	Release Side Back Side	5 ng/cm <sup>2</sup> (Range <20 ng/cm <sup>2</sup> ) FTIR Extract 5 ng/cm <sup>2</sup> (Range <50 ng/cm <sup>2</sup> )		FTIR Extractable Silicones
Ionic Contamination Specification Limits (µg/cm <sup>2</sup> )		<ul> <li>≤0.05 - Fluoride, Chloride, Nitrite,</li> <li>Bromide, Nitrate, Phosphate, Sulfate,</li> <li>≤0.20 - Total Anions (7)</li> <li>≤0.16 - Ammonium, ≤0.20 - Total</li> <li>Cations (6)</li> </ul>		Ion Chromatography
Recommended storage of unconverted product		70°F ± 20°F 50% ± 20% RH	21°C ± 11°C 50% ± 20% RH	
Shelf life of unconverted product		Not to exceed two years from date of manufacture		

<sup>1</sup>Utilizing AR EL-8883 acrylic test tape.

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

# www.adhesivesresearch.com



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.

## STORAGE OF LINERS

Customers should be aware of specific product shelf life. Shipping and storage conditions affect shelf life. The optimum storage temperature is 70°F (21°C). Cool, dry storage is recommended.

Consult your Adhesive Research 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 LSED, 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.

ARcare<sup>®</sup>, ARclad<sup>®</sup>, ARclean<sup>®</sup>, ARflow<sup>®</sup>, ARseal<sup>®</sup>, ARclear<sup>®</sup> are registered trademarks of Adhesives Research, Inc. Adhesives Research<sup>\*</sup> is a registered service mark of Adhesives Research, Inc. for engineering and design services in the field of pressure-sensitive adhesive systems.

## ©2017 Adhesives Research, Inc. Printed in USA.

# North America – Headquarters

Adhesives Research, Inc. 400 Seaks Run Road Glen Rock, PA 17327 Phone: +1 (717) 235-7979 Toll-free: +1 (800) 445-6240 Fax: +1 (717) 235-8320 Europe

Adhesives Research Ireland, Ltd. Raheen Business Park Raheen, Limerick V94 VH22 Ireland Phone: +353 61 300 300 Fax: +353 61 300 700

### China

Adhesives Research China Co., Ltd. Room 2710-2711, Building B Far Glory International Square No. 317 Xianxia Road Shanghai, China 200051 Phone: +86 (21) 6150 4358 Fax: +86 21 6278 5576 (Revised 18 June 2020)

#### Singapore

Adhesives Research PTE Ltd. 60 Paya Lebar Road #04-04 Paya Lebar Square Singapore 409051 Phone: +65 6774 9580 Fax: +65 6777 7261

# www.adhesivesresearch.com