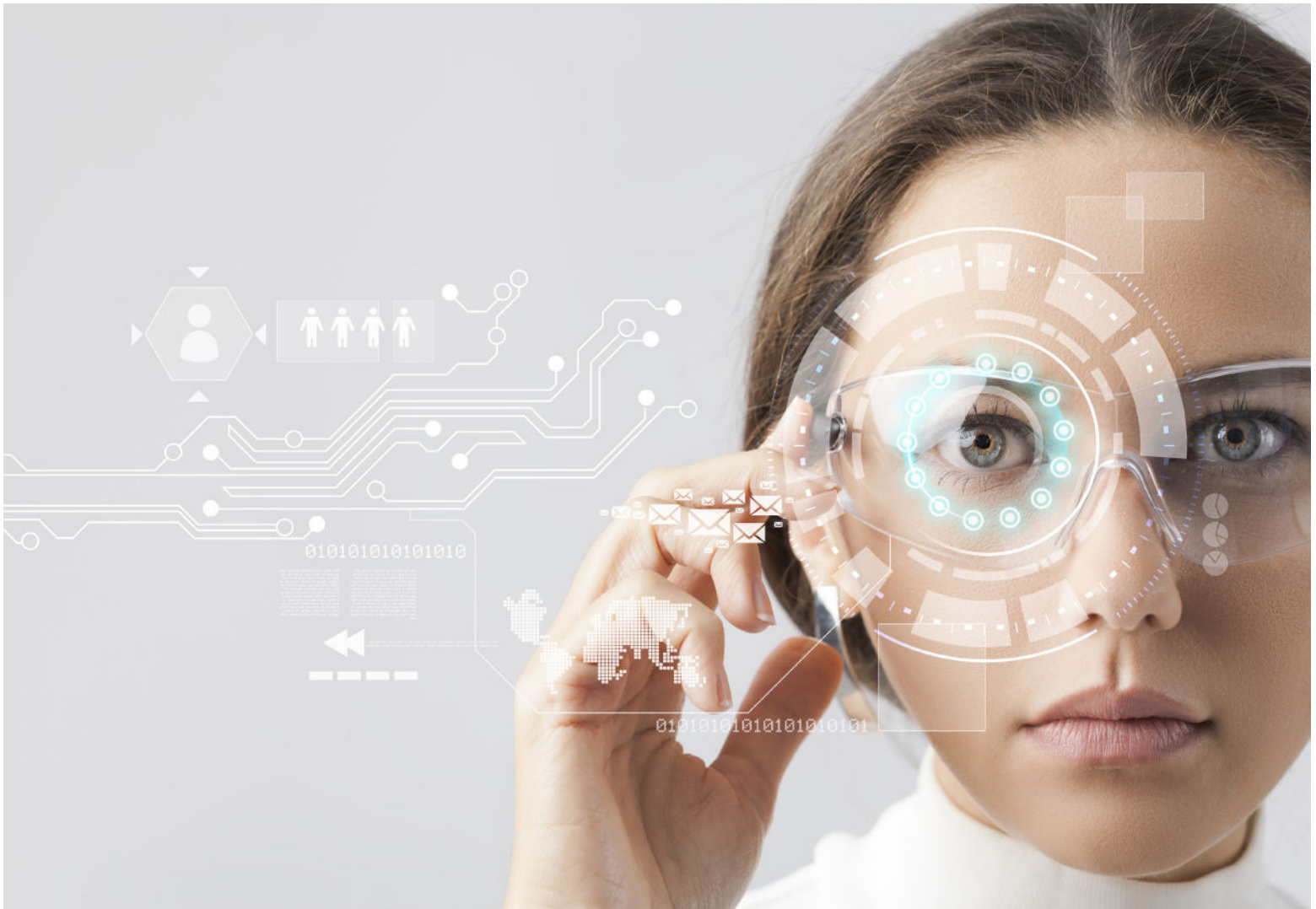


Solutions for Display Applications



Adhesive solutions that display innovation

Solutions for Display Applications

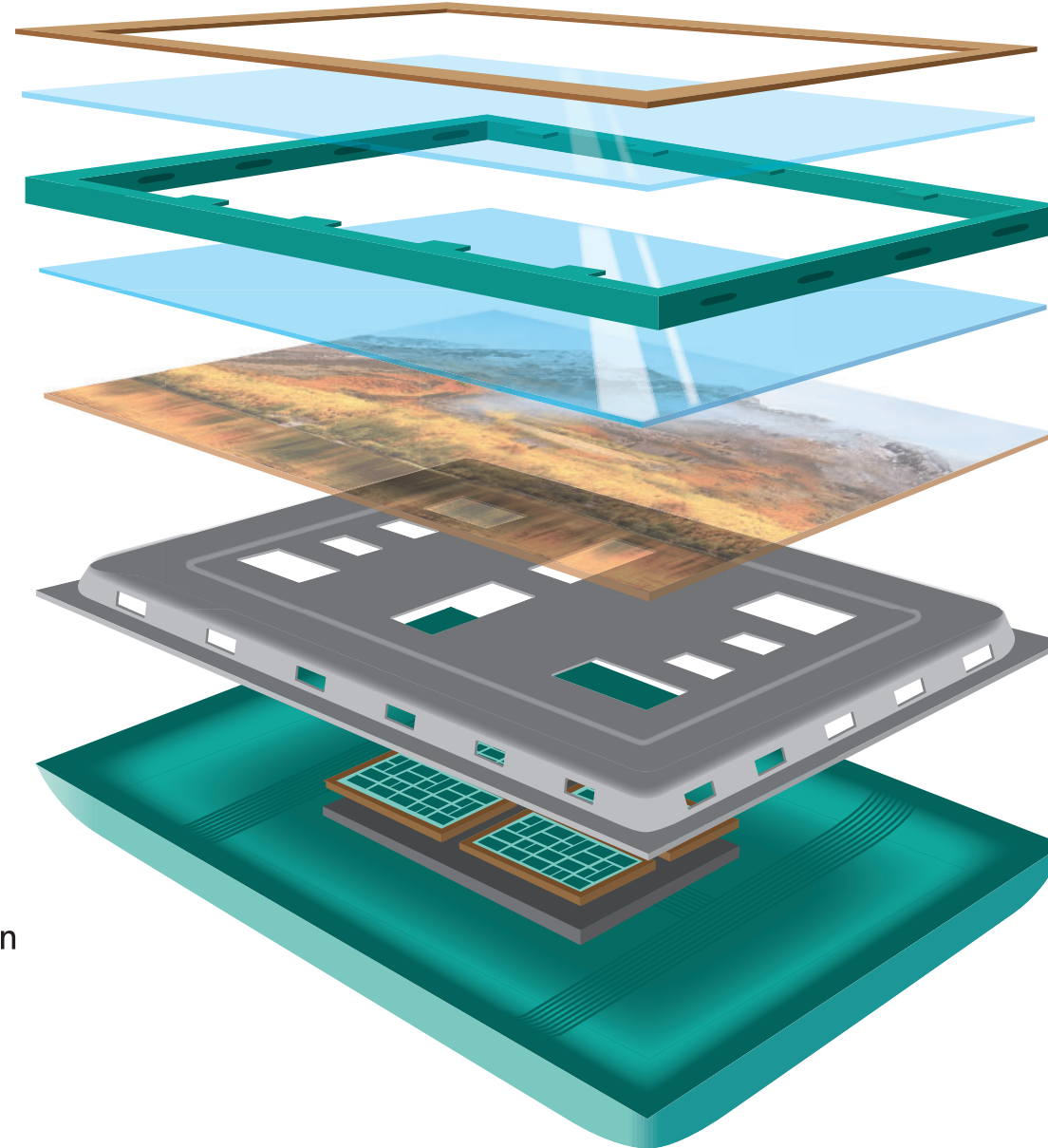
Typical Applications Include:

Optical Bonding

Robust optically clear adhesives (OCAs) to weather the most challenging environmental extremes, including high/low temperatures, humidity, and UV exposure. Capable of gap filling from 12.5 to 250 μm .

Process Aids

Ultra-clean release liners and protective films to withstand extreme process conditions for electronics production with no chemical contamination.

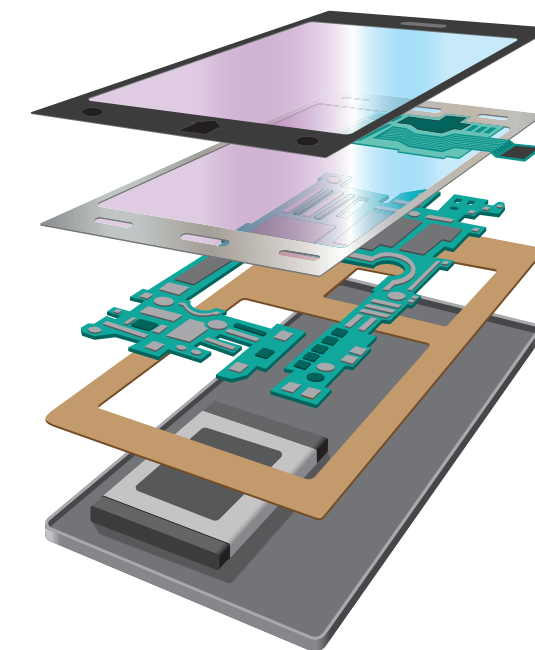


Edge Sealing and Moisture Barrier Encapsulation

Specialty hydrophobic adhesives, with superior thermoxidative and UV stability, to protect the most sensitive display components.

General Bonding

Versatile bonding options throughout the module or device (including low VOC, low surface energy and high surface energy substrates).



Conductive Bonding

Highly conductive tapes to solve interconnection challenges, available as foil-backed tapes, transfer tapes and heat seals.

As a global technology leader, Adhesives Research (AR) provides optical and conductive bonding, moisture barrier protection, and process aids to critical electronics segments, including the display screen market. AR's portfolio of pressure sensitive adhesives is designed for a broad range of end products including touch sensitive, flexible, curved, and emerging technology displays. Our chemists and engineers are passionate about developing novel products that enable our customers to overcome challenging applications in meeting the demands of an ever-evolving display market.

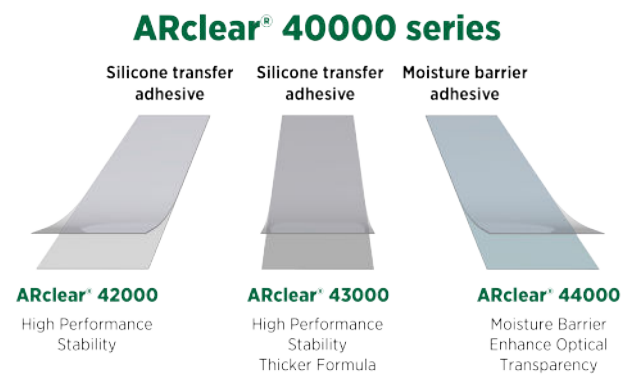
Technology Highlights

Silicone OCA Transfer Tapes

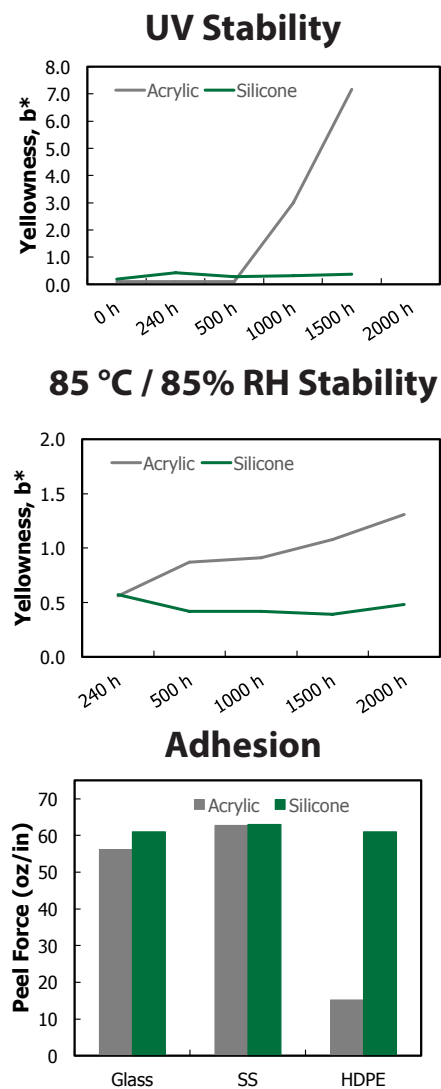
Key features:

- ✓ Outstanding durability for automotive and outdoor applications, including high temperature, humidity, and UV exposure.
- ✓ Ease of application compared to liquid options.
- ✓ Full range of thickness from 12.5 to 250 microns.

Family	Thickness (µm)
ARclear® 42000 Series High-performance silicone transfer tape OCA for unsurpassed durability	12.5
	25
	40
	50
	75
	100
ARclear® 43000 Series Thick silicone transfer tape OCA for gap-filling in demanding applications	100
	150
	175
	200
	250



Download our video to learn more about our full line of OCA and moisture barrier transfer tapes.

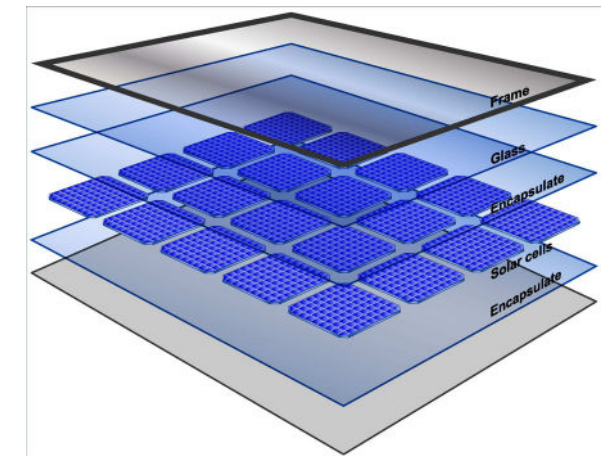


Technology Highlights

Moisture Barrier Transfer Tapes

Key features:

- ✓ Inert, non-reactive polyisobutylene chemistry enables direct contact with sensitive components.
- ✓ Optically clear with excellent thermo-oxidative and UV stability.
- ✓ Suitable for edge sealing and full encapsulation.
- ✓ Available in 12.5 and 25 micron thicknesses.



	ARclear® 44005	ARclear® 44010	ARclear® 44110
Description	Thin optically-clear moisture barrier	Optically-clear moisture barrier	High-peel optically-clear moisture barrier
Adhesive thickness (µm)	12.5	25	25
Moisture permeability (g·mil/m ² ·day)	2.2	2.2	2.2
Refractive index	1.52	1.52	1.52
Peel adhesion to polycarbonate (N / 25.4 mm)	12.8	17.5	20.9

Transfer Tape

- Allows for easy die cutting and handling.
- Designed/manufactured in the USA
- Slit sizes and length options.



Adhesive Guide

EDGE SEALING & MOISTURE BARRIER PROTECTION

Product	Description	Construction	1st Release Liner (Type/Thickness)	Adhesive (Type/Thickness)	2nd Release Liner (Type/Thickness)	“Peel Adhesion (N/25.4 mm)	Moisture permeability (g-mil/m2-day)
ARclear® 44005 (formally ARcare® 93453)	Moisture barrier adhesive with strong adhesion to various substrates; Chemically inert with excellent thermo-oxidative and UV stability	TT	Clear/ PET/51 µm	Rubber/13 µm	Clear PET/51 µm	6 (Glass) / 13 (PC)	2.2
ARclear® 44010 (formally ARcare® 92734)	Moisture barrier adhesive with strong adhesion to various substrates; Chemically inert with excellent thermo-oxidative and UV stability	TT	Clear/ PET/51 µm	Rubber/25 µm	Clear PET/51 µm	17 (Glass) /18 (PC)	2.2
ARclear® 44110 (formally ARcare® 93378)	Moisture barrier adhesive with strong adhesion to various substrates; Chemically inert with excellent thermo-oxidative and UV stability	TT	Clear/ PET/51 µm	Rubber/25 µm	Clear PET/127 µm	17 (Glass) /21 (PC)	2.2
ARclad® 74000 series	Clean acrylic with low outgassing and low VOCs	See ARclad® 74000 Series table for construction details				12 (Glass) / 15 (PC)	-



Adhesive Guide

OPTICAL BONDING

Product	Description	Construction	1st Release Liner (Type/Thickness)	Adhesive (Type/Thickness)	2nd Release Liner (Type/Thickness)	Peel Adhesion (N/25.4 mm)	Optical Properties (%) Haze / Clarity / Transmission	Refractive Index
ARclear® 42005	ARclear® 42000 Series Addition-cured silicone transfer adhesive for high-performance and stability	TT	Clear/ PET/51 µm	Silicone/ 12.5 µm	Clear PET/102 µm	15 (Glass) / 8 (PC)	0.5 / 99 / 99	1.41
ARclear® 42010		TT	Clear/ PET/51 µm	Silicone/ 25 µm	Clear PET/102 µm	15 (Glass) / 10 (PC)	0.5 / 99 / 99	1.41
ARclear® 42016		TT	Clear/ PET/51 µm	Silicone/ 40 µm	Clear PET/102 µm	20 (Glass) / 16 (PC)	0.5 / 99 / 99	1.41
ARclear® 42020		TT	Clear/ PET/51 µm	Silicone/ 50 µm	Clear PET/102 µm	19 (Glass) / 16 (PC)	0.5 / 99 / 99	1.41
ARclear® 42030		TT	Clear/ PET/51 µm	Silicone/ 75 µm	Clear PET/102 µm	19 (Glass) / 17 (PC)	0.5 / 99 / 99	1.41
ARclear® 42040		TT	Clear/ PET/51 µm	Silicone/ 100 µm	Clear PET/102 µm	22 (Glass) / 19 (PC)	0.5 / 99 / 99	1.41
ARclear® 43040	ARclear® 43000 Series Addition-cured silicone transfer adhesive for ultra-thick applications	TT	Clear/ PET/51 µm	Silicone/ 100 µm	Clear PET/102 µm	22 (Glass) / 23 (PC)	0.5 / 99 / 99	1.41
ARclear® 43060		TT	Clear/ PET/51 µm	Silicone/ 150 µm	Clear PET/102 µm	24 (Glass) / 26 (PC)	0.5 / 99 / 99	1.41
ARclear® 43070		TT	Clear/ PET/51 µm	Silicone/ 175 µm	Clear PET/102 µm	25 (Glass) / 22 (PC)	0.5 / 99 / 99	1.41
ARclear® 43080		TT	Clear/ PET/51 µm	Silicone/ 200 µm	Clear PET/102 µm	28 (Glass) / 22 (PC)	0.5 / 99 / 99	1.41
ARclear® 43100		TT	Clear/ PET/51 µm	Silicone/ 250 µm	Clear PET/102 µm	29 (Glass) / 23 (PC)	0.5 / 99 / 99	1.41
ARclear® 8932EE	Addition-cured silicone transfer adhesive	TT	Clear/ PET/51 µm	Silicone/ 41µm	Clear PET/102 µm	15 (Glass) / 13 (PC)	0.3 / 99 / 100	1.41
ARclear® 44005 (formally ARcare® 93453)	ARclear® 44000 Series Moisture barrier adhesive with strong adhesion to various substrates; Chemically inert with excellent thermo-oxidative and UV stability	TT	Clear/ PET/51 µm	Rubber/ 13 µm	Clear PET/51 µm	6 (Glass) / 13 (PC)	0.1 / 98 / 100	1.52
ARclear® 44010 (formally ARcare® 92734)		TT	Clear/ PET/51 µm	Rubber/ 25 µm	Clear PET/51 µm	17 (Glass) / 18 (PC)	0.4 / 99 / 100	1.52
ARclear® 44110 (formally ARcare® 93378)		TT	Clear/ PET/51 µm	Rubber/ 25 µm	Clear PET/127 µm	17 (Glass) / 21 (PC)	0.4 / 99 / 100	1.52



Adhesive Guide

CONDUCTIVE BONDING

Product	Description	Construction	1st Release Liner (Type/ Thickness)	1st Adhesive (Type/ Thickness)	Carrier (Color/ Type/ Thickness)	2nd Adhesive (Type/ Thickness)	2nd Release Liner (Type/ Thickness)	Peel Adhesion to Stainless Steel (ozf/ in [N/25.4 mm])	Volume Resistance	Surface Resistance
ARcare® 93758	Performance conductive acrylic; Resistant to creep, temperature, and humidity; Tin-coated backing for oxidation and corrosion resistance	SCT	Clear/ PET/51 µm	Highly conductive acrylic/25 µm	Roll-annealed tin-coated copper foil/ 36µm	-	-	35 (10)	<2 mΩ	<0.5 Ω
ARclad® 93853	Heat-seal adhesive for shielding and electrical bonding; Resistant to temperature and humidity	SCT	-	Conductive curable heat seal/33 µm	Roll-annealed tin-coated copper foil/ 36 µm	-	-	40 (11)	<50 mΩ	<118 mΩ
ARclad® 93886	Heat-seal adhesive for shielding and electrical bonding; Resistant to temperature and humidity	SCT	-	Conductive curable heat seal/33 µm	Black PET (51 µm)/ Dielectric acrylic adhesive (25 µm)/ Tin-Coated copper foil (36 µm)/ 62 µm	-	-	40 (11)	<50 mΩ	<0.2 Ω
ARlow® 93400	Highly-conductive heat-seal transfer film; Thin consistent bond line; heat sink bonding, EMI/RF grounding, etc.	HFT	Clear PET/51 µm	Conductive Rubber/5 µm	-	-	-	40 (11)	<20 mΩ	-
ARclad® 9032	Transfer tape adhesive with superior z-axis conductivity due to its unique filler package	TT	Clear/ PET/51 µm	Conductive acrylic/25 µm	-	-	White PET/ 51 µm	30 (8)	<10 mΩ	>10 kΩ
ARlow® 93802	High-performance transfer tape adhesive; chemically inert and stable in harsh or corrosive environments	TT	Clear PET/51 µm	Conductive Rubber/25 µm	-	-	Clear PET/51 µm	23 (6)	<50 mΩ	-
ARflow® 94141	Ultra-thin transfer adhesive with high-peel; chemically inert and stable in harsh or corrosive environments	TT	Clear PET/51 µm	Conductive Rubber/5 µm	-	-	Clear PET/51 µm	31 (9)	<50 mΩ	-
ARflow® 94274	Ultra-thin, transfer adhesive with high-shear (<5000 min at 70 C); chemically inert and stable in harsh or corrosive environments	TT	Clear PET/51 µm	Conductive Rubber/5 µm	-	-	Clear PET/51 µm	12 (3)	<50 mΩ	-



Adhesive Guide

GENERAL BONDING

Product	Description	Construction	1st Release Liner (Type/ Thickness)	1st Adhesive (Type/ Thickness)	Carrier (Color/Type/ Thickness)	2nd Adhesive (Type/ Thickness)	2nd Release Liner (Type/ Thickness)	Peel Adhesion to Stainless Steel (ozf/in [N/25.4 mm])
ARclad® 7418	Aggressive acrylic adhesive with superior adhesion to various surfaces	TT	White/ Poly-coated paper/160 µm (double-faced)	Acrylic/64 µm	-	-	-	50 (13.9)
ARclad® 8645-78	Temperature-resistant foam tape offering excellent shear and peel performance on diverse surfaces	DCFT	Blue/ PP/76 µm (double-faced)	Acrylic/58 µm	Grey/closed-cell PE foam/ 42 mil (1067 µm)	Acrylic/58 µm	-	85 (23.6)
ARclad® 8314-10	Resistant to temperature and humidity; Offers strong adhesion to low surface energy materials and is ideal for rough surfaces and gap filling	DCFT	White/ SCK paper/81 µm (double-faced)	Acrylic/84 µm	Clear PET/ 25 µm	Acrylic/84 µm	-	90 (25.0)
ARclad® 71000 series	Acrylic designed for enhanced bonding to high surface energy materials	See ARclad® 71000 Series table for construction details						89 (24.7)
ARclad® 73000 series	Acrylic designed for enhanced bonding to low surface energy materials	See ARclad® 73000 Series table for construction details						122 (33.9)
ARclad® 74000 series	Clean acrylic with low outgassing and low VOCs	See ARclad® 74000 Series table for construction details						48 (13.3)

PROCESS AIDS

Product	Description	Construction	Carrier (Color/Type/ Thickness)	Adhesive (Type/ Thickness)	Release Force (g/2in)
ARclean®W-10002	Clean, low extractables fluorosilicone liner; Ideal for silicone components and adhesives	SCT/Liner	Clear/PET/51 µm	-	4
ARclean® W-10004		SCT/Liner	Clear/PET/76 µm	-	4
Aclean®W-3363		SCT/Liner	Clear/PET/51 µm	-	11
ARclean® 4010	Ultra-clean liner with ultra-low extractables; Ideal for sensitive electrical components and cast materials like ceramics and colloids	SCT/Liner	Clear/PET/51 µm	-	10
ARclean® 4013		SCT/Liner	Clear/PET/76 µm	-	10
ARclean® 4026		SCT/Liner	Clear/PET/51 µm	-	10
ARclean® 5030		SCT/Liner	Clear/PET/51 µm	-	54
ARclean® 3473	Clean, low extractables, silicone liner; Formulated and designed with the smoothest surface and high thickness constancy	SCT/Liner	Clear/PET/51 µm	-	22
ARclean® 3474		SCT/Liner	Clear/PET/51 µm	-	59
ARclad® 79027	Low-tack acrylic suitable for temporary protection or as a process aid for casting	SCT	Clear/PET/51 µm	Acrylic/18 µm	17
ARclad® 79029		SCT	Clear/PET/51 µm	Acrylic/23 µm	113

Adhesive Guide

ARclad® 71000 Series

Product	Construction	1st Release Liner (Type/Thickness)	1st Adhesive (Type/Thickness)	Carrier (Color/Type/Thickness)	2nd Adhesive (Type/Thickness)
ARclad® 71020	TT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 51 µm	-	-
ARclad® 71035	TT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 89 µm	-	-
ARclad® 71150	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 51 µm	Clear PET / 25 µm	Acrylic / 51 µm
ARclad® 71180	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 89 µm	Clear PET / 25 µm	Acrylic / 89 µm

ARclad® 72000 Series

Product	Construction	1st Release Liner (Type/Thickness)	1st Adhesive (Type/Thickness)	Carrier (Color/Type/Thickness)	2nd Adhesive (Type/Thickness)
ARclad® 72020	TT	Brown, Poly-coated Kraft Paper / 109 µm	Rubber / 51µm	-	-
ARclad® 72035	TT	Brown, Poly-coated Kraft Paper / 109 µm	Rubber / 89 µm	-	-
ARclad® 72150	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Rubber / 51µm	Clear PET / 25 µm	Rubber / 51µm
ARclad® 72255	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Rubber / 51µm	Tissue / 38 µm	Rubber / 51µm
ARclad® 72340	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Rubber / 51µm	DC Scrim	Rubber / 51µm

ARclad® 73000 Series

Product	Construction	1st Release Liner (Type/Thickness)	1st Adhesive (Type/Thickness)	Carrier (Color/Type/Thickness)	2nd Adhesive (Type/Thickness)
ARclad® 73020	TT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 51 µm	-	-
ARclad® 73035	TT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 89 µm	-	-
ARclad® 73150	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 51 µm	Clear PET / 25 µm	Acrylic / 51 µm
ARclad® 73180	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Acrylic / 89 µm	Clear PET / 25 µm	Acrylic / 89 µm

ARclad® 74000 Series

Product	Construction	1st Release Liner (Type/Thickness)	1st Adhesive (Type/Thickness)	Carrier (Color/Type/Thickness)	2nd Adhesive (Type/Thickness)
ARclad® 74018	TT	Brown, Poly-coated Kraft Paper / 109 µm	Low VOC Acrylic / 46 µm	-	-
ARclad® 74030	TT	Brown, Poly-coated Kraft Paper / 109 µm	Low VOC Acrylic / 76 µm	-	-
ARclad® 74146	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Low VOC Acrylic / 46 µm	Clear PET / 25 µm	Low VOC Acrylic / 46 µm
ARclad® 74251	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Low VOC Acrylic / 46 µm	Tissue / 38 µm	Low VOC Acrylic / 46 µm
ARclad® 74336	DCT	Brown, Poly-coated Kraft Paper / 109 µm	Low VOC Acrylic / 46 µm	DC Scrim	Low VOC Acrylic / 46 µm

Types of Tape Construction

Transfer Tape (TT)

Unsupported adhesive is coated directly onto a release liner, allowing transfer films to be the most flexible and conformable of all bonding systems.

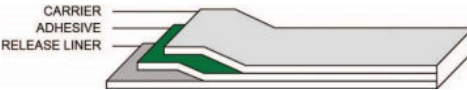
- ✓ Vibration damping
- ✓ Bonds with consistently thin line
- ✓ High strength bonding to a variety of industrial substrates
- ✓ Conforms well to irregular surfaces



Single-Coated Tape (SCT)

Single-coated tapes consist of a backing that is coated on one side with an adhesive. Single-coated tapes are available either in selfwound rolls or with a release liner for ease of application.

- ✓ Ideal for over-lamination
- ✓ Protecting
- ✓ Energy management



Double- Coated Tape (DCT)

Double-coated tapes have a carrier that is coated on both sides with an adhesive, eliminating heat and solvent cure cycles. The instant bonding capabilities of double-coated tapes make them very conducive to automation and high-speed processing.

- ✓ Offers ease of handling
- ✓ Bonding rigid materials to irregular surfaces
- ✓ Compensates for thermal expansion
- ✓ Reduces sound, shock, and vibration
- ✓ Allows use of two different adhesives per application



Heat-activated Film Tape

Heat-activated film tapes require heat and pressure to achieve final bonding to any surface.

- ✓ Ideal for plasticized materials
- ✓ High ultimate bonding strength
- ✓ Conforms to irregular or textured surfaces



High-performance Thin Foam Tape

High-performance thin foam tape is designed for mounting smart devices and other components in various electronics applications.

- ✓ Fill narrow gaps
- ✓ Excellent impact resistance
- ✓ Distribute stress uniformly over the bonded area





Adhesives Research®

About Adhesives Research:

Adhesives Research is a permanently independent developer and manufacturer of adhesives and coatings for various markets.

We utilize our material knowledge, polymer synthesis/formulation expertise, and versatile manufacturing capabilities to supply key components to the industry. We offer robust products and technologies and can also rapidly customize to meet the specific needs of an application.

Headquartered in Glen Rock, PA. Adhesives Research has also sales and manufacturing facilities in Ireland and sales offices in China and Singapore.

To learn more information about how Adhesives Research can help solve tape and materials engineering challenges, contact us today.



Scan me for more details

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(October 2023)

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